

# VALUE CO-CREATION AND INNOVATION IN THE NEW SERVICE ECONOMY



## 30<sup>th</sup> RESER International Congress Proceedings – book of abstracts

Edited by Luis Rubalcaba

January 21<sup>st</sup>-22<sup>nd</sup> 2021

University of Alcalá. Alcalá de Henares, Madrid, Spain

Including proceedings of the  
COVAL Conference

**Value co-creation, innovation  
and digital transformation  
in public services**

[www.reser2020.com](http://www.reser2020.com)

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## Presentation of the RESER Congress

Research in services is moving from a sector and supply approach to an activity and demand perspective, where services generate value in any social and economic activity, with users playing a leading role. Any company, industry, sector, city, region, or country can generate business, economic, or social value when integrating new or improved services. Services generate value by building on new forms of interaction between users and providers, organizations and individuals, the public, business, and the third sector. These interactions increasingly involve co-creation and innovation, for which new technologies are of the utmost importance. This is the case with servitization processes, smart services, Industry 4.0 and digital transformation in public services.

The **30<sup>th</sup> RESER Congress**, which will take place on January 21<sup>st</sup>-22<sup>nd</sup> in virtually mode, focuses on value co-creation and innovation as new dynamics shaping services today and aimed at improving the transformative power of services in modern societies: new avenues for a new services world.

The RESER Congress includes several activities, before and during the Congress days, related to public and private services. Particular mention has to be made to the RESER-COVAL conference on Value co-creation, innovation and digital transformation in public services, on Thursday, January 21<sup>st</sup> and Friday 22<sup>st</sup>, the **International workshop on servitization, smart services and industry 4.0** that will take place before the conference, on Wednesday, January 20<sup>th</sup>, and the **Winter school on services innovation** on Monday, January 18<sup>th</sup>, Tuesday, 19<sup>th</sup> and Wednesday 20<sup>th</sup>, 2021.

The Organizing Committee

## Presentation of the COVAL Conference

The challenges that the public sector needs to address in the 21st century include providing efficient and high-quality public services, as well as improving the public sector's ability to deal with societal demands. Oftentimes, designing public services following the internal logic of government does not meet the changing needs of citizens. Public sector transformation requires thinking of inclusive ways of citizen engagement. The traditional view of top-down and supply-driven public administrations is no longer appropriate for the creation of public value. There is a need for a demand-driven design of public services that incorporates the opportunities, provided by new technologies, for the effective engagement of citizens and organizations. A key element for a public sector transformation is a paradigm shift from designing and delivering services solely based on the internal logic of public administrations to an external, open and collaborative logic.

An understanding of participatory value creation and innovation promotes a new paradigm of service provision: One that integrates the co-production and multiagent perspectives with an emerging new public service logic. This can be aligned with the on-going work on digital transformation through the use of ICT. The new paradigm fosters technological and nontechnological innovation based on changing organizational procedures. Moreover, it demands a mentality open to innovation and user participation in the development of public goods and services.

Value is increasingly co-created through the involvement of all stakeholders in multiple phases of the service process: Co-planning, co-design, co-implementation, co-delivery and coevaluation. This process can transform public administrations. Thus, a new research agenda is needed in order to help unlock this transformative power.

This conference builds on the work undertaken by the H2020 research project Co-VAL ([www.co-val.eu](http://www.co-val.eu)) on value co-creation and innovation in European public administrations. The project goals are to i) provide a comprehensive and holistic theoretical framework, ii) measure and monitor transformative innovations in the public sector, iii) deliver research outcomes on four areas of public service transformation (digital transformation, service design, living-labs and public-private networks for social innovation), and iv) build practical tools and a tracking system for helping policy design, monitoring and evaluation of existing initiatives to support public service transformation.

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### Organizers and collaborators:

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**Thursday, 21<sup>st</sup> January, 2021**

08:15 – 08:30	<b>Arrival &amp; virtual registration</b>
08:30 – 09:00	<b>Opening session &amp; Welcome</b> Chair: Eva Senra Vice-Chancellor, Economy, Entrepreneurship, and Employability. UAH Organizers welcome: <ul style="list-style-type: none"><li>• Markus Scheuer RESER</li><li>• Anna Triantafillou COVAL</li><li>• Luis Rubalcaba University of Alcalá</li><li>• Fernando de Pablo Digital Office Director, municipality of Madrid Ex-Secretary General for Digital Transformation in Spain</li></ul>
09:00 – 10:00	<b>PLENARY PROGRAM: Keynotes “The future of public innovation and digital services”</b> Chair: Luis Rubalcaba University of Alcalá “Moving beyond sporadic innovation: Lessons learned from OPSI Alex Roberts OECD “The Digital Innovation Challenge” Emanuele Baldacci Director at DG DIGIT, European Commission
10:00 – 10:15	Coffee break time
10:15 – 11:30	<b>PLENARY PROGRAM – COVAL SESSION. “New avenues on value cocreation and service design”</b> Chair: Rolf Rønning University of Lillehammer, Norway Jakob Trischler CTF Service Research Center, Karlstad, Sweden Selected CO-VAL findings: <ul style="list-style-type: none"><li>• Stephen Osborne, on value co-creation University of Edinburg, UK</li><li>• Maria Røhnebæk, on service design University of Lillehammer, Norway</li></ul>
10:15 – 11:30	<b>PARALLEL PROGRAM</b> <ul style="list-style-type: none"><li>✓ Track 7: Servitization, smart services and Industry 4.0 (SERVIT)<ul style="list-style-type: none"><li>○ Session 1. Servitization</li></ul></li><li>✓ Track 9: New paths in services research: digitalization and jobs (PATHS)<ul style="list-style-type: none"><li>○ Session 1_PATHS. Marketing and Experience</li></ul></li><li>✓ Track 10 Practitioners. Policy actions and cases for public sector transformation (PRACTICE)<ul style="list-style-type: none"><li>○ Session 1_PRACTICE. Education</li></ul></li></ul>

11:30 – 12:45 **PLENARY – COVAL SESSION. “New avenues on digital transformation”**

Chair: Anna Triantafillou  
ATC, Greece

Gianluca Misuraca  
Danube University Krems, Austria

Discussion: selecting Co-VAL findings by:  
Ines Mergel  
Konstanz University, Germany

Concluding remarks by:  
David Osimo and Francesco Mureddu  
Lisbon Council, Belgium

11:30 – 12:45 **PARALLEL PROGRAM**

- ✓ Track 1: VALUE co-creation in public services
  - Session 1. Value cocreation and participation
- ✓ Track 2: Service INNOVATION and innovation ecosystems in services
  - Session 1. Social Innovation
- ✓ Track 7: Service Servitization, smart services and Industry 4.0 (SERVIT)
  - Session 2. Digital servitization
- ✓ Track 9: New paths in services research: digitalization and jobs (PATHS)
  - Session 2 PATHS. Trends in KIBS

12:45 – 13:30 Lunch time

13:30 – 15:00 **PLENARY – COVAL SESSION: H2020 projects on public sector: sharing progress and exploring synergies**

Chair: Asa Barton  
DG CNECT H4. European Commission

COVAL – Anna Triantafillou  
ATC, Greece

COGOV – Keith Shaw  
Northumbria University, UK

ENLARGE – Cristina Vasilescu and Erica Melloni  
Institute for Social Research, Italy

CITADEL & TOKEN – Marcos Fernández Gutiérrez  
University of Cantabria, Spain

TROPICO - Lise Hellebø Rykkja and Line Marie Sørsdal  
University of Bergen, Norway

13:30 – 15:00 **PARALLEL PROGRAM**

- ✓ Track 2: Service INNOVATION and innovation ecosystems in services
  - Session 2: Innovation for management
- ✓ Track 3: DIGITAL transformation in public services
  - Session 1. Digital transformation framework
- ✓ Track 5: Service DESIGN and co-creation methods for services
  - Session 1. Business & ecosystems
- ✓ Track 7: Servitization, smart services and Industry 4.0 (SERVIT)
  - Session 3. Value co-creation
- ✓ Track 8: Services globalization and trade; Economic geography of services
  - Session 1. Territorial

- ✓ Track 9: New paths in services research: digitalization and jobs (PATHS)
  - Session 3. Public and network services
- ✓ Track 10: Practitioners: Policy actions and cases for public sector transformation (PRACTICE)
  - Session 2. Municipal challenges

15:00 – 15:15 Coffee break time

**15:15 – 16:30 PLENARY – Round table on women for leading public innovation**

Chair: Ada Scupola  
Roskilde University

A dialogue with:

- Paz Sanchez  
Spanish Women for Public Innovation Association
- Mary Feeney  
Professor of ethics in public affairs Arizona State University and author of “Power in Editorial Positions: A Feminist Critique of Public Administration”
- Erika Widegren  
Chief Executive, Re-Imagine Europa (RIE)

**15:15 – 16:30 PARALLEL PROGRAM**

- ✓ Track 1: VALUE co-creation in public services
  - Session 2. Challenges for public value co-creation
- ✓ Track 2: Service INNOVATION and innovation ecosystems in services
  - Session 3. Innovation Networks
- ✓ Track 3: DIGITAL transformation in public services
  - Session 2. Local digital
- ✓ Track 5: Service DESIGN and co-creation methods for services
  - Session 2. Public cases
- ✓ Track 6: Living LABS and co-creation spaces for services
  - Session 1. Case studies on Labs (I)
- ✓ Track 7: Servitization, smart services and Industry 4.0 (SERVIT)
  - Session 4
- ✓ MISCELANEA (in Spanish) Sesión en español
- ✓ Track 9: New paths in services research: digitalization and jobs (PATHS)
  - Session 4. PATHS. Towards social research
- ✓ Track 10 Practitioners: Policy actions and cases for public sector transformation (PRACTICE)
  - Session 3. Developing economies

**16:30 – 18:00 PLENARY – Keynote speech “People, knowledge and innovation for public value”**

Chair: Luis Rubalcaba  
University of Alcalá  
Mary Feeney  
Arizona State University, School for Public Affairs, US

**18:00 RESER Lifetime achievement award to Prof. Marja Toivonen, Aalto University**  
Introduced by Markus Scheuer, RESER president, and Jon Sundbo, Roskilde University

**RESER Founders'PhD Award**

Introduced by Marie-Christine Monnoyer, ICT Toulouse, France and Estíbaliz Hernández, Mondragon University

**18:30 CLOSE**

**Friday, 22<sup>nd</sup> January, 2021**

08:00 – 09:30    **RESER SFS SPECIAL SESSION: “Cross-cultural aspects of digitalization and service innovation”**

Chairs: Kentaro Watanabe

National Institute of Advance Industrial Science and Technology (AIST), Japan

Marja Toivonen

Aalto University, Finland

Spring Han

Kyoto University, Japan

Walter Ganz

Fraunhofer Institute, IAO, Germany

Kirsi Hytinen

VTT Technical Research Centre of Finland, Finland

08:00 – 09:30    **PARALLEL PROGRAM**

- ✓ Track 1: VALUE co-creation in public services
  - Session 3. The territorial and social dimension
- ✓ Track 2: Service INNOVATION and innovation ecosystems in services
  - Session 4. Gender issues & social entrepreneurship
- ✓ Track 3: DIGITAL transformation in public services
  - Session 3. Artificial intelligence open data
- ✓ Track 4: Measuring value co-creation and innovation in services (METRICS)
  - Session 1
- ✓ Track 5: Service DESIGN and co-creation methods for services
  - Session 3. Framework
- ✓ Track 6: Living LABS and co-creation spaces for services
  - Session 2. Labs and value cocreation

09:30 – 11:15    **PLENARY – COVAL SESSION – “New avenues on public service innovation”**

Chair: Paul Windrum

University of Nottingham, UK

“Public Innovation”

Marja Toivonen

Aalto University, Finland

Selected CO-VAL findings:

- Anthony Arundel, on public innovation metrics  
UNU-Merit, The Netherlands
- Lars Fuglsang, on living labs  
Roskilde University, Denmark
- Faiz Gallouj, on networks for social innovation  
University of Lille, France

09:30 – 11:15    **PARALLEL PROGRAM**

- ✓ Track 3: DIGITAL transformation in public services
  - Session 4. Digital transformation cases
- ✓ Track 5: Service design and co-creation methods for services
  - Session 4
- ✓ Track 10 Practitioners: Policy actions and cases for public sector transformation (PRACTICE)
  - Session 4. Design, data and health

11:15 – 12:30

**Special session “Meeting the editors”**

RESER Session A) Innovation and services journals:

Chair: Faiz Galloj

*European Review of Service Economics and Management*

- Maria Savona  
Editor of *Research Policy*
- Levent Altinay  
Editor of the *Services Industrial Journal*
- Faiz Galloj  
*European Review of Service Economics and Management*
- Special Issue in Foresight and STI Governance: new directions for KIBS and KIBS research

Guest editors:

Ian Miles  
University of Manchester

Veroniuka Belousova  
ISSEK, Higher School of Economics, Moscow

COVAL Session B) Public administration journals:

Chair: Stephen Osborne

Editor of *Public Management Review*

- Stephen Osborne  
Editor of *Public Management Review*
- Anders Ryom Villadsen  
*Journal of Public Administration Research and Theory*
- Paolo Roberto Graziano  
Editor of *Governance*
- Isabel-María García-Sánchez  
Editor, *Administrative Sciences*
- Special Issue at *Administrative Sciences*. Insights on value co-creation in the public sector

Guest editors:

Luis Rubalcaba  
Kirsty Strokosch  
Maria Røhnebæk  
Anne Vorre Hansen  
Christine Liefoghe

11:15 – 12:30

**Special Session: Innovation procurement in Europe and the Procure2Innovate Network**

Marlene Grauer

International Project Manager - KOINNO, German Competence Centre for innovation procurement  
Beatriz Torralba

Innovation Procurement Office CDTI, Spanish Ministry of Science and Innovation - Spanish Competence Centre for innovation procurement

Rolf Zeldenerust

Senior Advisor Innovation Procurement - PIANOo, Dutch Competence Centre for innovation procurement

*Facilitated by ICLEI - Local Governments for Sustainability*

11:15 – 12:30

**PARALLEL PROGRAM**

- ✓ Track 1: VALUE co-creation in public services
  - Session 4. Business vs Public Cocreation
- ✓ Track 2: Service INNOVATION and innovation ecosystems in services
  - Session 5. Resources cases

- ✓ Track 3: DIGITAL transformation in public services
  - Session 5. Digital capacities
- ✓ Track 4: Measuring value co-creation and innovation in services (METRICS)
  - Session 2
- ✓ Track 5: Service DESIGN and co-creation methods for services
  - Session 5. Health
- ✓ Track 6: Living LABS and co-creation spaces for services
  - Session 3. Case studies on Labs (II)
- ✓ Track 7: Servitization, smart services and Industry 4.0 (SERVIT)
  - Session 5. Artificial intelligence and Industry 4.0
- ✓ Track 10 Practitioners: Policy actions and cases for public sector transformation (PRACTICE)
  - Session 5. Co-creating public services

12:30 – 14:00	Lunch time
14:00 – 15:30	<b>PLENARY JOINT RESER-COVAL SESSION Round table on policies for governance in developing economies</b> Chair: Nanno Mulder CEPAL-ECLAC and REDLAS  Lea Giménez IDB, Institutions for Development, Innovation for Citizen Services Zahid Hasnain Global Lead on Public Institutions Reform, the World Bank Group Carlos Santiso Director for the Digital Innovation in Government Department Francisco Velázquez CLAD
15:30 – 15:45	<b>Coffee break time</b>
15:45 – 17:00	<b>PLENARY-COVAL-IBM policy and stakeholder's session: round table on the future of public services transformations and policy and research agendas</b> Chair: David Osimo The Lisbon Council, Belgium  Co-chair: Dan Chenok Center for the Business of Government. IBM Global, US  The view from different organizations <ul style="list-style-type: none"><li>• Walter Ganz Fraunhofer Institute, IAO, Germany</li><li>• Miquel Estape LivingGob, Barcelona</li><li>• Francisco Rojas Novagob e Innolabs</li><li>• Dan Chenok Center for The Business of Government. IBM, US</li><li>• Gianluca Misuraca Danube University Krems, Austria</li><li>• Francesco Mureddu The Lisbon Council</li><li>• Charlotte van Ooijen The Lisbon Council</li></ul>
17:00 – 17:30	<b>PLENARY-Policy and research agenda</b>
17:30	<b>Closing Session and presentation of the next RESER Congress</b>

### Track 1: VALUE co-creation in public services

Thursday, 21 <sup>st</sup> January 2021	Friday, 22 <sup>nd</sup> January 2021
<b>VALUE_Session 1. Value cocreation and participation</b> <b>11:30 – 12:45</b>	<b>VALUE_Session 3. The territorial and social dimensión</b> <b>08:00 - 09:30</b>
<b>Chair: Rolf Ronning</b>  <b>Co-creation and co-destruction of value in public services – A struggle between conflicting interests</b> Magnussen, Siv; Rønning, Rolf	<b>Chair: Metka Stare</b>  <b>Students' and parents' co-production in compulsory education: insights and challenges for public services</b> Díaz-Fuentes, Daniel; Fernández-Gutiérrez, Marcos
<b>Value creation through intrinsic participation: the importance of context</b> Strokosch, Kirsty; Osborne, Stephen; Zhu, Edwina Yida	<b>From City to City-as-a-Service exploring the transformation through the lenses of servitization and service-dominant logic</b> Viljakainen, Anna; Hyttinen, Kirsi; Toivonen, Marja
<b>Levers of citizen participation in co-creation</b> Zadra-Veil, Cathy; Fragny, Benjamin	<b>Organizations CSR strategies: A long-run sustainability value creation model</b> Moreno, Manuel; Mañas, Elena; Montes, Oscar René; Fernández, Beatriz
<b>Radical value co-creation in public services: A Pragmatist case</b> Kaszynska, Patrycja	<b>Social innovation in extreme institutional contexts: a case study of Non-government organization in Palestine</b> Morrar, Rabeh; Sofiane Baba
<b>VALUE_Session 2. Challenges for public value cocreation</b> <b>15:15 – 16:30</b>	<b>VALUE_Session 4. Business vs Public Cocreation</b> <b>11:15 – 12:30</b>
<b>Chair: György Drótos</b>  <b>Political and Cultural Determinants of Public Sector Innovation and Value Co-creation. The Case of Hungary</b> Drótos, György; Miklós, Rosta	<b>Chair: Jakob Mickelsson</b>  <b>Co-creation challenges in public sector - what can we learn from private sector?</b> Lindland, Kristiane Marie Fjaer
<b>Interactive value formation: exploring the literature on the side dark of the service experience from the perspective of value co-destruction, (VCD)</b> Silva Farias, Josivania; Calhau Codá, Renato; Freitas, Dias, Gilmar; Celis Leon, Andrea; Oliveira Militão, Luciana; Miranda Martins, Isabela	<b>Transformation towards service(s) in Public Research and Technology Organizations</b> Viljakainen, Anna; Hyttinen, Kirsi; Toivonen, Marja
<b>The evolution of public management at the Spanish National Health System</b> García-Goñi, Manuel	<b>The Continuing Evolution of Value Research in Service Marketing</b> Mickelsson, Jacob; Medberg, Gustav
<b>Understanding the Dynamics and Challenges of Multi-Actor Collaborations in the Co-creation of Public Value</b> Yuan, Qianli; Gasco-Hernández, Mila; Gil-García, J. Ramon	<b>Value co-creation and innovation: the case of Portuguese firms</b> Madeira, João Pedro; Torres, Preto Miguel

**Track 2: Service INNOVATION and innovation ecosystems in services**

Thursday, 21<sup>st</sup> January 2021

**INNOVATION Session 1. Social innovation  
11:30 – 12:45**

**Chair: Celine Merlin-Brogniart**

**A European state-of-the-art of Public Service Innovation Network for Social innovation**  
Merlin-Brogniart, Céline; Fuglsang, Lars; Magnussen, Siv; Peralta, Alberto; Rønning, Rolf; Scupola, Ada

**The role of the State in the emergence and scaling-up process of social innovation networks**  
Rosta, Miklós; Merlin-Brogniart, Céline; Katona, Márton; Liefoghe, Christine

**Social innovation impacts in European public administrations**  
Rubalcaba, Luis; Gallouj, Faiz; Merino, Fernando; Katona, Márton

**Social Innovation in Active Mobility Public Services**  
Stuchi, Silvia; Paulino, Sonia

**INNOVATION Session 2. Innovation for management  
13:30 – 15:00**

**Chair: Marja Toivonen**

**Value co-creation and impacts in service ecosystems**  
Hyytinen, Kirsi; Nousiainen, Anu; Toivonen, Marja

**A Conceptual Framework for Consumer Inventory Management Services**  
Heumann, Christian

**“Platforming”: a historical perspective of designing and delivering innovative logistical services**  
Paché, Gilles

**Innovation in Public Services. Mexico transformation of government’s policies 2019-2020**  
Corona-Treviño, Leonel; Camacho, Alexis

**INNOVATION Session 3. Innovation Networks  
15:15 – 16:30**

**Chair: Faiz Gallouj**

**Collaborating for social innovation in public services: public service innovation networks for social innovation (PSINSIS)**  
Gallouj, Faiz Desmarchelier, Benoît; Djellal, Faridah

**Public Service Innovation Network for Social Innovation: A european overview**  
Merlin, Celine; Fuglsang, Lars; Katona, Márton; Magnussen, Siv; Peralta, Alberto; Ronning, Rolf; Rosta, Miklós; Scupola, Ada

**Modelling public networks for collaborative social innovation: a quantitative exploration of the employment and social public services**  
Peralta, Alberto; Rubalcaba, Luis

**Network Co-production of Public Service: Interaction of Multiple Agents in Digital Platforms of the European Union and Brazil**

Oliveira Militão, Luciana; Celis Leon, Andrea Juliet; Miranda Martins, Isabela; de Freitas Dias, Gilmara Aparecida; Calhau Codá, Renato

Friday, 22<sup>nd</sup> January 2021

**INNOVATION Session 4. Gender issues & social entrepreneurship  
08:00 – 09:30**

**Chair: Ada Scupola**

**Power, participation and public service innovation funding: findings from ‘Gender and Nesta’s Innovation Support’**  
Callaghan, Robert; Lewis, James

**Women’s innovation in European public administration**

Suárez, Cristina; Scupola, Ada; Bazah, Naja; Polo, Laura; Solano, Ernesto; Rubalcaba, Luis

**Thanks but no thanks - an empirical analysis on the role of middle managers and their experiences with social entrepreneurship in a public organization**  
Isaksen, Kjersti

**Social Entrepreneurs – The motor behind public service innovation networks for social innovation?**  
Hansen, Anne Vorre; Gallouj, Faiz; Fuglsang, Lars; Scupola, Ada

**INNOVATION Session 5. Ressources cases  
11:15 – 12:30**

**Chair: Marie-Christine Monnoyer**

**FASTER Project: development of innovation in rescue technologies for international disasters**  
Cintora Sanz, Ana María; Gómez de la Oliva, Soledad; Ruiz Palomino, Julio; Aldea Reyes, Ana María; Izquierdo, Susana; Coll, Annika

**Innovation in Designing Territorial Platforms for Elderly Homecare Services**  
Bourret, Christian; Depeyrot - Ficatier, Thérèse

**Universities as strategic actors to decarbonise the economy**  
Monnoyer, Marie-Christine

**The Configuration of Service Innovation Capabilities**  
Crispim, Rafael; Zawislak, Paulo

**Track 3: DIGITAL transformation in public services**

Thursday, 21 <sup>st</sup> January 2021	Friday, 22 <sup>nd</sup> January 2021
<b>DIGITAL Session 1. Digital transformation framework 13:30 – 15:00</b>	<b>DIGITAL Session 3. Artificial Intelligence open data 08:00 – 09:30</b>
<b>Chair: Ines Mergel</b>	<b>Chair: Rannveig Roeste</b>
<p><b>Digital transformation in the public sector: A systematic literature review and future research agenda</b> Dan, Sorin; Vancauwenberghe, Glenn</p> <p><b>Understanding collaborative innovation in public sector: a case for increasing scholarship dialogue</b> Tangi, Luca; Marijn, Janssen; Vanini, Irene; Michele, Benedetti; Giuliano, Noci</p> <p><b>Co-Value Creation and Digital Service Transformation: The case of Denmark</b> Scupola, Ada; Mergel, Ines</p>	<p><b>AI, data scientists and wicked problems: a case study of collaborative teams in the Norwegian Labour and Welfare Administration</b> Roeste, Rannveig; Björkquist, Catharina</p> <p><b>City apps: A contribution to the fluidification of the digital administration information system</b> Mercier, Sylvie; Meyer, Claudie; Bourret, Christian</p> <p><b>The impact of blockchain in the public sector: a Systematic review</b> Cagigas, Diego; Clifton, Judith; Diaz-Fuentes, Daniel; Fernández-Gutiérrez, Marcos</p>
<b>DIGITAL Session 2. Local digital 15:15 – 16:30</b>	<b>DIGITAL Session 4. Digital transformation cases 09:30 – 11:15</b>
<b>Chair: Christine Liefoghe</b>	<b>Chair: Francisco Mureddu</b>
<p><b>Social media in local governments: Comparing determinants of adoption and use across multiple platforms</b> Yuan, Qianli; Gasco-Hernández, Mila; Gil-García, J. Ramón</p> <p><b>Uncovering the intertwined nature of collaborative processes and structures in the digital transformation of state governments</b> Gasco-Hernández, Mila; Gil-García, J. Ramón; Luna-Reyes, Luis</p> <p><b>Government strategies used in the development of citizens competencies to complete the income tax return in E-Gov</b> Silva Farias, Josivania; Freitas Dias, Gilmara; Miranda Martins, Isabela; Celis Leon, Andrea; Oliveira Militão, Luciana; Calhau Codá, Renato; Martins Cruz, Geisa</p> <p><b>The digital transformation of French public services: from the government to local public agents. Tools, methods and limits</b> Liefoghe, Christine</p>	<p><b>Understanding How BOSA's DG DT is Implementing Digital Transformation within the Belgian Federal Government</b> Lepczynki, Stéphanie; Mureddu, Francesco</p> <p><b>Lights and shadows in the development and implementation of the National Platform for Data Verification</b> Eusamio Mazagatos, José Antonio; Fraile, Máximo</p> <p><b>Doctor On Demand: Finnish Patients' Experiences of Online Medical Video Consultations</b> Medberg, Gustav</p>
	<b>DIGITAL Session 5. Digital capacities 11:15 – 12:30</b>
	<b>Chair: Greta Nasi</b>
	<p><b>Building government capacity through co-production. Evidence from a case of digital transformation</b> Oprea, Natalia; Nasi, Greta</p> <p><b>Effectiveness of flexible working arrangement as a form of digital transformation from the perspective of government officials</b> Sirait, Emyana Ruth Eritha; Nugroho, Badar Agung</p> <p><b>Getting non-profit organizations fit for digital transformation</b> Freitag, Mike; Ganz, Walter; Hämmerle, Oliver</p>

**Track 4: Measuring value co-creation and innovation in services (METRICS)**

Friday, 22<sup>nd</sup> January 2021

**METRICS Session 1**  
**08:00 – 09:30**

**Chair: Matthieu Belarouci**

**Efficiency of judicial conciliation activities in French courts: Evidence from a bad-output Data Envelopment Analysis (DEA) framework**  
Belarouci, Matthieu

**Effect of strict graders on service scoring: An analysis with mystery shopper's data**  
Sasaki, Kohei; Hiroki, Takahashi; Nariaki, Nishino; Takeshi, Takenaka; Hiroshi, Nishikori

**Basic payment accounts: an analysis of the transparency performance of financial institutions in Spain**  
Fernández-Olit, Beatriz; González Sanz, Gloria; Sierra Martín, Óscar; Ortega Diaz, Elena

**METRICS Session 2**  
**11:15 – 12:30**

**Chair: Annaflavia Bianchi**

**Measuring Public Innovation in Europe. The STARPIN Methodology**  
Bianchi, Annaflavia; Marin, Giovanni; Zanfei, Antonello

**Human-centered co-evaluation method to support the renewal of public education**  
Hyttinen, Kirsi; Saari, Eveliina; Franstsi, Valtteri

**The Educational and social impact of science museums. The case of the Granada science park**  
Martín Segura, José Aureliano

**The effects of user co-creation on innovation outcomes in the public sector: a QCA analysis of survey data**  
Jørgensen Nordli, Anne; Arundel, A.; Miklós, Rosta; Márton Tamás, Katona

### Track 5: Service DESIGN and co-creation methods for services

Thursday, 21 <sup>st</sup> January 2021	Friday, 22 <sup>nd</sup> January 2021
<b>DESIGN Session 1. Business &amp; ecosystems 13:30 – 15:00</b>	<b>DESIGN Session 3. Framework 08:00 – 09:30</b>
<b>Chair: Markus Warg</b>	<b>Chair: Maria Røhnebæk</b>
Why co-creation in service ecosystems needs an architectural view Warg, Markus; Deetjen, Ulrike	Public Service Logic and Service Design - Value propositions through framing Røhnebæk, Maria; Yida, Zhu; Francois, Valerie; Peralta, Alberto ; Kiss, Norbert
The co-creation strategy adapted to the type of service Karim, Elasri; Arbia, Chatmi	Quick and dirty: misuse of design thinking and UX design in public action transformation. Lessons from State, regional or metropolitan administrations in France Liefooghe, Christine; Garry, Olivier; Ramon-Daré, Marie
A systems approach to understanding creative Innovation in gastronomy services Cordeiro, Cheryl Marie; van Hal, Jaap W.	Caught in the middle: Frontline employees ambivalent role in service design Bast, Ane; Engen, Marit; Røhnebæk, Maria
<b>DESIGN Session 2. Public cases 15:15 – 16:30</b>	<b>The organizing of the co-design process underlying assumptions and mechanisms: A conceptual framework and a research agenda</b> Lundsgaard, Daniela; Högström, Claes
<b>Chair: Sami Kauppinen</b>	<b>DESIGN Session 4 09:30 – 11:15</b>
Service design method in co-creation of public services on example of a polish pilot project representing the CoSIE project Misniakiewicz, Anna	<b>Chair: Norbert Kiss</b>
The changing role of healthcare professionals in the public services sector co-creation process Kauppinen, Sami; Satu, Luojuus; Elina, Kesäniemi	Co-creation, power and democracy Lindland, Kristiane Marie; Selvig, Therese
	Catalysing systems thinking through service design doing Wetter-Edman, Katarina
	Service Design and Learning Experience Development in Higher Education Fazekas, Nóra; Kiss, Norbert; Baráth, Tibor
	Co-designing the client's civic queuing experience based on human ethology: the challenges of welcoming the homeless in a social public institution in Geneva Fagniere, Emmanuel; Gouédard, Isis; Girard, Philippe; Reymond, Antonin
	<b>DESIGN Session 5. Health 11:15 – 12:30</b>
	<b>Chair: Marianne Storm</b>
	Home-living elderly' experiences with eHealth technologies in care coordination: How the design thinking perspective can help Fjellsaa, Hilde Marie H.; Storm, Marianne
	User-testing and co-designing a mobile application for self-management of serious mental illness and service integration Storm, Marianne; Fjellsaa, Hilde Marie H.; Skjearpe, Jorunn N.; Fortuna, Karen L.; Myers, Amanda
	User-centered design in a school-based health education program Kiss, Norbert; Boros, Judit; Drótós, György; Fazekas, Nóra; Révész, Éva
	Scenario-Based Design Process for Digital Technology Assisted Service System Tsunetomo, Kaito Watanabe, Kentaro; Kishita, Yusuke

### Track 6: Living-LABS and co-creation spaces for services

Thursday, 21 <sup>st</sup> January 2021	Friday, 22 <sup>nd</sup> January 2021
<b>LABS Session 1. Case studies on Labs (I) 15:15 – 16:30</b>	<b>LABS Session 2. Labs and value cocreation 08:00 – 09:30</b>
<b>Chair: David Gago</b>	<b>Chair: Lars Fuglsang</b>
<b>Living labs in response to the tensions of the circular economy</b> Fragny, Benjamin; Zadra-Veil, Cathy	<b>Living Labs as a method for value co-creation</b> Haug, Nathalie; Mergel, Ines
<b>Data-Driven Journalism Living Lab: Concepts and Challenges</b> Mantzari, Despoina; Sidiropoulos, Efstathios; Bratsas, Charalampos; Konstantinidis, Evdokimos; Dimoulas, Charalampos; Veglis, Andreas	<b>Living labs as a path to public innovation and co-creation</b> Fuglsang, Lars; Hansen, Anne Vorre
<b>Inception, activities and performance of Spanish living labs: a comparative approach</b> Gago, David; Rubalcaba, Luis	<b>Co-creating public services and policies leveraging on the opportunities provided by Living Labs</b> Magistretti, Stefano; Dell'Era, Claudio; Galasso, Giovanna; Garbasso, Giorgio; Lotti, Roberta; Senatore, Giancarlo
<b>Social innovation in coordination of health services for people with serious mental illness</b> Skjaerpe, Jorunn Nærland; Storm, Marianne	<b>LABS Session 3. Case studies on Labs (II) 11:15 – 12:30</b>
	<b>Chair: Christine Liefoghe</b>
	<b>Smart Campus Initiative: The Campus Approach to Living Labs and Co-creative Service Innovation</b> Prochazka, Veronika; Handrich, Melanie; Feike, Maximilian; Bienzeisler, Bernd
	<b>Simulating the social learning and innovation of living labs and social hackathons: the Living lab simulator</b> Peralta, Alberto; Rubalcaba, Luis
	<b>Living labs business models in France</b> Fasshauer, Ingrid
	<b>Living Labs and cocreation for new public services: the territorial dimension matters. The case of French metropolitan or regional Living Labs</b> Liefoghe, Christine
	<b>Living Labs as Co-Creation Environments for Value-Creating Public Services: The Case of Turkey</b> Sevinc Cubuk, Ecem Buse; Karkin, Naci

### Track 7: Servitization, Smart services and Industry 4.0 (SERVIT)

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<b>SERVIT Session 1. Servitization 10:15 – 11:30</b>	<b>SERVIT Session 4 15:15 – 16:30</b>	
<b>Chair: Luna Leoni</b>	<b>Chair: Liudmila Bagdoniene</b>	
<b>Data management for servitization: a new framework for manufacturing companies</b> Adrodegari, Federico; Saccani, Nicola; Janković, Anja	<b>Uncovering the possibilities of modularity by service system decomposition: the case of Public Employment Services</b> Dociūtė, Guoda; Bagdonienė, Liudmila	
<b>How are B2B Services Co-created? An Investigation of Servitizing Manufacturing Firms</b> Bakir, Lisa; Loohuis, Raymond; Nieuwenhuis, Lambert	<b>Patterns of Service Co-production: Evidence from KIBS-Clients Interactions</b> Chichkanov, Nikolay	
<b>SERVIT Session 2. Digital servitization 11:30 – 12:45</b>	<b>The cost of data lifecycle in the development process of after-sales industrial services</b> Mendizabal, Gorka; Castellano, Eduardo; Galfarsoro, Gurutz	
<b>Chair: Luna Leoni</b>	<b>Chair: Tiziana Russo</b>	
<b>Designing digital services through human-centred service design in the servitization context. A practical case in the packaging manufacturing industry</b> Uranga, Maitane; Iriarte, Ion	<b>Artificial Intelligence in Smart Service Systems: A structured Quality Approach</b> Neuhüttler, Jens	
<b>Drivers and barriers of digital servitization: Evidence from the textile manufacturing industry</b> Rösler, Jonathan; Sironi, Olga; Kalbaska, Nadzeya; Friedli, Thomas	<b>Chatbots to enact value propositions</b> Russo Spena, Tiziana; Mele, Cristina; Tregua, Marco; Ranieri, Angel	
<b>Digital Transformation and Servitization in Offshore Wind Industry - Learnings from private sector (Ørsted A/S)</b> Møller, Jørn	<b>Human-Centred Design in the context of Servitization in Industry 4.0. A Collaborative Approach</b> Nguyen Ngoc, Hien; Ganix, Lasa; Iriarte, Ion	
<b>Dynamic capabilities and (digital) servitization</b> Leoni, Luna; Chirumalla, Koteshwar		
<b>SERVIT Session 3. Value co-creation 13:30 – 15:00</b>		
<b>Chair: Liudmila Bagdoniene</b>		
<b>Value co-creation in service innovation: how the firm can enable the client</b> Geguzyte, Gintare; Bagdoniene, Liudmila		
<b>Opportunities for Value Creation Enabled by Data Economy - Study in Five Domains</b> Korhonen, Heidi; Valtanen, Kristiina; Rantala, Tuija		
<b>Generating unique selling propositions through digital business innovations in SME especially crafts</b> Strina, Giuseppe; Said, Christophe; Özdemir, Feriha		

**Track 8: Services globalization and trade; Economic geography of services**

Thursday, 21<sup>st</sup> January 2021

**GLOBAL\_Session 1. Territorial  
13:30 – 15:00**

**Chair: Pedro Costa**

**Public Choice and Decentralised Health Service Delivery in Lesotho: Assessment of views of service providers and users**  
Dick-Sagoe, Christopher

**Recent developments in integration for services**  
Smith, Peter M

**Challenging the measurement of value in cultural activities: a framework for territorial impacts assessment**  
Costa, Pedro

**MISCELANEA (IN SPANISH) SESIÓN EN ESPAÑOL  
15:15 – 16:30**

**Chair: Elena Mañas**

**Transformación Regional del Sector Terciario de la Economía, a partir de la Gestión del Turismo Rural Vivencial; Caso de Monterrey de San Carlos, Costa Rica, 2019-2020**  
Espinoza Góngora, José Ramón

**Programa para la prevención, detección y actuación coordinada municipal ante la violencia de género más seguras, más iguales**  
Iniesta Perez de Gracia, Elisa; Julián Edo, Ana María

**Internationalization of the Knowledge Intensive Services “the Born Global Firms”: mixed methods approach**  
Martos Martinez, Clara Belén; Muñoz Guarasa, Marta

### Track 9: New paths in services research: digitalization and Jobs (PATHS)

Thursday, 21 <sup>st</sup> January 2021	Thursday, 21 <sup>st</sup> January 2021
<b>Session 1 PATHS. Marketing and Experience 10:15 – 11:30</b>	<b>Session 3 PATHS. Public and network services 13:30 – 15:00</b>
<b>Chair: Jean Philippe</b>	<b>Chair: Takeshi Takenaka</b>
<b>Customer's experience of sharing hosting platform services: How to explain their intention to rebuy?</b> Bertrand, Daisy; Léo, Pierre-Yves; Philippe, Jean	<b>The Reason why Public Services Lag Behind the Private Sector in Terms of Sustainable Development (SD): An Exploratory Research Conducted in the Swiss Service Economy</b> Fragniere, Emmanuel; Dubosson, Magali; Rochat, Denis
<b>Extending the influence of Brand Image, Service Quality, Patient Satisfaction on Loyalty with an Importance-Performance Map Analysis</b> Vimla; Udita, Taneja	<b>Employee Health and Business Performance: A comprehensive approach with questionnaire survey to companies and economic lab experiments</b> Nishino, Nariaki; Takenaka, Takeshi; Gu, Jiewen
<b>Employer branding in times of sustainability and digitalization</b> Holzweber, Markus	<b>Small museums digitalisation: evidence from Italy</b> Leoni, Luna; Cristofaro, Matteo
<b>Problems in Services Marketing</b> Holzweber, Markus	
<b>Session 2 PATHS. Trends in KIBS 11:30 – 12:45</b>	<b>Session 4 PATHS. Towards social research 15:15 – 16:30</b>
<b>Chair: Veronika Belousova</b>	<b>Chair: Javier Reynoso</b>
<b>Artificial Intelligence (AI) in knowledge services and self-service (insourcing)</b> Sundbo, Jon	<b>Exploring the co-creation of services in informal micro-businesses at the Base of the Pyramid</b> Cabrera, Karla; Reynoso, Javier
<b>Sectoral consumption of KIBS services consumed across EU countries</b> Belousova, Veronika; Miles, Ian; Chichkanov, Nikolay; Kuzmin, Gleb	<b>Market Services Innovations Networks (MSINs): Enriching the Network Lineage in Innovation Studies</b> Gallouj, Faïz; Desmarchelier, Benoît; Djellal, Faridah; Gallouj, Camal
<b>Sourcing great talent in the tourism industry</b> Hartleif, Lukas; Holzweber, Markus	<b>Characteristics of cities and social entrepreneurship</b> Desmarchelier, Benoit; Djellal, Faridah; Gallouj, Faïz
<b>Explanation of pressure against digital transformation in legal services</b> Gnusowski, Marek; Lawrynowicz, Maciej; Durczak, Krzysztof	

**Track 10: Practitioners Policy actions and cases for public sector transformation  
(PRACTICE)**

Thursday, 21<sup>st</sup> January 2021Friday, 22<sup>nd</sup> January 2021

<b>PRACTICE Session 1. Education</b> <b>10:15 – 11:30</b>	<b>PRACTICE Session 4. Data, design and health</b> <b>09:30 a 11:15</b>
<b>Chair: Esteban Romero</b>  <b>Student-driven innovation- A driver for professional learning?</b> Stalheim, Odd Rune	<b>Chair: Gerhard Embacher-Köhle</b>  <b>Data Analytics for Citizens and Member States</b> Mureddu, Francesco; Vassilios, Peristeras; Osimo, David
<b>NEXUS24 “Trousers” or the double innovation funnel model at Universitat Politècnica de Catalunya</b> Ferrer-Balas, Didac; Lazzarini, Ginevra Marina; Losantos, Pere; Rosas-Casals, Martí	<b>Designing the future governmental Business Service Portal of Austria with Entrepreneurs</b> Embacher-Köhle, Gerhard; Lukas, Bernhard
<b>Laboratory 717 - A platform to promote participation and democratic innovation in Andalusia</b> Romero-Frías, Esteban	<b>CO-Creating Public Value through an integrated healthcare system</b> Guerra, Igone; Barandiaran, Xabier
<b>The Effect of Sustainability in Older Talent’s Career Development (in the case of Lithuanian Public Service Providers)</b> Vilčiauskaitė, Birutė	<b>Framing Value Based Healthcare in Practice</b> Spurrell, Mark
<b>PRACTICE Session 2. Municipal challenges</b> <b>13:30 – 15:00</b>	<b>PRACTICE Session 5. Co-creating public services</b> <b>11:15 – 12:30</b>
<b>Chair: Wiltrud Terlau</b>  <b>Urban Risks and Challenges – Assessments of Transformation Paths and the Contribution of Social Innovations for a Resilient, Sustainable City</b> Terlau, Wiltrud	<b>Chair: Francesco Molinari</b>  <b>Design thinking, local public policy and the “new normal”</b> Molinari, Francesco
<b>The merger of municipalities the most priority innovation in the administrations of Spain</b> Fraile, Maximo	<b>Humanising the system - Using the knowledge of lived experience to co-create public services</b> Trowbridge, Hayley; Willoughby, Michael
<b>From an Open Government to an Open State: Cross-Sector Collaboration and Innovation to Improve Government Services at the Municipal Level in Costa Rica?</b> Iriani, Rodrigo; Vega, Angelica	<b>Futureproof governance is about co-creation</b> Cherroud, Karim; Bambust, Fran
<b>PRACTICE Session 3. Developing economies</b> <b>15:15 – 16:30</b>	<b>“The Suministro Inmediato de Información (SII) in the electronic management of the Spanish Value Added Tax (VAT): analysis and international comparison”</b> Camilo Lebón y Rocío Sánchez-Lissen
<b>Chair: Alex Cavalcante</b>  <b>Learning from South America’s New Innovator—Paraguay</b> Foster, Isabelle	
<b>Public Sector Reform in Brazil: changing human capital policies</b> Cavalcante Alves, Alex	
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## People, knowledge and innovation for public value

### Advancing research, advancing practice

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As I look to the RESER Co-Val program, I see an array of papers to be presented on key research concepts such as public service design, value co-creation, co-production, collaboration, digital transformation, innovation, public service innovation, social innovation, and service innovation. My perspective on these areas of research is shaped by my training, research interests, and research experiences, and more recently by my role as an editor of a leading public administration journal where I not only see the top research in the field, but the ways in which scholars assess, cultivate, and bound that research. My academic research on knowledge creation related to public value notes that public administration – or more generally research focused on government - is characterized by 1) manageability, to develop solutions for real-world problems; 2) economization, defending collective values against the intrusion of an economic system; and 3) democratic accountability, serving the public interest (Wallmeier, Helmig, Feeney 2018). Yet we see scholars conducting research disconnected from practice, many modern governments putting the economic system ahead of collective values, and myriad examples of government action absent of democratic accountability.

As a journal editor, I have developed a more instrumental view of academic knowledge creation. In this address, I draw from my experience as a researcher, mentor to PhD trainees, and journal editor to outline two current challenges in our academic approaches to studying public value creation and innovation. I characterize these challenges as 1) excessive variation and inconsistency in our terminology due to an academic overvaluing of the “novel” and (2) our failure to fully account for the political, social, and cultural factors that influence public value creation.

I suggest that as an academic research community we need to do more to advance core research concepts and practical knowledge with an intentional focus on political structures, social context, and culture. The study of government action and bureaucracy is contingent on political structures, social context, and culture. Yet too little of our research takes into account the critical socio-cultural aspects of public value creation. By adopting and engaging concepts of collaboration and public value creation in our research practice, academic scholars can better produce applicable knowledge. To meaningfully affect government practice, academic researchers interested in questions of good government, public value creation, and public service delivery would do well to focus more clearly on the coherence of our research agendas and language use and the need to integrate political, social, and cultural context to our theoretical frameworks and research designs.

### References

Wallmeier, F., Helmig, B., & Feeney, M. K. (2019). Knowledge construction in public administration: A discourse analysis of public value. *Public Administration Review*, 79(4), 488-499.

## Europe's Digital Innovation Challenge

Emanuele Baldacci

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To better understand latest trends in improved user-centred services, one avenue that we must collectively explore is what drives bottom-up actors, like SMEs and start-ups, who build innovative digital services.

European projects can struggle to design and co-create strategic interactions with external stakeholders and to engage with impact. The Commission is therefore actively looking for novel ways to take ideas from inception at EU-level to impact at local level. The recent Digital Innovation Challenge is an example of how the European Commission is looking to overcome such dilemmas.

Achieving cross-border interoperability and connectivity – especially in the area of public services – is a huge priority for the Commission and EU Member States. To connect national digital infrastructures, the Commission uses both the Connecting Europe Facility (CEF) Digital and ISA<sup>2</sup> (Interoperability solutions for public administrations, businesses and citizens) programmes to provide open and reusable solutions to interconnect Europe's varied national I.T. landscapes. This might be in the area of secure data exchange, user authentication, machine translation or eProcurement (as realised by CEF Building Blocks); or achieving technical, semantic and/or legal interoperability between administrations (as realised by ISA solutions).

In this context, the Commission's informatics department (DIGIT), with pilot project financing from the European Parliament, organised a Digital Innovation Challenge for SMEs and startups to imagine new services based on open and reusable solutions. With this, we experimented with new ways of interacting with SMEs and startups. We also saw it as a chance to reimagine how the Commission creates and promotes these reusable solutions and to stimulate awareness and adoption of them and, ultimately, connect Europe.

From the outset, we sought to aim for the best possible propositions by promoting at relevant fora. We launched the Challenge at the Web Summit in Lisbon in 2019. After this, we invited 10 shortlisted candidates to pitch their idea at a (virtual) co-creation bootcamp to workshop their ideas, followed by pitches in front of a jury of senior EU officials working in the digital domain. The final step was an award ceremony at the Hello Tomorrow Global Summit 2020.

The winning teams were CleverBooks (winner of €50,000) proposing sustainable digital education via reusable online text- and workbooks for schools; Latitudo40 (second place winning €20,000) who propose supporting everyday decisions by turning satellite imagery into geospatial information; and OpenContent (third place winning €10,000) with OpenCityPlus: driving small and medium municipalities in Europe towards integrating into the Single Digital Gateway.

While the challenge was not limited to the development of public services, the challenge finalists delivered innovative solutions in areas where co-creation and innovation can most benefit the public sector, namely digitalising local government, giving our children the skills they need for a digital future or making better use of data.

Such collaborative digital transformation is a major opportunity for European start-ups and SMEs. Europe has some of the strongest, most developed public sectors in the world able to invest in innovation. GovTech solutions have the potential to be a great opportunity – through co-creation – for Europe to become digitally sovereign.

Public administrations should do everything possible to support the development and procurement of such solutions and services as we have seen delivered through the Digital Innovation Challenge. This includes pan-European interoperability promoted through the coming Digital Europe Programme, making the Once Only Principle a reality, or through a GovTech incubator supported through the EU budget.

## Moving beyond sporadic innovation: Lessons learned from OPSI

Alex Roberts

*OECD*

The COVID-19 pandemic and the associated crisis has once again emphasised the essential role of government. Through the OECD's Observatory of Public Sector Innovation, several hundred innovative responses were tracked after the immediate onset of the pandemic around the world, demonstrating the inherent ability of the public sector to be a source of novel initiatives. Governments have had to rapidly adapt and introduce new ways of working, new ways of delivering services and extensive ongoing communication with citizens.

While governments have demonstrated their ability to respond to a crisis in innovative ways, their ability to sustain innovative practices and activity outside the urgency of a crisis is much less clear. A systemic approach to public sector innovation is required, one that embeds innovation as a core function and responsibility within the machinery of government.

Equally, the crisis has also demonstrated that there is much to be improved, revisited or rethought. Through the global dialogue of Government After Shock, the OECD explored questions of what needs to be left behind, what is wanted to be kept, and what should be done differently, given what has been learned from the crisis. The post-2020 world will require many different things from government that traditional structures and processes are ill-suited to. Governments thus must consider not only innovation, but transformation, and what they are transforming to.

In this session, Alex Roberts of the OECD's Observatory of Public Sector Innovation will discuss results from research during 2020 about the crisis, the responses of government, and what has been learned about how governments can and need to build upon the hard-won lessons of the COVID-19 pandemic.

## Co-creation for new digital administrations

Fernando de Pablo

*Digital Office Director, municipality of Madrid*

“Participation of citizens and public employees in the definition and development of services, co-creation, not only improves the participation and transparency of our administrations but also creates value, in terms of outcomes, impact, efficiency, savings, improvements in processing, and reduction of administrative burdens, especially using electronic channels.

Companies, third sector, and start-ups should also participate in the co-design of innovative public services with different alternatives, such as GovTechLabs. The machine-machine interconnection or the definition of new public services with the management of data of the administrations as platforms open to society must produce services more demanded by societies.

The COVID pandemic has shown us the importance of including citizens (those most affected). Confinement and closure of administrative offices have put even more value on electronic public services and common platforms, in a context where digital administration not only produces efficiency and greater user satisfaction but also allows maintaining the necessary social distance to fight the pandemic.

Integration of new enabling technologies (AI, big data, machine learning, etc.) will accelerate automation with social and labor implications. These technologies will bring new possibilities for co-creation in administrations, which should preserve an ethical vision centered on people ((because) not everything that can be done with technology must be done), reinforcing a “human-centric” vision in a new context of “social contract”.

European Reconstruction programs focus on digital transformation, sustainability, and social cohesion, with the participation of all actors of our society and focusing on public-private collaboration. Value creation with the collaboration of all stakeholders will be fostered.

Due to all these reasons, attending this conference at this time is a good opportunity to discuss all these challenges that public administrations and society must face in the coming years”.

## From designing services to service ecosystem design – Key developments and future avenues of the service design field

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Service design has become a key element of service innovation, both in the private and public sector. At the same time, service design is constantly evolving, and through its theoretical changes can lead to confusion and ill-informed application. Against this backdrop, this study aims to review the key developments in the service design field, discuss future avenues of the field, and outline related implications for research and practice. In its original approach, service design concerned the ‘design of services that deliver’ (Shostack 1984). Related service design tools, such as the service blueprint, focus on the service delivery system where the service user interacts with the focal service provider. However and mostly inspired by the 10<sup>th</sup> fundamental premise of the Service-Dominant Logic asserting that value cannot be predefined and delivered, service design shifted towards a ‘design for service’ approach (Meroni and Sangiorgi 2011). This approach notes that an organization cannot design and deliver a service offering per se, but can only support their customers or users to create value during use. Since value creation takes place within the user’s unique lifeworld, service design introduced tools that help to more fully explore user needs and experiences. For example, co-design involves selected service users as experts of their experiences into the service design process (Trischler et al. 2018). While the ‘design for service’ perspective is still widely regarded as the current state of service design, it should be noted that recent studies have advocated for a more systemic approach which a) recognizes that users do not create value in isolation (Trischler and Charles 2019), and b) considers the governing effects of institutions (Vink et al. 2019). For example, the service ecosystem design concept discusses how institutional arrangements influence design efforts within multi-actor service systems (Vink et al. 2020). These studies help to explain important aspects which often go beyond service design projects, such as barriers to change or drivers of transformation. Further, the developments towards conceptualizing service design from an open, collective, multidisciplinary stance, underline the field’s potential to drive lasting change and leverage innovation especially in complex settings.

## References

Meroni, Anna, and Daniela Sangiorgi. 2011. *Design for Services*. Surrey: Gower Publishing.

Shostack, L.G. 1984. “Designing services that deliver.” *Harvard Business Review* 62 (1):133-9.

Trischler, Jakob, and Michael Charles. 2019. “The application of a service ecosystems lens to public policy analysis and design: Exploring the frontiers.” *Journal of Public Policy & Marketing* 38 (1):19-35.

Trischler, Jakob, Simon J. Pervan, Stephen J. Kelly, and Don R. Scott. 2018. “The value of codesign: The effect of customer involvement in service design teams.” *Journal of Service Research* 21 (1):75-100.

Vink, Josina, Bo Edvardsson, Katarina Wetter-Edman, and Bård Tronvoll. 2019. “Reshaping mental models—enabling innovation through service design.” *Journal of Service Management* 30 (1):75-104.

Vink, Josina, Kaisa Koskela-Huotari, Bård Tronvoll, Bo Edvardsson, and Katarina Wetter-Edman. 2020. “Service ecosystem design: Propositions, process model, and future research agenda.” *Journal of Service Research* online first: 1-19.

## Service design in public service settings

Maria Taivalsaari Røhnebæk

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This presentation will outline key findings from a study of service design in public service contexts. The study is based on a 1) a literature review of the academic literature dealing with public service design; 2) a review of how and to what extent service design and related concepts appear in policy documents; and 3) a multiple case study involving ten in-depth case studies set in five European countries. The presentation will highlight key summarized findings from the desk research and the empirical case studies, pointing to both contributions and challenges related to the use of design approaches for spurring innovation and transformations in public services. Insights from the study will be used as a basis for inspiring further academic discussions, and for outlining research gaps and potentially future research avenues on public service design.

## **Governing in the Digital Age: Artificial Intelligence and public sector innovation in a data-driven society**

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The paper will provide an overview of the policy evolution, foresight expectations and state of play in the area of Digital Governance in the EU in the last decade, underlying rhetoric, false myths and paradoxes of unrealised paradigmatic shifts heralded by techno-deterministic claims. It will then outline scenarios for Digital Europe at the horizon 2040, debating on the key dimensions, policy implications for future-proof institutional re-design required for governing in the digital age.

The paper builds on findings from exploratory research conducted by the European Commission's Joint Research Centre on Digital Government transformation in the EU (DigiGov), which conducted a systematic review of literature and policy in the field, as well as empirical analysis through experimental case studies and developing an original conceptual framework to assess and "reframe" Digital Government transformation within a public sector innovation change agenda.

In addition, it builds on a mapping exercise and analysis of the use and impact of AI in public services carried out as part of the AI Watch, the Knowledge Service of the European Commission to monitor the uptake and impact of AI for Europe.

The paper will then discuss results of these exploratory work and building on the evidence gathered, will present the scenarios for Digital Europe 2040, outcome of a foresight exercise conducted through expert consultation and stakeholder engagement.

The paper will conclude discussing implications for policy and future research directions in light of the need to innovate democratic systems and ensure digital resilience in the emerging "Pandemic Society", taking advantage of data-driven policymaking, foresight, experimental and AI-assisted decision systems and dynamic simulation models, for engaging citizens and increase speed and effectiveness of policies and their social acceptance and adoption.

AI, Governance, Public Sector Innovation, Digital Resilience, Democracy.

## COVAL SESSION. H2020 projects on public sector: sharing progress and exploring synergies

Diego Cagigas<sup>1</sup>, Judith Clifton<sup>1</sup>, Daniel Díaz-Fuentes<sup>1</sup>, Marcos Fernández-Gutiérrez<sup>1</sup>

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This text summarizes the presentation made for COVAL Session “H2020 projects on public sector: sharing progress and exploring synergies”, describing the contents and progress of H2020 projects on the public sector, in which the members of the Research Group Econpoint (International Applied Economics, Department of Economics, University of Cantabria) led by Prof. Daniel Díaz-Fuentes and Prof. Judith Clifton have recently participated: CITADEL and TOKEN (Transformative Impact Of Blockchain Technologies In Public Services). In particular, it focuses on the most recent of these projects, which is ongoing for the period 2020-2022: TOKEN<sup>1</sup>, a project in which four researchers from this group participate: Judith Clifton (leader), Daniel Díaz-Fuentes (co-leader), Marcos Fernández-Gutiérrez and Diego Cagigas.

TOKEN focuses on the potential of the use of blockchain technology on the provision of public services. Its ultimate goal is to develop an experimental ecosystem to enable the adoption of this technology and to evaluate its value as driver for the transformation of public services, focusing on four Use Cases: public funding distribution, management of public accounts, urban logistics and valorisation of data. These Use Cases were selected because of their impact, taking into account several issues: 1) Their potential scalability and replicability; 2) The wide range of user groups and stakeholders of public services which they address (civil servants, researchers, entrepreneurs, citizens, service operators and policy makers); 3) Their potential for technology standardization; and 4) The legal and regulatory aspects related with how a public service might be regulated.

Participants in TOKEN include a multidisciplinary consortium of 11 partners comprising:

1) Technology developers with experience in the development of blockchain components: FIWARE Foundation E.V –Germany– (who leads the project), Fundingbox Accelerator –Poland–, IMEC (Interuniversitair Micro-Electronica Centrum) –Belgium–, Vlaams Instituut Voor De Logistiek –Belgium–, and The Centre for Research and Technology (CERTH) –Greece–; 2) Blockchain associations (Infrachain a.s.b.l –Luxembourg–); 3) Public administrations (Ayuntamiento de Santander –Spain– and Municipality of Katerini –Greece–); 4) Experts in Telematic Engineering (Grupo de Ingeniería Telemática, TLMAT) and in Public services management and innovation from the field of Social Science (Econpoint) (both from University of Cantabria –Spain–); and 5) Think tanks specialized in digital transformation and policy making (Demos Research Institute –Finland–) and Open Commons business models (Fundingbox Research Aps –Denmark–). Blockchain implementation in public services is assessed from a multidimensional perspective (technological, cultural, socio-economic and legal), paying special attention to attitudes of public servants, as key agents in public service provision.

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<sup>1</sup> <https://token-project.eu/the-project/>

Previous experience of researchers from this group includes participation in COCOPS and CITADEL H2020 projects.

Distributed Ledger Technologies (DLT) are based on a consensus of replicated, shared, and synchronized digital data spread across multiple sites, countries, or institutions. Their main characteristic is that they do not require a central administrator or centralized data storage. DLT require a peer-to-peer network, as well as consensus algorithms to ensure replication across nodes. Blockchain is the most well-known example of DLT. Specifically, blockchain uses DLT to store information verified by cryptography among a group of users through a pre-defined network protocol, without the control of a centralized entity or authority. Blockchain has the potential to profoundly transform public service production and delivery. At present, governments and public administrations around the world are increasingly initiating projects and early stage applications of blockchain. One example is the development of the European Blockchain Services Infrastructure (EBSI) in the European Union, which aims to develop a public-permissioned blockchain infrastructure for application upon public services, such as sovereign digital identity, notarization, diplomas and data sharing.

Econpoint group's role (Department of Economics, University of Cantabria) in the TOKEN project is focused on Working Package 2 (WP2) and, especially, on Working Package 4 (WP4).

WP2 aims to establish a framework to examine the impact of blockchain in public services. This WP includes a task focused on developing the analysis of current processes. The objective of this task is to define in detail the scenario of each public service that will be transformed by using blockchain technology and then, identify the flaws, gaps and opportunities that may be solved and/or captured by using the technology as baseline for the transformation of such public services. This task contributes to feeding both the framework for the impact analysis and the definition of users' requirements for implementation of the use cases.

WP4, led by Econpoint Group, focuses on evaluating the impact generated by the Use Cases and has three objectives: 1) To define the evaluation framework for impact assessment; 2) To evaluate the impact achieved by each use case; and 3) To produce feedback for policy makers to guide future implementations of blockchain for transformation of public services. WP4 encompasses three tasks. First, to prepare an evaluation framework, based on a systematic review of relevant literature, describing what is known theoretically and empirically on the potential benefits and risks of the use of blockchain in public services. This systematic review examines the potential impact of blockchain technologies on citizens, governments, public servants and the third sector, from a political, socio-economic, legal and cultural point of view. This evaluation framework serves as a guide on user needs and societal challenges raised when introducing blockchain technologies for TOKEN partners. Second, to conduct an impact assessment on benefits and risks regarding the introduction of blockchain technologies in public services. The aim of this task is to assess the potential benefits and risks of blockchain technology from the point of view of public servants. It is based on in-depth structured and semi-structured interviews with stakeholders, followed by experimental vignette studies carried out in the use cases to explain public servants attitudes towards disruptive technologies. And third, to produce meaningful feedback for policy makers to guide future implementations of blockchain technologies for transformation of public services, highlighting the policy challenges presented by blockchain in the legal, political, financial, socioeconomic and cultural fields, and by setting out the main policy lessons that can be inferred from both the use cases and the literature on blockchain in public services.

## Public innovation

Marja Toivonen

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The concept of innovation is a ‘newcomer’ in the public sector. On the other hand, there is a growing need to find novel solutions to the challenges of ageing, health care, unemployment, social segregation etc. In most countries, the responsibility of answering these challenges is at least partially in the hands of public authorities. Both incremental improvements and systemic changes are important in the public context, and both top-down and bottom-up perspectives should be included. Top-down activities are linked to policies and regulations, the renewal of which is necessary to materialize public innovations. Bottom-up activities are linked to citizen empowerment and participation, and here innovations are manifested in new user-based and employee-driven practices.

In addition to individual innovations in public services, a system view is increasingly called for. The systemic nature of current problems is clearly visible in the areas of welfare and environmental issues: a specific answer to a specific problem often causes the emergence of a new problem. Striving for a system innovation means the simultaneous development of organizations, technologies, services, and multiple network relationships. Also a larger, paradigmatic, change is going on in the public sector. This change has taken place during the last thirty-forty years and includes the transfer from the traditional public administration to New Public Management (NPM) and further to the emerging Network Governance (NG).

Experimental approaches have gained ground both generally and in the public sector. Local experiments are seen as an engine for systemic changes as they engage multiple actors, co-creation and networked decision-making. A strength of experimentation is a close relationship between innovation and the practical forms of learning: learning-by-doing and learning-by-using. In the public context, there are, however, some specific issues that challenge the adoption of experiments. The aims of the governmental and local levels may differ, and the inclusion of the bottom-up perspective may be difficult, because of the traditional dominance of the top-down approach. Experiments are also often launched without an allocation of the responsibility and resources for the spread of the results. Models of the scaling-up of novelties are still rare in the public sector.

Along with digitalization, intelligent services will constitute an important infrastructure in society. Many governmental organizations and cities collect a broad range of data to perform their tasks. However, a big portion of this data is in silos. The analysis of the content of these silos would reveal new potential for integrated innovation activities. In several countries, there are examples of the opening of public data: legislation data, health data, energy data, meteorological data, or transport data. Next tasks are the development of more versatile services for analyzing and interpreting the open data and the further development of standards and practices to avoid the misuse of information.

## Living labs

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Living labs can be described as environments or settings for open innovation offering collaborative platforms for interaction between research, development and experimentation (Gascó 2017) thereby engaging researchers in practical problem-solving and practitioners in research. As societal phenomena, living labs in public sector emerge as a response to changing governance structures such as government experiments with New Public Management (NPM) and networked governance (Hartley 2005; Osborne 2006). Responding to such emerging and experimental governance structures, living labs contribute to reframing innovation as open, user-centric and stakeholder-based and give more attention to innovation as a specific task of public sector services. This is a radically different approach than earlier modes of top-down, internally driven and universal innovation spurred by political reforms and political leadership. It is also different from more informal innovation activities that grow out of everyday practices as living labs provide more structure to the innovation process. However, living labs are not widely spread phenomena in the public sector. They are niche activities (Smith and Raven 2012) through which actors engage in developing and framing (public) innovation. Designing innovation activities for the public sector and solutions for complex problem-solving requires an effective engagement in framing public innovation activities (Schot and Steinmueller 2018). The rationale for reframing innovation along these lines is to enhance public sector's innovation capacity and improve public innovation processes.

The presentation is based on three data sets: 1) a literature review of the literature on public service living labs, 2) in depths case studies of 22 public service living labs across Europe, and 3) three scenarios of living labs and recommendations to practitioners. Based on this extensive research, the presentation will give a brief overview over the following topics:

1. A theoretical framework emphasizing how living labs can be understood as ways to engage stakeholders in defining and solving the common goods of public service development, and what the difficulties may be.
2. Three living lab scenarios, which illustrate the derived approaches to living lab organizing in data: 1) living labs as cross-sectorial collaboration either based in or outside the public sector, 2) living labs positioned within the public sector and with the public sector as both main initiator and beneficiary and 3) Living labs initiated and led by citizens/citizen groups.
3. Structured recommendations to the research community and practitioners with theoretical conclusions, questions that practitioners must pose before setting up a living lab and recommendations in terms of what matters when setting up a living lab.

The recommendation to the research community is that especially the democratic potential in engaging citizens and users more radically in developing future public services calls for

further exploration. Also, the aspect of how living labs create impact and value, and to whom, need more refinement based on empirical studies. Such a future research plays a key role in building up the knowledge base as living labs become more widespread as an approach to public sector innovation.

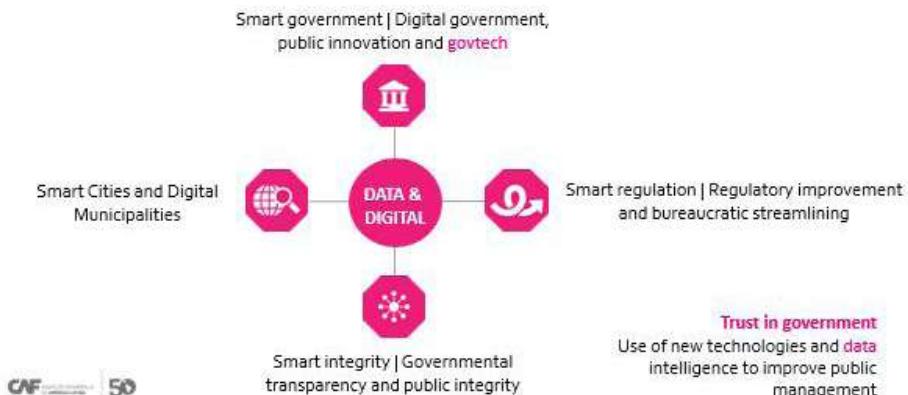
## Improving lives through public innovation

Carlos Santiso

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Taking this crisis as an opportunity to regional growth, CAF, the development bank which promotes regional integration and sustainable development in Ibero-America, includes the challenge of introduce public innovation through digital solutions (Figure 1). In that way, it promotes improvements in the efficiency and quality of governments' services offered to the citizens of our region, in order to deliver State modernization through more agile, open and innovative governments, supported by new technologies and data intelligence.

**Figure 1. CAF Agenda in digital innovation**



*Source: CAF*

The global agenda includes the promotion of Govtech ecosystem as one of the strategies, which leads towards new public-private partnerships to reset governments in a startup mode for the recovery. It is important to take in account that Govtech is not government technology. It is a new model for public-private partnerships to incubate and accelerate innovation in government through alliances between public agencies and tech-based, data-driven startups with a public vocation and seeking social impact to solve public problems.

A CAF Govtech platform was structured consisting of: the first Govtech Regional Report<sup>1</sup> (published with the PublicTechLab of IEUniversity in 2020); the Govtech Index 2020<sup>2</sup> (Figure 2), built in collaboration of the Oxford Insights, focused on analyzing the potential of national ecosystems in the region; proposal for an endowment fund for Govtech; Methodologies for the implementation of Govtech Laboratories and Public Challenge Initiatives; and the Govtech Observatory crowdsourcing tool that will identify startups in the region, which

<sup>1</sup> <https://scioteca.caf.com/handle/123456789/1645>

<sup>2</sup> <https://scioteca.caf.com/handle/123456789/1580>

includes a publication this year. In addition, various Govtech ecosystems were analyzed and opportunities for CAF in terms of investment funds, public programs, public policies and innovative public purchases in this sector were defined.

*Figure 2. Ranking of Govtech index (2020).*



*Source: CAF.*

All in, the digital challenge, in the wake of COVID-19, went from being a pending task and became an emergency to be attended by the states. In addition, Govtech is not only services digitization, but also their improvement and the development of digital solutions. In this sense, a citizen today is more digital and therefore expects from the State the same agility that any private service offers.



# Track 1: VALUE co-creation in public services

## Co-creation and co-destruction of value in public services – a struggle between conflicting interests?

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Co-creation and innovation has become concepts with a clear normative positive connotation in the public service delivery debate today. A branch within public service innovation theory is using a public service logic (PSL). Here, co-creation assumes an interactive and dynamic relationship where value is created at the nexus of interaction between service users and service providers (Osborne 2018). Within this perspective Grönroos argues that service providers cannot ever deliver value, but only offer a value proposition for the user and/or resources for the creation of value by the service user. Nevertheless, users may have different value preferences than the providers. It is also somewhat misleading to speak of co-creation as a single phenomenon, while there are so many steps in a co-creation process and quite many different actors that may be involved. Different actors may build their offer on different institutional logics, and conflicts about what the user need (from a professional point of view) and what they have the right to (rule orientation) is not unusual. One actor may spoil the efforts of another actor, or an interpretation of a rule can stop the realization of a wanted treatment, seen from another actor's point of view. Not at least we often find conflicts between different actors about their roles, and how to treat a client / beneficiary.

This means that value co-creation depends on the involved actors (both users and providers) ability, opportunity and willingness to integrate their resources in an interaction. It is not obvious that this will be reality; resources can also be destroyed or unused. We also have to take into account the effects over time; a response from a provider at time 1 can be seen as negative, while the user at time 2 can realize that it had positive effects. It is an important goal for public services to improve the situation of the users (adding value), but it is also important for public services to control the citizens and putting restrictions on their behaviour.

Our contribution in this paper is, by examining in depth eight interviews with persons in a vulnerable position, to discuss the diversity in the interaction between users and providers, and how the actors try to take care of their own interests. The public services will often have to handle their own conflicting goals, and the interaction with the users, in a situation with limited resources (Lipsky 1980). In the discussion of positive or negative effect, we will try to take into account the ambiguity. It is often not either-or.

## Value creation through intrinsic participation: the importance of context

Kirsty Strokosch<sup>1</sup>, Stephen Osborne<sup>1</sup>, Edwina Yida Zhu<sup>1</sup>

<sup>1</sup> University of Edinburgh

This conceptual paper will apply an ecosystem perspective to investigate citizen participation during public service production and the potential implications for value creation. It will focus especially on two research questions: what role do citizens play during public service production; and which factors influence value creation within a public service ecosystem?

The paper will commence with the presentation of the traditional understanding of citizen participation as an extrinsic process, suggesting that the role of citizens has been confined to the periphery of public service production. It will then introduce Public Service Logic, which draws on unique insights from service management theory to understand the process of value creation, particularly during public service delivery (Gronroos, 2019) but also within a complex and dynamic public service ecosystem (Petrescu, 2019). From this perspective, and drawing on an illustrative case study of social welfare in Scotland, the role of citizens will be explored, especially through the intrinsic participative processes of co-experience and co-construction.

The discussion will reframe citizen participation as an integral part of the value creation process during public service delivery and contextualization. It will also emphasize the complexity of a public service ecosystem where multiple actors are involved through various interactions and where value creation is also shaped by the contextual backdrop at different levels of the system (Frow et al, 2016).

This paper will be conceptual, but will include an illustrative case study from social welfare services in Scotland. A single cross-sectional case study research design was adopted, with 19 interviews and one direct observation conducted to generate rich insight.

This paper will offer an important contribution to theory. Value creation will be framed and understood as an inherently relational process, where value for public service users is influenced and shaped by their own experience of the service, the extent to which it meets their needs, but also broader contextual factors operating at various levels of the system (Rihova et al, 2013; Eriksson, 2019). It will therefore, contribute to the evolving theory on PSL.

## Levers of citizen participation in co-creation

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Leminen, Rajahonka and Westerlund consider that there have been several generations of living labs (Leminen, Rajahonka and Westerlund, 2017). These different generations of Living labs are in concordance with the user's new position in the process. However, the degree of the citizen participation and the tools used for the co-construction determine the forms and the intensity of the relationship, but they don't define the decision power of citizens in the whole process. Thus, the user is the cornerstone of the co-creation methodology which so relies on the space left to the user. Our objective is to study the capacity of living labs to generate levers for citizen participation in the co-creation process.

In terms of methodology, we focus on different living labs from the real estate sector located in different regions of France (TUBA Lyon, TUBA Mulhouse, Bordeaux Euratlantique). Theoretically, the analysis is enlightened by the mobilization of various theories related to commons and knowledge commons (Ostrom, 1990 ; Hess, 2015), creative communities, forms of organization and governance, and citizen participation (Arnstein, 1969) and the methodology of the grounded theory.

Living labs can help to solve problems related to the credibility of citizens in the co-creation process. Moreover, it can be a favourable vector for the creation of community. In fact, the living lab must allow the ideas expressed by the stakeholders to be understood and integrated. It must help to change everyone's approach in order to move from an individual vision of the problem, with personal constraints, to a collective vision of the problem, with collective constraints. Finding solutions requires that all stakeholders succeed in making others understand their positions and constraints. Living labs can be favourable vectors, facilitators who use tools and make it possible to overcome differences in terms of time constraints, credibility and legitimacy.

## References

Arnstein, S. R. (1969), "A ladder of citizen participation." *Journal of the American Institute of planners*, 35(4), p. 216-224.

Hess C., (2015), « Communs de la connaissance, communs globaux et connaissance des communs », in Coriat, B. (2015), (eds), *Le retour des communs. La crise de l'idéologie propriétaire*, Les Liens qui Libèrent, p. 259-274.

Leminen S., Rajahonka M., Westerlund M., (2017). Towards Third-Generation Living Lab Networks in Cities. , Talent First Network. URN:NBN:fi:amk-201801251648

Ostrom, E. (1990), *Governing the commons*, Cambridge university press.

## Radical value co-creation in public services: A Pragmatist case

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This paper argues that the robust and radical understanding of value co-creation - as rooted in service theory where co-production is recognised as an essential aspect of service delivery (Pestoff, 2012; Osborne et al., 2018) - calls for a Pragmatist conception of value. The emergence of co-production and co-creation in the 'new' paradigms of public administration, public policy reform and service delivery (Alford and O'Flynn, 2012; Nambisan and Nambisan, 2013; Osborne and Strokosch, 2012; Dickinson, 2014; Mulgan et al., 2019) is here traced against the backdrop of the Pragmatist account of valuation (Dewey, 1916; Callon & Muniesa, 2005; Lamont, 2012; Aspers & Beckert, 2015). The key insight of Pragmatism is that valuing is fundamentally a collective act of practical judgment taking place in specific contexts. Value is therefore 'neither an intrinsic quality of an object, nor a reflection of a subject's preferences, but rather something that is organized and brought into existence through mechanisms, technologies and practices of valuation' (Kornberger et al., 2015). In other words, value is configured and constituted through situated co-creation.

This paper explores the benefits of approaching value co-creation in public services and policy through the lens of Pragmatism. Before drawing any wider implications, it highlights the need to re-define value beyond the traditionally accepted registers of welfare outcomes and personal wellbeing. Crucially, in the Pragmatist framework, values don't just have sizes and magnitudes but also, directions and purposes (cf. Boltanski & Thévenot, 2006). Following this logic implies that what might be at issue in the radical value co-creation is a negotiation of different visions of social change. The resulting model of value should therefore be irreducibly multidimensional and pluralistic.

Critical discourse analysis is used as the primary methodological approach. The two bodies of discourse analysed are: the academic literature on the reform of governance and public services, and scholarship in the pragmatic sociology of valuation and Pragmatist philosophy. Elements of synoptic and conceptual analysis are applied to gain more clarity about complex discursive constructs such as co-production, co-governance, co-management, co-construction and co-design.

This paper proposes an important theoretical development that can prove very consequential for the understanding of the co-creation of public services. The proposed re-casting of the co-creation value presents not just a new conceptual model but puts a foundation for novel ways of exploring, analysing and assessing which public administration mechanisms and service delivery methods are fit to deliver radical value co-creation.

## Political and Cultural Determinants of Public Sector Innovation and Value Co-creation. The Case of Hungary

György Drótos<sup>1</sup>, Miklós Rosta<sup>1</sup>

<sup>1</sup> Corvinus University of Budapest

Comparative studies exploring the national differences of mainstream public management frameworks and methods have been requested for long by scholars and practitioners alike. Preliminary results of a recent survey within the CO-VAL research program (<https://www.co-val.eu>) involving six European countries suggest that such differences exist in the field of public sector innovation and value co-creation too. The objective of the paper is to disclose those political and cultural factors that can be partly or fully accounted for the sometimes rather divergent survey results of Hungary compared to the other five countries. These results are as follows: (1) much less completed public sector innovations than the average (2) much less direct user involvement in the innovation process than the average (3) much less input to the innovations from outside the public sector (except ICT firms). In addition, the widespread practice of non-visible (and sometimes forced) innovation and co-creation aiming at an acceptable service level will be presented, based on prior research.

Besides the CO-VAL survey and prior research mentioned above, detailed description of the recent political regime (often called “illiberal” state) and the resulting public administration practice will be applied as the basis of discussion, together with the conclusions of large-scale national culture studies, especially those of the GLOBE project (<https://globeproject.com/>).

The authors assume that some possible determinants of the observed innovation and co-creation patterns are political: the over-centralization of the institutional system and the decisions within the organizations, the strong politicization of public administration issues, the dominant legal approach (within the preset political limits), and the lack of resources (even mandatory tasks are hardly covered). Other influencing factors, however, seem to be cultural in nature (and as such, are even more difficult to change): the very high power distance and very low institutional collectivism indices of the nation as well as its higher than worldwide average score in group collectivism. Since quasi-autocratic political systems are not unique even within the EU anymore and the cultural characteristics of Hungary are rather similar to the rest of Central-Eastern Europe, these results might be generalized for other countries as well.

## **Interactive value formation: exploring the literature on dark side of the service experience from the perspective of value co-destruction (VCD)**

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Andrea Juliet Celis Leon<sup>1</sup>, Luciana Oliveira Militão<sup>1</sup>, Isabela Miranda Martins<sup>1</sup>

<sup>1</sup> University of Brasilia

With the objectives: characterize the profile of scientific production on value co-destruction (VCD); verify, in the current literature on VCD, which dimensions/variables have often been studied in empirical efforts; analyse the main service sectors that have served as a frequent site (locus) for VCD exploration and what agenda current VCD studies have proposed to expand knowledge of the construct and contribution to interactive value formation (IVF), this article is innovative in proposing a systematic review of VCD, by drawing a timeline in studies progress, characterizing the main economic activities that are research locus and centralizing the main groups of variables that are explored empirically.

A systematic literature review using the Prisma protocol (Liberati et al., 2009) was carried out of 93 articles published from 2010 to 2020. The analysis was based on two stages. In the first, the general characteristics of the articles were identified. In the second stage, dimensions, or variables of VCD have been frequently studied were identified.

To advance VCD discussion in order to level the knowledge on both value co-creation (VCC) and VCD, strengthening the understanding of IVF. As a result of this systematic review, new research possibilities are offered to explore VCD study. In the end, a research agenda is recommended for futures studies.

## **Management at the Spanish National Health System. Where are we now?**

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Public service provision has dramatically changed in Spain since the 1980s, when the National Health System was founded. From the demand side, population's need of services has also changed, due to the aging process, the access to new, better but many times also very expensive technology, and the change in the burden of disease from acute to chronic conditions. From the supply, in 2001 culminated the process of decentralization of competences in health. Since then, the Autonomous Communities are responsible for the planning and provision of public health in their territories.

We look at the evolution of public management in the health sector in Spain, from the Traditional Public Management to the New Public Management and the New Public Governance to exploring which features of the theoretical transition are observed and which are not. The particularities of the Spanish National Health System are taken into consideration, as well as the austerity measures.

The structure of the National Health System started following the traditional public management model. However, the process of decentralization has made of Spain an interesting case study in which the transition in the management model is not homogeneous. Several Autonomous Communities present very innovative ways of health provision within the public system, including quite plastic and dynamic management models, while others are navigating this transition at a much slower path. The economic crisis starting in 2008 and the austerity measures that followed boosted the need of change in management and the current COVID-19 pandemic can be understood as an opportunity to renovate and definitively promote the transition to a new governance model.

## **Understanding the Dynamics and Challenges of Multi-Actor Collaborations in the Co-creation of Public Value**

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In a world increasingly characterized by complexity, dynamism, and ambiguity, public value is often achieved through collaboration among multiple actors in multi-level settings (Bryson et al., 2017), who work together to reach common goals. Collaboration for public value, therefore, requires the engagement of stakeholders at both the organizational-level and the individual-level (e.g., citizens and professionals) to achieve “collaborative advantage” (Desportes et al., 2016; Huxham, 2003; Klievink, 2015). While inter-organizational collaboration brings together the diverse knowledge, resources, and expertise of different organizations, engaging individual citizens allows multiple voices to be heard to understand public needs and better inform public decisions to address those needs (Nabatchi et al., 2017; Sancino & Jacklin-Jarvis, 2016).

Previous studies have recognized different practices of collaboration at these two levels but have focused on one or the other, ignoring how both levels interact for a specific project or initiative. Thus, there is not enough knowledge on the drivers and challenges of collaborative initiatives that require the simultaneous engagement of different types of actors, and therefore different processes and dynamics. Further, there is also a need to understand how such interaction contributes to public value creation. To address this gap, this study aims to answer the following research questions: 1) what are the drivers and challenges of collaboration at the inter-organizational and the individual levels when both processes happen simultaneously? and 2) how does the interaction between these two levels of collaboration contribute to public value creation?

We use a case study approach of multi-actor collaboration in the development of a mobile application for emergency preparedness and response in the Town of Thurman, New York State. The collaboration includes local government organizations, the University at Albany, and Thurman residents. The data collection is proceeding in two waves: four initial focus groups were conducted between March and October in 2019 that gave us a good understanding of the collaboration processes, while 15 follow up interviews will be conducting in 2020 with public servants, project team members from the University, and residents, to understand drivers and challenges of inter-organizational collaboration and collaboration with citizens.

Current data shows that the agreement between the University and the Town enabled the involvement of residents, moderating some of the challenges of collaborating with citizens. We expect new data to show potential effects of residents’ involvement on challenges faced by inter-organizational collaborations as well the different actors’ perspectives on their contribution to public value creation.

## **Students' and parents' co-production in compulsory education: insights and challenges for public services**

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Education constitutes a significant case for studying co-production and co-creation of value in the context of public services. However, there is a lack of empirical evidence on which are the individual and organizational factors associated with co-production of educational services. This paper provides an empirical analysis on the relationship between a broad set of students' and schools' characteristics and both students' and their parents' co-production in compulsory secondary education in seven European countries.

This paper analyses which individual and school characteristics are positively or negatively associated with students' and their parents' activity as co-producers of compulsory secondary education in seven European countries. Additionally, it analyses whether parents' co-production is positively associated with their children's co-production. To do so, it uses survey data from PISA-2015, a large dataset which provides unique cross-country comparable information on students' (at the age of 15) and their parents' characteristics and attitudes, as well as on schools' characteristics. In this analysis, the paper follows Bovill et al. (2015) distinction of four roles of students and their parents as regards educational co-production: "consultants", "co-researchers", "pedagogical co-designers" and "representatives".

The results show that family background (parental education and occupation, as well as immigration status), student gender, school characteristics (public/private ownership, autonomy and location) and availability of ICT (both at home and at school) play a key role as determinants of both students' and their parents' participation in educational co-production. Nevertheless, these effects strongly differ depending on the type of activity, taking into account the four roles distinguished in educational co-production. Besides, parents' co-production is positively associated with their children's participation in co-production activities, albeit it does not mitigate any of the other effects found as regards the determinants of students' co-production. The last section of the paper discusses the implications of these results on the design and implementation of co-production which aim to focus on public service values, such as equity and social cohesion.

## From City to City-as-a-Service – exploring the transformation through the lenses of servitization and service-dominant logic

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The fundamental logic how the private and public sectors create value to regain competitiveness is dramatically changing (Normann & Ramirez, 1993). Within this transformation, two phenomena can be identified. Firstly, organizations servitize (Vandermerwe & Rada, 1988), by adding services to their offering. Secondly, a new managerial mindset is adopted, where the traditional view that organizations unilaterally create value for customers is replaced with the idea that value is co-created within systems (service-dominant logic (SDL); Vargo & Lusch, 2004). The former typically highlights reformations taking place in the processes, strategies, and business models. The latter generally explores changes taking place in managerial mind-sets.

The scarcity of empirical studies on both servitization and value-based perspectives in the public service sector welcomes further research. They both require fundamental changes in managerial worldviews. SDL is a work-in-progress open sourced for testing in real-world organizational settings to augment its theoretical and practical relevance (Gummesson et al. 2010; Vargo & Lusch, 2004). Further analysis is also welcomed on the implications of servitization in the public sector, since research on servitization strategies generally concentrate on manufacturing companies (see e.g. Neely 2008; Oliva & Kallenberg, 2003).

This study followed an action research approach, where the researchers carried out a 12-week co-creation project together with the studied organization. Participants from the case organization were individuals that are actively involved in the strategy reorganization process. Data are being gathered in participatory workshops and via interviews during fall 2020.

The case context of this study is City of Espoo (Finland) that is undergoing a major strategic reformation as a response to the societal demands and increasingly unpredictable nature of the operational and economic environment. The findings suggest there is a growing value-orientation and service-based thinking in the city context, which set new requirements for strategic management and affect their long-term survival. In particular, we explain how the common mental models, strategies, and organizational processes previously locked-in to a goods-dominant (top-down, supply-driven) worldview, are being replaced with a service-dominant (open and collaborative) perspective. Similar to other scholars (cf. Kindström & Kowalkowski, 2009) we observe extreme difficulties to depart from old habits to adopt these new perspectives and become a ‘City-as-a-Service’. As a response, this work introduces a service-dominant business model construct to explore and explain the simultaneous transformations taking place in the case context, and discusses how it can be used as a managerial tool to manage change.

## **Organizations CSR strategies: A long-run sustainability value creation model**

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This article analyses the academic debate regarding the need to adopt a long-term vision of firms socially responsible strategies. It's based on the premise that short run is the dominant approach in financial markets, and how this situation could be negatively conditioning the long-term sustainability value creation. To perform this analysis, a thorough literature review has been done across different specialized journals trying to determine and model the elements that can facilitate this sustainable value creation.

The literature review shows the alignment needed, between CEOs and their shareholders within the framework of Corporate Governance, to create long-term value within CSR. In addition, there are signs indicating a possible financial over-performance of companies which have, in their strategy, the creation of a shared value with stakeholders based on environmental, social and governance aspects (ESG). This improved financial performance would have the capacity to involve and align investors with the long-term ESG objectives. We argue that this situation can be reached when the selected objectives are the result of an appropriate selection of the ESG themes which are material to organizations and their stakeholders.

Last, a model is proposed in which potential drivers are identified to consider a long-term approach to create sustainable value in organizations, detecting a possible sequence of requirements and key issues for their achievement.

## **Social innovation in extreme institutional contexts: a case study of non-government organizations in Palestine**

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In politically complex and rapidly changing environment like Palestine, the discussion around NGO sustainability has brought attention to different stakeholders and policy makers (Nakhleh, 1989; NGOs development Center, 2009; Atia & Herrold, 2018). This discussion was lately intensified by the sharp decrease in external funding of the NGO sector, which remains largely donor-driven (Atia and Herold, 2018). For example, many of the NGOs in Palestine were obligated to decrease their activities – or cease work altogether – due to the cutting of USAID funds by the Trump Administration. This is of course linked with the refusal of Palestinian leaders to deal with the President Trump peace plan between Palestinians and Israelis. This added new social challenges and more complexities to the very difficult socio-economic environment that already exists in Palestine. It is in this context that the objective of this article is to introduce a new understanding for the sustainability of NGOs using a social innovation perspective. In other words, we concentrate discussion on the challenges that are facing NGOs in their endeavour of generating social innovations within an extreme environment. This research is guided by the following research question: what are the challenges of using social innovation to create a sustainability model for NGOs in Palestine?

To answer this research question, our article builds on the case of Palestine's NGO sector, a rarely studied context in organizational studies. From an engaged scholarship perspective (Van de Ven, 2007), studying Palestine cannot be more relevant than today considering the turmoil in which Palestinians are. Combining archival sources with 24 semi-structured interviews allowed us to better understand the challenges related to social innovation in Palestine. We theorized three barriers, which we called traps, allowing us to better understand these challenges: 'institutional trap' related to the broad institutional environment; a 'sustainability trap' related to the inter-field dependence; and an 'effectiveness trap' associated with the way the NGO sector in Palestine developed. Overall, this study enriches our understanding of social innovations in extreme institutional environments.

Proposition 1: NGOs use social innovation to create sustainability, but they aren't sustainable. Sustainability trap (dependence vis-à-vis international donors) – "Sustainability trap"

Proposition 2: Palestinian NGOs are heavily influenced by their international donors (taking western models and applying them in Palestine with almost no adaptation). Translating social innovations: taking western models and applying them in other contexts – "Translation trap"

Proposition 3: Palestinian NGOs are working in an institutional void (social enterprise, social innovation, charity, corporate social responsibility, innovation) – "Institutional trap".

## **Co-creation challenges in public sector - what can we learn from private sector?**

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In order to meet changing and increasing needs for public services, public sector tries to move away from the New Public Management-logic over to a co-creation approach where public, private and volunteer sector tries to develop new solutions through shared efforts. In doing so, design thinking is often used as a method for developing services in close collaboration with users. Design thinking comes originally from product design, where consumer acceptance is imperative for company survival. Thus, learning from companies developing new products can be highly valuable if one wants to put the needs of the user in the forefront.

However, there are tacit aspects of product development work that can be imperative for succeeding with design thinking. However, they are not expressed through the abstract design thinking models. The aim of this paper is to give insight in the tacit aspects of using design thinking and co-creation in a private company and use these findings to mirror and discuss how design thinking and co-creation is realized in public sector.

Commercial product development and public service development might seem to be so different that it is difficult to compare how development work is done in the two sectors. Nevertheless, one of the main elements in design thinking is to look for solutions that others have used on a similar problem and see how it can fit in on the problem in question.

Findings from a qualitative fieldwork studying new product development processes in private sector, is used to point out tacit aspects of successful co-creation. These aspects will then be used to explore and discuss findings from research and experiences on how co-creation is conducted in public sector.

The results from the research in the private company indicate there can be substantial differences between how public sector and private sector work with co-creation. Contrary to what we might expect, the range of what was seen as valuable output in the private company was wider and more flexible than appears to be in the public sector. This flexibility also led to a better use of the lessons learned and an improved ability to respond fast to upcoming challenges. The article can contribute to identify possible important elements in how to make good use of design thinking, and thus develop better value through co-creation in public sector.

## Transformation towards service(s) in Public Research and Technology Organizations

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As the world markets are becoming more competitive and increasingly unpredictable, public Research and Technology Organizations (RTO's) face a major strategic challenge: how to position themselves in a way that continues to offer opportunities for sustainable growth and advances for the society, for businesses, and for themselves. As a response, RTO's competitive strategies increasingly focus on service(s). The issue of how these organizations successfully adapt into service-thinking is topical, because it challenges the fundamental value creation and impact mechanisms. In essence, the focus is shifted from technology to the customer need; how knowledge about future market opportunities is turned into opportunities for renewal and growth.

Servitization (Vandermerwe & Rada, 1988) and service-dominant (S-D) logic (Vargo & Lusch, 2004) are used in this study as theoretical lenses to better understand the strategic renewal and organizational transformation towards service(s). The case context in our study is VTT Technical Research Centre of Finland – a leading Research and Technology Organization in the Nordic area – that has recently undertaken a major strategic transformation and reorganization.

Our study follows the approach of action research, where the researchers have actively been involved in the strategy reorganization process of the studied organization. Data has been gathered in participatory workshops and via interviews. Altogether, 10 customer and 41 upper-management semi-structured interviews were conducted during the years 2017-2019.

The findings suggest that increased service-thinking in the RTO domain manifests itself in the way in which these organizations look at customers' problems. New value is being created by: (1) redefining the customer problem into scalable solutions; (2) discovering new solutions into nascent demands; and (3) co-creating new demands with new solutions. Accordingly, the work introduces three service models. *Solution-Driven Services* are scalable and productized technology competence (e.g., IPR, technology knowledge, facilities) at market price. They focus on efficient service delivery, as both the customer problem and the solution are known. *Opportunity-Driven Services* are highly customized co-production services with pre-defined scope and scale. As the customer problem in this model is known, but the solution unknown, their focus is on effectiveness: co-creating outcomes beyond the obvious. *Vision-Driven Services* are innovative leaps co-created in innovation ecosystems with actors sharing a vision. As both the problem and the solution are unknown, their aim is to create new opportunities and societal impact through new value creation and disruption.

## The Continuing Evolution of Value Research in Service Marketing

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The concept of value is central to service marketing, as the objective of service firms is to support or enable value. However, the underlying assumptions about what value is guides the behavior of both firms and researchers, leading them to focus on some aspects over others. Indeed, the way value has been conceptualized in service research has evolved over the years. The purpose of this paper is to identify and understand how and why conceptualizations of value have changed over the years and where current developments are leading.

The paper uses key service literature to conduct a conceptual analysis of value research within the service marketing domain. The paper problematizes the underlying assumptions of existing value conceptualizations in service to distinguish between different perspectives on value.

We identify and compare three different waves of value research in service. We portray the first wave as a focus on value as a trade-off between benefits and sacrifices. The second wave depicts value as situated in experiences of use or customer-firm interaction. The third and currently emergent wave of value research characterizes value as a holistic understanding of the role and fit of offerings in the customer's individual or collective life. Here, the focus is not on experiences of (real or imagined) use, but rather on value as an understanding of one's current state of well-being within a particular domain of life, business or consumption.

Thus, the paper contributes to service research in two ways. First, it identifies and describes the three waves of value conceptualizations in service literature, depicting a development from an initial focus on trade-offs to a later focus on experiences, and currently evolving towards holistic understandings of individual and collective well-being.

Second, it clarifies the assumptions and implications of each of the three value conceptualizations, discussing how the third, emergent perspective can contribute with to service theory and business practice in the future. For service providers, the third perspective involves a shift of focus from value co-creation in the visible customer-firm interaction to a focus on how value is formed in the consumer's own life context, with an array of firms, people and other resources as ingredients in it.

## Value co-creation and innovation: the case of Portuguese firms

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The central objective of this research is to study value co-creation as a key driver for innovation in the development of innovative products/services applied in Portuguese firms. The innovation literature comprises different models and concepts, from linear models to non-linear models, namely open innovation, user innovation and co-creation. Companies evolved into non-linear models of innovation; however, information management remained producer-centered, lacking the ability to carry out an adequate collection of the specific needs of users. Both user innovation and co-creation address this issue. We aim to study the firms which make the decision, regarding their strategy, to move towards activities related to customer-centric information management. Although user innovation and co-creation have customer-centered information management, while user innovation strategy is customer driven, co-creation, being an integrant part of open innovation, has a firm driven strategy, hence being the most appropriate form of innovation to conduct this study. Co-creation is defined by the jointly creation of value, between companies and users, using iterative interactions to better identify user's needs, providing a unique experience during the process of the development of a new innovative product or service. It is also the most holistic since incorporates user innovation, with respect to the lead users, as a form to perform co-creation.

The data that is intended to be analyzed in order to fulfil the main objective of this research is secondary data provided by the CIS 2016, which is trustworthy, once it's validated by EUROSTAT. Applied in Portugal, the CIS section to be analyzed covers 4779 national responses from firms, configuring itself as a respectable amount of data, which allows a proper analysis, to be performed through econometric models.

It is expected with this study to grasp the benefits that Portuguese firms can obtain, namely, leveraging competitive advantage and be successful, if they assume strategically the integration of co-creation activities into their own innovation processes, for the development of new innovative products or services.

## Value Co-creation through RIS3 instruments

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Designing and acquiring skills and competences to address the challenges of new technologies and sustainability requires stakeholders' effort in private and public sector. In this respect, cooperation between them and co-creation of value is seen as a relevant approach. The main objective of the paper is to explore the potential of instruments aimed at enhancing smart specialization through improving the skills and competences of the employees in the strategic areas of development, chosen by EU countries. The focus is on the evaluation of Strategic development and innovation partnerships (SRIP) and Competence centers (KOC) and their contribution to the on-going implementation of Smart specialization strategy of Slovenia.

Evaluation of SRIP and KOC activities to better align the skills to technological and societal changes departs from the interviews with managers of SRIP, participating companies and research institutions. Principal method used in the exploratory analysis is qualitative evaluation of activities performed so far, using also available quantitative indicators.

The cooperation between the corporate and public research sector is the critical weakness of Slovenian innovation system. Instruments like Strategic development and innovation partnerships (SRIP) and Competence centres (KOC) present a new approach for the support of more effective collaboration between the key stakeholders and provide a platform for the co-creation of solutions, addressing the skills and competence gap found in business sector. Accordingly, we aim to identify strengths and weaknesses of stakeholders' joint activities in order to on one hand improve the existing skills and competences in business sector. On the other hand, the two instruments should help to better anticipate the demand for future skills and competences in a changing economic and societal environment underpinned by radical technological changes, with the aim of also adjusting the public education system.

# Track 2: Service INNOVATION and innovation ecosystems in services

## A European state-of-the-art of Public Service Innovation Network for Social innovation

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Conceptions about how public services should be produced have greatly evolved over the past fifty years. Currently, governments are looking for new solutions and new partners to deliver public services.

Innovation networks involving a variety of stakeholders are becoming common modes of co-production. This paper focuses on Public Service innovation Networks for social innovation as a new way of delivering public services. This paper provides a state of the art of the grey and academic literature on this new form of networks in several European countries (Denmark, France, Hungary, Norway and Spain).

Public service is interpreted both as specific service functions produces or co-produces by public-sector agents (public government and entities) as well as public services developed and carried out by other actors.

One of the objective of this paper is to clarify the role of these networks in public service innovation and new forms of public service governance. It provides conceptual clarifications in order to draw the boundaries between these networks and other value co-creation schemes (e.g. Living labs, Design...).

The paper is based on a survey of the relevant literature through a thorough research of all the relevant national databases using the Prisma method. Keywords used for extraction purpose in the different languages are combinations of the following ones: public services, social innovation, citizen participation, networks, partnerships, collaboration

The phenomenon of Public Service Innovation Networks focusing on Social Innovation exists under different names in several research as well as practical contexts. It covers different themes (e.g. co-creation, cooperation, public-private innovation partnerships, Social entrepreneurs, collaboration with civil society, modernization of the state, territorial innovation, digital technologies, innovation commons...). The frequency of these themes depends on the country.

The results give an overview of the nature of the innovation generated by these networks, the types of agents involved in these networks, the role of these agents and in particular of the public agent, the main sectors concerned by these innovations, the barriers and drivers, as well as the impact of the history and traditions of certain countries on these networks.

## References

Mohrer et al (2009), Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement, *Annals of Internal Medicine*, 151 (4), 264-269.

Torfing (2016), Collaborative Innovation in the Public Sector, Washington, DC: Georgetown University Press.

Merlin-Brogniart (ed.) *et al.* (2019) “4th empirical approach to value co-creation in public services: structural transformations”, Co-VAL Deliverable 6.1.

## The role of the State in the emergence and scaling-up process of social innovation networks

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Innovation networks involving a variety of stakeholders are becoming common modes of co-production (Sørensen, Torfing, 2010). Among these networks, social innovation networks are now increasingly seen as alternatives to the provision of public services by the state. But what are the types of relation between these rather local innovation networks and the State? The purpose of this paper is to analyse the role of the state in designing, commissioning, delivering, controlling, and upscaling, social innovation networks.

Our hypothesis is that there are main differences of how public sector innovation networks emerge, operate and deliver services to citizens in different institutional settings. These institutional arrangements – rules of the game – can be scrutinized in a given time and place. The formal institutions are shaped by the state by deciding on public policies. However, decision-making of the state is not fully free due to path dependency and the informal institutions of the given society.

We use as a framework the literature on public service innovation networks, as well as the literature on political economy and institutional economics. Different patterns of institutional arrangements and coordination mechanisms (Acemoglu, Robinson, 2005, North, 1990) could be in favour of innovation networks and entrepreneurial activities, or on the contrary, could undermine them (Baumol, 1990; Pasquier, Perron, 2008).

This study is based on a qualitative research approach. Several significant case studies of innovation networks focusing on Social Innovation have been identified in Hungary and France. These countries have been chosen having a long history of centralization process, so they have some common patterns, however they institutions differ significantly. Case-studies have been carried out with the same “case study framework”.

The results indicate that in countries with a state-centered tradition, the state continues to try to control over social innovation networks.

The state can position itself as a driver to solve social problems by providing the framework and encouraging stakeholders to develop innovation networks, but too much formalization of support can be contrary to the natural principles of cooperation.

Some social innovations could not easily be standardized to be disseminated: a case-by-case basis dissemination taking into account local specificities is often needed.

While communicating success stories of social innovation networks and disseminating the innovation is in the nature of the innovation itself, attempts to upscale these social innovation networks, or to re-internalize innovation projects into public structures, might also have negative consequences on the sustainability of these networks.

We propose a grid for analyzing the degree of state control of citizens' and local initiatives. Depending on the degree of control, the consequences on the networks can be negative (capture by the State) or positive (network reinforced at the national level).

## References

Acemoglu, D., Robinson, J. A. (2005), Economic origins of dictatorship and democracy. Cambridge University Press.

Baumol, W. P. (1990) Entrepreneurship: productive, unproductive, and destructive *Journal of political economics, Journal of Political Economy*, Vol. 98, No. 5, Part 1, 893-921.

Pasquier, R, Perron, C. (2008), Régionalisations et régionalismes dans une Europe élargie : les enjeux d'une comparaison est-ouest, in *Revues d'études comparatives Est-Ouest*, vol. 39, n°3, 5-18.

Sørensen E., Torfing J. (2010), Collaborative Innovation in the Public Sector: An Analytical Framework, *Working paper n°1/2010*, Research project (CLIPS) funded by the Danish Strategic Research Council, Roskilde: Roskilde Universitet.

Merlin-Brogniart C. (ed.) *et al.* (2019) “4th empirical approach to value co-creation in public services: structural transformations”, Co-VAL Deliverable 6.1.

North, D. C. (1990). Institutions, institutional change and economic performance. Cambridge university press.)

## Social innovation impacts in European public administrations

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Social innovation was traditionally in reference to activities within the third sector and social entrepreneurship. However, this concept has been extended to apply to many other dimensions of socioeconomic activity, one of which is the public sector.

The proposal of this paper is twofold: i) to provide an analytical framework with which to understand social innovation in public services, and ii) to provide new empirical evidence on how social innovation works and provides impacts in European public administrations.

We will investigate factors that may lead to success in the innovation of public services at three social innovation levels: inter-organisation level, intra-organisation level and extra-organization level (and particularly regarding users).

Innovation impacts will cover a range from internal dimensions (such as employee satisfaction, costs, etc.) to other dimensions that are linked to societal needs (time to deliver a service, capacity to provide a service to whoever needs that service, etc.).

The explanatory focus will be placed into four dimensions: 1) collaboration with other agents (both internal and external to the public sector), 2) sources of innovation ideas, 3) origin of the innovation climate (whether it is bottom-up or top-down), and 4) motivations.

The study will begin with a survey that is aimed at a large sample of public agencies, government branches, and similar agents across six European countries in different sectors (from education or health to social services).

With this database, a series of logistic regression models will be estimated. The results of the estimations will allow us to identify the relation of the aforementioned factors with the impact they generate in each of the innovation results.

The paper identifies whether the collaboration with a different set of agents is related to the impact of the innovation in public services in a large set of dimensions, as well as the relevance of other internal, motivational, and organisational explanatory factors. There are different paths with different impacts, depending on different types of social innovation levels. The role of users and collaborations for co-creating services are in providing higher levels of perceived impacts.

The conclusions of these results will be valuable, both for a better internal organisational design of the public agencies in order to increase the probability of success in their innovative activities, as well as to design collaboration partnerships with which to innovate.

## Social Innovation in Active Mobility Public Services

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This study aims to explore the panorama of initiatives for active urban mobility in São Paulo, the largest Brazilian megacity, emphasizing the relationship between social innovation and opportunities for innovation in services, considering these initiatives: Reduced Speed Zone, Open Streets Program, and Complete Street. We propose the incorporation of a broader innovation approach for exploring the potential of innovation in services that address sustainable urban mobility issues (Calabrese et al., 2018a, 2018b), including strategies such as social inclusion, and social innovation itself (Moulaert et al., 2005; Mulgan, 2006; Djellal and Gallouj, 2012).

Stare (2013) and Cruz and Paulino (2013;2019) show that the challenges are even greater in contexts of developing and emerging economies, which public services demand innovation not only in terms of efficiency gains, but also in terms of transparency and responsiveness to users'/ citizens' needs (Mohnen and Stare, 2013; Cruz et al, 2017; Cruz and Paulino, 2019).

The research methodology is based on four steps:

1- Identification and mapping of initiatives

2- Cases studied selected: São Miguel Paulista and Santana Reduced Speed Zones; Joel Carlos Borges Complete Street; and Paulista Open street Program.

3- Primary and secondary data collection: reports and interviews with stakeholders from public and third sectors

4- The multi-agent framework for service innovation (Gallouj and Weinstein, 1997; Windrum and Garcia-Goni,2008) incorporating analysis variables to characterize the social innovation (e.g.: actions to highlight social needs; third sector interaction with the public sector; support from public policies for the diffusion of innovation, among others).

Through the work of third sector organizations, we highlight the role of volunteers and collectives in the creation and introduction of solutions for active mobility, which meet social needs based on the inclusion of pedestrians as a priority in the use of urban road space. The organizations draw attention to the interests of the individual citizen and use their experience to interact with the public service provider (City Hall) in the identification of areas for intervention and in the establishment of evidence bases on the effectiveness of the techniques used for the requalification of the road space. They also assist in the definition of forms and characteristics of social innovation (service characteristics), that represent solutions to social needs presented to the public sector (service provider).

The innovation in services occurred in new ways for treatment of infrastructure for pedestrians, in the local context, aiming at maintenance and re-qualification of infrastructure for walking, cycling and integration with public transport. It shows the relevance of paying attention to forms of non-technological innovation, and that the deliberate structuring of innovation networks does not necessarily support innovative processes and results verified in the local context.

The paper provides elements for the discussion of public policies aligned with urban mobility challenges in the 21st century: attuned to social and environmental needs and suitable public services for prioritizing active modes of transport.

## References

Ahmed, S., Elrahmann, A (2016) Tactical Urbanism – a pop-up local change for Cairos built environment, Urban Planning and Architecture Design for Sustainable Development, UPADSD 14- 16 October 2015, Procedia - Social and Behavioral Sciences 216 ( 2016 ) 224 – 235. doi: 10.1016/j.sbspro.2015.12.032.

Banister, D. (2008). The sustainable mobility paradigm. *Transport Policy* 15 (2), 73–80. <http://dx.doi.org/10.1016/j.tranpol.2007.10.005>

Brazil (2012) Política Nacional De Mobilidade Urbana, Lei 12.587/12

Calabrese, A. , Castaldi, C. Forte, G., Levialdi, N. (2018a) Sustainability-oriented service innovation: An emerging research field / *Journal of Cleaner Production*. DOI: 10.1016/j.jclepro.2018.05.073

Calabrese, A. , Castaldi, C. Forte, G., Levialdi, N. (2018b) Fostering sustainability-oriented service innovation (SOSI) through business model renewal: The SOSI tool, *Journal of Cleaner Production*. DOI: 10.1016/j.jclepro.2018.05.073

Cloutier, G., M. Papin, C. Bizier (2018) Do-it-yourself (DIY) adaptation: Civic initiatives as drivers to address climate change at the urban scale, *Cities*, 74 (2018) 284–291. <https://doi.org/10.1016/j.cities.2017.12.018>

Cruz; S., Paulino, S. (2013) Analysis of Access to Clean Development Mechanism Landfill Projects through a Multi-Agent Model. *International Journal of Environmental Science and Development*, p. 268-271.

Cruz, S. R. S.; Paulino, S. R., Paiva, D. (2017). Verification of outcomes from carbon market under the clean development mechanism (CDM) projects in landfills, *Journal of Cleaner Production*, Volume 142, Part 1, 20 January 2017, Pages 145-156. DOI 10.1016/j.jclepro.2016.04.022

Cruz, S. R. S.; Paulino, S. R. (2019). Active Mobility Challenges under public services perspective: experiences in the city of São Paulo. *urbe, Rev. Bras. Gest. Urbana* [online]. 2019, vol.11, e20190026. Epub Sep 09, 2019. ISSN 2175-3369. <https://doi.org/10.1590/2175-3369.011.e20190026>.

Detran (2019) Departamento Estadual de trânsito de São Paulo, Frota de Veículos em SP. Disponível em: <https://www.detran.sp.gov.br/> Acesso em: mai.2020.

Djellal, F., and F. Gallouj. (2012). Social innovation and service innovation, in *Challenge Social Innovation Potentials for Business, Social Entrepreneurship, Welfare and Civil Society* edited by F. H-W. Hochgerner, and J. Howaldt, 119-137. Berlin: Springer.

Djellal, F., Gallouj, F., Miles, I. (2013) Two decades of research on innovation in services: Which place for public services?. *Structural Change and Economic Dynamics*, Elsevier, pp.98-117. DOI: 10.1016/j.strueco.2013.06.005

Djellal, F.; Gallouj, F. (2018a). Services, Service Innovation and the Ecological Challenge. in Faïz Gallouj and Faridah Djellal (eds), *A Research Agenda for Service Innovation*, Edward Elgar Publishers, 2018. <hal-01672570>

Djellal, F.; Gallouj, F. (2018b). Fifteen Advances in Service Innovation Studies. in Ada Scupola and Lars Fuglsang. (eds), *Integrated Crossroads of Service, Innovation and Experience Research-Emerging and Established Trends*, Edward Elgar Publishers, 2018. <hal-01672567>

Gallouj, F; Weinstein, O. (1997). Innovation in Services. *Research Policy*, v.26, p.537-556, 1997. DOI: 10.1016/s0048- 7333(97)00030-9

Gallouj, F. (2002) Innovation in the service economy: the new wealth of nations. Cheltenham: Edward Elgar.

IBGE (2019) Instituto Brasileiro de Geografia e Estatística estimativas populacionais dos municípios para 2019. Disponível em: <https://cidades.ibge.gov.br/brasil/sp/sao-paulo/panorama> Acesso em: mai 2020.

Lydon, M., Garcia, A (2015) Tactical urbanism? Short term action for long-term change. The streets plans collaborative, inc. Page 26,36, 171.

Mohnen, P.; Stare, M. (2013) The notion of inclusive innovation. In: Wobbe, W. (ed.) *Inclusive innovation and service innovation*. Luxembourg: Publications Office of the European Union.

Moulaert, F., Martinelli, F., Swyngedouw, E. and Gonzalez, S. (2005), “Towards alternative model(s) of local innovation”, *Urban Studies*, 42(11), pp. 1969-1990.

Mulgan, G. (2006). The Process of Social Innovation. In: Innovations: Technology, Governance, Globalization Volume 1, Issue 2, Spring 2006 p.145-162.

Stare, M. (2013) Seizing the opportunities of service innovation: Policy brief no. 7. In: Wobbe, W. (ed.) Inclusive innovation and service innovation. Luxembourg: Publications Office of the European Union.

Windrum, P., Garcia-Goñi, M., 2008. A neo-Schumpeterian model of health services innovation, Research Policy, Elsevier, vol. 37(4), pages 649-672, May. DOI: 10.1016/j.respol.2007.12.011.

## Value co-creation and impacts in service ecosystems

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Dealing with complex societal problems and continuously changing social systems requires flexibility, interconnectivity and collaboration. That drives the emergence of networked structures and innovation ecosystems. However, innovations at the system level do not emerge without policy measures and governance structures that support their creation and evolvement (Hyytinens & Toivonen, 2015).

Our paper studies impacts of ecosystems and generates a framework for their analysis. It provides understanding of how an innovation ecosystem co-creates value and how an impact-driven approach fosters common target setting and governance in an ecosystem.

Theoretically, the paper is rooted on the concept of value co-creation and ecosystems analysis based on it. The core idea is that value is a multidimensional phenomenon and it is co-created in a network of mutually dependent actors (Vargo & Lusch, 2016; Wieland et al., 2016). Networks are not just aggregations of relationships, but dynamic systems whose critical characteristic is self-adjustment: they are simultaneously functioning and reconfiguring themselves (Vargo & Lusch, 2011; cf. Giddens, 1984). The impacts are defined by the users and ecosystem collaborators (Prahalad & Ramaswamy, 2004, Edvardsson et al., 2011).

To identify impact criteria and related indicators, we apply the multi-criteria approach of evaluation (Djellal & Gallouj, 2010, 2013). It is used to generate understanding of multiple impacts of innovations and ecosystems. Besides traditional techno-economic impacts, it puts emphasis on intangible aspects such as services and systemic and societal changes.

Our paper uses multiple case studies (Ragin, 1994) to understand value-co-creation in a complex system of actors. We follow the approach of action research, which allows researchers to be actively involved in the studied ecosystems. Data is gathered in collaborative workshops and via interviews.

Our focus is on seven ecosystems, which represent distinct fields of industries: mobility and transport, smart energy, food economy, industrial automation, health care, circular economy, and electronic industry. Their common nominator is that they are complex, multi-organisational environments. Multiple domain experts and actors with various targets collaborate in them to develop solutions and to apply them to serve user needs at the level of industries, economy and broader society.

Our study generates understanding of ecosystem impacts. It makes visible how these impacts are created and how they manifest themselves in ecosystem competence building and business as well as at the level of industries, the economy and the society.

Key results of the study are: 1) understanding dynamics and interconnectedness of value creation in ecosystems, 2) identifying impacts of ecosystems from the multi-criteria perspective, and 3) understanding how the framework of impact evaluation can support systematic and continuous evaluation and governance of ecosystems in order to support ecosystems to reach their systemic goals.

## A Conceptual Framework for Consumer Inventory Management Services

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Recent developments in retail and technology already pave the way for services in which suppliers manage and replenish a private buyer's inventory. For example, e-commerce subscriptions experienced unprecedented double digit growth over the last years; thereof, mere replenishment subscriptions drive a significant portion of the overall trend (Chen et al. 2018). Reports from the packaging industry reveal that in the future milk jugs, bottles, and boxes will have sensors to reorder its own refill. Regarding household appliances, a new generation of dish washers, coffee makers and washing machines is smart to either let you know or directly place an order when they run out of supplies. Ultimately, new service offerings such as Walmart's direct-to-fridge pilot "InHome Delivery" seem to be a great success (Cain 2020) and demonstrate the market demand for *Consumer Inventory Management Services* and its significant value to consumers.

While these likely are just early appearances of a bigger *Consumer Inventory Management Services* trend to come, the basic principle is already established in B2B. Known as vendor-managed inventory (VMI), the topic has become a multidisciplinary research topic in the late 1990s. Findings of this literature stream suggest that both the buyer and the supplier significantly benefit from VMI, for example, due to reduced costs and stock-outs, increased administrative efficiencies, and higher sales and profits (for a review see Lee et al. 2015). Therefore, it seems likely that it also entails considerable benefits for consumers. However, buyer-supplier relationships in B2C are fundamentally different to those in B2B, primarily because consumer psychology and behavior need to be considered at its core. It therefore seems appropriate to consider *Consumer Inventory Management* a research theme on its own and not just as 'VMI for B2C'. Against this background, the goal of this research is to develop a conceptual framework of *Consumer Inventory Management Services* and to ascertain its antecedents and consequences for from both a buyer and a supplier perspective.

Conceptual / literature review / desk research.

This study is expected to establish a conceptual foundation / framework to define the domain of *Consumer Inventory Management Service*, its scope, as well as specify the key similarities and differences of B2C and B2B environments to derive a research agenda with corresponding propositions for further research.

## **“Platforming”: a historical perspective of designing and delivering innovative logistical services**

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The question linked to the universalist or culturalist nature of management tools and approaches is a very old. This is also the case in economics, with the seminal work of Rostow (1960/1990) who tried to identify a standard model of the stages of economic growth, independently of any institutional context. Logistical services do not escape the temptation of universalism, i.e. the application of the same organizational framework of product flows, also independently of any institutional context. Since the 1980s, the implementation of platforms by large retailers has thus become widespread throughout Europe. The policy of “platforming” has led them to abandon direct supplies to their stores from manufacturers’ factories. This policy has spread to all large retailers in a homogeneous manner, which allows many academics to conclude that “platforming” is a universal service model. It is possible here to refer to *circulation norms*, in the sense of Colin (1982), which are imposed on companies in the management of their supply chains. We will show how circulation norms provide an original insight into the implementation of service innovations that are very present in contemporary supply chains.

Historians report on situations in which “platforming” was at the origin of logistical performances, some of which led to the success of projects that were fatal for humanity (like triangular trade). The interest of the approach is to investigate historical phenomena in order to better understand the contemporary dynamics of some innovation ecosystems within logistical services, which sometimes lead to excesses of what Bauman (2007) calls “liquid times”. The methodology is based on the analysis of secondary data from research conducted by historians on the phenomena mentioned, identifying more specifically the designing and delivering of innovative logistical services in their works.

The purpose of the paper is to underline that circulation norms are not linked to the managerial revolution that began in the second half of the 20th century. On the contrary, they appear very early on as a true service innovation. Through three sometimes dramatic historical examples (the triangular trade, the Armenian genocide, the Overlord operation), we will describe the existence of highly structured “platforming” processes, which today serve as a reference to the famous hub-and-spokes model. The three historical examples finally allow us to identify a “service-based archetype” that indicates how public-private networks for logistical innovation were created in the past.

## **Innovation in Public Services. Mexico transformation of government's policies 2019-2020**

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Mexico's public sector is changing, accordingly, with the so called 4th transformation (4T)<sup>1</sup>, which is beginning with the actual government since December 2018, improving its ability to deal with some societal historical demands. The main goals could be grouped in: Well-being<sup>2</sup>, Diminishing the unequal distribution<sup>3</sup>, Justice<sup>4</sup>, Democracy<sup>5</sup>, and No corruption<sup>6</sup>. (DOF, 2019).

To assess the new government policies in Mexico considering two aspects; 1) Innovation in public services, and 2) to contrast public services with qualitative aspects such as: Co-creation; Multi-agent frames; Public-private networks; Social innovation.

A selection of some public services is made based on its relative importance given by: 1) the resources and investment involved; 2) The innovativeness of the selected public services, measured by an Index adapted to its nature, weighing capacities and results. (Corona Treviño, 2015); and, 3) the trajectory breakthrough, set against between changes or conserving heavy cultural ecosystems;

The service innovations selected are depicted considering which goal there are attending and the Minister in charge of it

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<sup>1</sup> The 4T, is a priori called after the three main historical deep changes: 1) Independence (1810-1821): after 300 years of the Spanish Colony.

2) Reformation (1858-1861: after the war between liberals and conservatives, the "Reform Laws" emerged that has implied the separation of the Church and the State, and

3) Revolution (1910-1917): armed conflict against the dictatorship of Porfirio Díaz, the Constitution currently in force in Mexico was promulgated, and the distribution of agricultural land was initiated.

The following colloquial phases are related to those goals (DOF, 2019):

<sup>2</sup> "No more hunger"

<sup>3</sup> "For the good of all, first the poor" "Don't leave anyone behind, don't leave anyone out"

<sup>4</sup> : "There can be no peace without justice" "Respect for the rights of others is peace" "Outside the law, nothing; above the law, nobody"

<sup>5</sup> "Democracy means the power of the people"

<sup>6</sup> "eradicating corruption from the public sector is one of the central objectives of the current sexennial", "typify corruption as a felony"

**Table 1:**

Goal	Service	Ministry of
Well-being ,	1. Welfare Bank 2700 branches.	Treasury
No corruption	2. BUSINESS CORRUPTION: - Subcontracting - false invoices - Facade companies	
Diminishing unequal distribution	3. Young people building the future	Labor
	4. The school is ours	Education
No corruption	5. Consolidated purchases (vs oligopolies): Supply.	Health
Democracy	6. Social communication: “Mañaneras”*, “The Pulse of Health”.	Presidency

\* Every morning press President conferences

Each service is compared to look out similar world public experiences, if any. Also, an achievement is estimated for one year or less of application. So, an appraisal could be settled for the whole presidential period -until September 2024-, providing the expected challenges, to meet the degree of satisfaction of the social historical demands.

The adaptation of the innovativeness Indico Index to public services is presents and discuss considering its possibilities and limitations.

## References

Corona Treviño, L. (2015). *índice INDICO: Innovación en las empresas*. México: Working Paper, 4, Cepcyt FE UNAM.

DOF. (12 de 07 de 2019). *Plan Nacional de Desarrollo 2019-2024*. Recuperado el 02 de 02 de 2020, de Diario Oficial de la Federación: [https://www.dof.gob.mx/nota\\_detalle.php?codigo=5565599&fecha=12/07/2019](https://www.dof.gob.mx/nota_detalle.php?codigo=5565599&fecha=12/07/2019)

## **Collaborating for social innovation in public services: public service innovation networks for social innovation (PSINSIs)**

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The tertiarization of Innovation Studies (IS), i.e. the integration within this field of research of forgotten sectors and invisible forms of innovation also leads to the integration of new collaborative organizational forms of innovation, in particular innovation networks. Therefore, there is an enrichment and a tertiarization of the concept of innovation network (Desmarchelier et al., 2019). Indeed, beyond the traditional innovation networks (TIN) which have been extensively addressed in the literature, new expressions of innovation networks emerge: public-private innovation networks in services - PPINs - (Gallouj et al., 2013), market service innovation networks (MSINs) and the so-called public service innovation networks (PSINs) and public innovation networks for social innovation (PSINSIs).

This communication is therefore devoted to the discussion of PSINSIs, namely innovation networks which are formed in the field of public services (sector) or public service (function) and which bring together public and private agents, in particular citizens, in order to solve societal problems through social innovation.

This work is based, on the one hand, on a review of the literature on social innovation, innovation in public services, and on innovation networks in public services, and, on the other hand, on a PSINSIs case studies database established within the European Co-VAL project. This database includes 25 cases of PSINSIs identified in 5 European countries (France, Spain, Norway, Denmark, Hungary). These in-depth case studies were selected from the following social or societal areas: elderly issues, education, minorities, long-term unemployment, environmental protection. They include data on the following topics: type of innovation/type of innovation process, type of innovation network (mode of formation, mode of functioning, evolution in space and time), drivers/barriers, institutional factors, impacts/performance.

This work is expected to bring new results, in particular on the following topics:

- The definition of social innovation, of public innovation and of social innovation in public services.
- The characteristics of networks for social innovation in public services compared with other types of innovation networks.
- The common points and the differences between PSINSIs according to national contexts and to the social or societal domains considered.
- The managerial and political recommendations derived from a benchmark analysis of the various cases.

## References

Etzkovitz, H., and L. Leydesdorff. 2000. "The dynamics of innovation from national systems and 'Mode 2' to a triple helix of university-industry-government relations". *Research Policy*, 29 (2): 109-123.

Desmarchelier B., Djellal F. Gallouj F., (2019), Towards a servitization of innovation networks: a mapping, *Public Management Review*, <https://doi.org/10.1080/14719037.2019.1637012>

Gallouj F., Rubalcaba L., Windrum P. (eds) (2013), *Public-Private Innovation Networks in Services: the dynamics of cooperation in service innovation*, Edward Elgar Publisher.

## Public Service Innovation Network for Social Innovation: A european overview

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Since the mid-2000s, researchers have been interested in the emergence of new types of tertiarized innovation networks. However, this literature is still in its infancy regarding Innovation Networks focusing on innovation in public services (PSINs) and particularly networks dedicated to Social Innovations (Sørensen and Torfing, 2010). At the same time, on a political level, governments are looking for new solutions and new partners to deliver public services.

The purpose of this paper is to analyse the type of innovation, innovation process and the role of the various actors in co-producing social innovation within the context of public service innovation networks for social innovation. Do these innovation networks belong to a specific governance paradigm? Are they based on an interactive and open concept of the dynamics of production and innovation? What are the modes of formation of these networks?

This analysis is based on a collection of case studies located in different European countries (Merlin-Brogniart et al., 2019). We use the literature on public service innovation networks which conceptualizes innovation as a collaborative and collective process that involves many and different actors over time.

This study is based on a qualitative research approach. In each country, five significant case studies of Public Service Innovation Networks focusing on Social Innovation have been identified in order to understand the type of innovations, innovation process and innovation network, the role of the actors, as well as the drivers, barriers and institutional factors.

To ensure national and sectoral comparisons, the cases are based on the same social issues (elderly care, education, Immigration, long-term unemployment, environmental protection), and have been carried out with the same “case study framework”.

Our findings suggest that innovation produced by these networks covers a wide variety of non-technological aspects of innovation as well as technological aspects. The innovation processes are mainly based on an interactive dynamics of innovation centred on multi-agent collaboration with the objective of value co-creation.

Different types of actors are involved in these social networks (public actors, third sector actors, citizens and users, and sometimes private companies). These networks can emerge

in a spontaneous and self-organized way. The spontaneous emergence of this type of network can be explained by the lack of public solutions to a given social problem, or by the ineffectiveness of the existing solutions. However, public actors appear to play a significant role in structuring or supporting these innovation networks.

## References

Sørensen E., Torfing J. (2010), Collaborative Innovation in the Public Sector: An Analytical Framework, Working paper n°1/2010, Research project (CLIPS) funded by the Danish Strategic Research Council, Roskilde: Roskilde Universitet

Merlin-Brogniart C. (ed.) *et al.* (2019) “4th empirical approach to value co-creation in public services: structural transformations”, Co-VAL Deliverable 6.1.

## **Modelling public networks for collaborative social innovation: a quantitative exploration of the employment and social public services**

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Public Service Innovation Networks (PSINs: Desmachellier & Gallouj, 2019) have been described as very resourceful multi-agent (not only human) collaborative practices to produce social innovation and solve wicked social problems. These complementary practices produce different combinations of public and non-public agents, involving many other types of components. But to this date, we found a lack of empirical demonstration of those building components and their effect on these collaborations' innovation ambitions.

In this research, we will explore how PSINs mediate the relationship between their building components – i.e., sectors, actors, innovation types and functioning structures – and the innovation of two types of public services: employment and social services.

This exploration will depart from a selection of structural variables – i.e., sectors, actors, innovation types – and dynamic variables – i.e. functioning structures – that might affect how PSINs innovate public services. After collecting primary data from 232 Spanish experienced participants in this type of networks using an ad-hoc survey, we will build a measurement model to identify the scale of each variable and a structural model to assess its effects on the innovation of public services. To develop both models, we will use structural equations and the partial least squares (PLS-SEM) algorithm. With the PLS algorithm and other techniques (e.g., MGA, POS), we will then describe the observable and hidden heterogeneity of the different networks and their impacts.

We will firstly build the scales of the constructs that describe PSINs as aggregations of agents: individuals, coordination methods, types of innovation, etc. Before studying PSINs as collections of nodes and links, our scales will identify which elements of these networks beyond nodes are meaningful and underpin their construction and the results they produce. More importantly, we will be able to grade these elements, highlighting the most and least influential.

Once we know the scales of each building element of a PSIN, we will model their connection with the innovations in the employment and social services. Our model will be able to identify the relevance of collaboration (bottom-up innovation) for public innovation in these two public environments, in terms of predictive power (R<sup>2</sup>) and size (Q<sup>2</sup>). Using different techniques, we will also be able to assess the differences of meaningful observable moderators (e.g., sectors, types of problems) and unobservable characteristics or groups.

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## **Network Co-production of Public Service: Interaction of Multiple Agents in Digital Platforms of the European Union and Brazil**

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In the European Union and in Brazil cases, governments provide a public service through a digital platform to resolve conflicts between consumers and companies. Known as Online Dispute Resolution (ODR), it is faster and less expensive than the traditional judicial system. Although the literature has advanced in the discussion of the services co-production, little attention has been dedicated to the analysis of the phenomenon from the perspective of networks of multiple agents. In this context, this research aims to analyze the interaction of multiple agents in the network co-production of the public service ODR offered on the digital platforms of the European Union and Brazil. It has as specific objectives: i) to characterize the responsibilities of multiple agents involved in network co-production in the two cases under study; ii) describe the network co-production processes of the ODR service provided by the EU and Brazil; and iii) demonstrate the interaction of multiple agents in the network co-production process of the ODR service offered on digital governmental platforms.

The research is qualitative exploratory-descriptive and adopts as a method the analysis of two case studies: provision of ODR service through the European Online Dispute Resolution and the Brazilian Consumidor.gov.br digital platforms. Data on the regulation of the European Union (EU) and Brazil including information, documents, and an open database available on the respective governmental digital platforms were used. Content analysis was adopted as an analysis technique.

The ODR platform was recently adopted in EU and Brazil to offer greater access to justice. In both cases, three agents act as co-producers: government, consumers and companies. Private companies can be users and beneficiaries of the public service. At the same time, both consumers and companies receive private value for the public services provided. In the case of Brazil, the citizens also receive public value. The European ODR processes has more extensive, detailed, and complex regulation than the Brazilian system. The more advanced ODR process does not necessarily generate better results. In Brazil, although the process is simplified, it presents better results than the European regime, both in terms of the number of complaints received and the percentage of conflicts resolved. In addition, the Brazilian platform provides deliveries that are not covered by the European platform, such as the availability of public data and platform evaluation mechanisms.

## Power, participation and public service innovation funding: findings from 'Gender and Nesta's Innovation Support'

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Public service paradigms based on service theory argue for greater participation in service innovation. As such, they represent an opportunity for fairer processes and outcomes than more established models which have often been criticised for concentrating power with policymakers and professionals (Strokosch, 2018). Widening participation has been found to be complex, however. Without proper safeguards, redistributions of power can reproduce social marginalisation at a different level.

Research into highly participatory service innovation has mostly focused on the inclusion of service users, organisations and economic sectors. One aspect of which has received relatively little attention is gender (Djellal and Gallouj, 2018). Gender is a process through which power is distributed, and marginalisation reproduced, in traditional public service reform (van Acker et al, 2018; Lindberg, 2012). This paper will discuss the gendering of service theory-based public service innovation.

Most research has focused on how successfully new service innovation paradigms have been operationalised in either projects or policy. This paper examines an under-studied part of the innovation ecosystem: resourcing. Establishing an 'engineered' public service innovation network can be an expensive process, with projects often dependent on grants. How funding organisations promote funding calls and make decisions can be obscure, however. The extent to which participatory paradigms are operationalised successfully, may be partially dependent on the equity of resource distribution.

This paper will describe the results of a research project into the gendering of public service innovation funding. The study uses internal data collected by Nesta, a major UK charitable funder of highly participatory policymaking, over 4 years of funding competitions. In the absence of self-identified gender data, the study uses an inference methodology to disaggregate gender in the funding pipeline, from call promotion through to decision-making. This comprises a combination of publicly available gender inference APIs and manual methods.

The paper will indicate the extent to which resourcing may be a barrier to the full application of service theory-based public service innovation paradigms. It will describe the gendering of innovation resourcing for a major innovation funder. It will outline the measures recommended to Nesta to make their funding processes more equitable. These measures could be adapted and applied across the innovation ecosystem.

## Women's innovation in European public administration

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The role of women in public administration has been gaining relevance during the last years, nevertheless, even though the public sector is often regarded as a more “feminine” work environment, results show that women feel less encouraged in the innovation process when compared with men (van Acker W. et al. 2018; Nair 2019). Moreover, women have an especially strong impact when governments engage in innovation, which may be due to the fact that female leaders actually generate a more innovation-oriented culture than their male counterparts (Lapuente and Suzuki 2020). Therefore, studying and analysing the level of women's innovation in the public sector is important, in order to create successful policies and strategies that would help women to develop and have a high impact in innovation.

In this paper, we consider evaluating the level of innovation of men and women in some economies of Europe (Spain, France, Hungary, Netherlands, Norway and the United Kingdom) based on some key variables, including the level of experience in a job, the lack of knowledge about innovation, the size of the entities, and the work level.

We made an exhaustive statistical analysis of the level of innovation based on the data provided by the survey undertaken by the H2020 Co-VAL Project (770356, 2017-2021) and coordinated by the UNU-MERIT group during 2019

According to Nair (2019) and Striebing et al. (2020), Women's presence in public innovation is lower than for male innovators. Those authors supply a model that this research will develop. In this way, we have established that female innovation in the public sector depends on the characteristics noted above, as well as on the obstacles/handicaps that women confront in their daily life when they innovate in the public sector, such as lack of financial resources, knowledge regarding innovation, horizontal and vertical segregation in jobs, and absence of time due to family responsibilities.

In order to test the theoretical framework that is proposed and also related with the previous literature, several hypotheses have been put forward. The first, and most important hypothesis in this paper, examines whether gender gaps are linked with having achieved innovations in the public sector. The second hypothesis is related to the reasons that explain the possible existence of a glass ceiling, which is mainly due to a possible knowledge barrier to innovation.

The analysis of these hypotheses is carried out by using econometric models that analyse the probability of achieving innovations. Gender and knowledge are introduced as explanatory variables for the barriers, along with control variables such as the size of the innovative units, experience in the current job, level of work, area, and country.

Our results suggest that even after controlling for observable characteristics, the probability of having achieved an innovation among women is lower than for males; and regarding

knowledge barriers, within the category of high degree of knowledge gap, females are less likely to achieve innovations than males. Thus, the empirical evidence confirms what has been found in the literature. It can be concluded that there is no gender equality in public innovation.

Once the final results are obtained, it will be concluded that there is a requirement to build comprehensive policies which promote coverage of innovation for women. If these measures are put into practice, we will gain a more equitable society between male and female innovators. As a result, we will obtain gender equality in public innovation.

## References

Lapuente V. and K. Suzuki (2020), The prudent entrepreneurs: women and public sector innovation, *Journal of European Public Policy*, DOI: 10.1080/13501763.2020.1770316

Nair S. (2019), The link between women entrepreneurship, innovation and stakeholder engagement: A review, *Journal of Business Research*, 119, 283-290.

Striebing C., E. Schmidt, R. Palmén, F. Holzinger and B. Nagy (2020), Women Underrepresentation in R&I: A Sector Program Assessment of the Contribution of Gender Equality Policies in Research and Innovation, *Evaluation and Program Planning*, 77.

van Acker, W., J. Wynen and S. Op de Beeck (2018), Illuminating the gender divide in public sector innovation: Evidence from the Australian public service. *Public Personnel Management*, 47 (2), 175-194. <https://doi.org/10.1177/0091026017747299>

## **Thanks – but no thanks - an empirical analysis on the role of middle managers and their experiences with social entrepreneurship in a public organization**

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Multi-actor collaboration is considered as a way for the public sector to drive innovation (Torfing, 2019). In theory collaboration turns upside down to the traditional conception of roles, relationships and power in governance. It challenges the roles of all actors involved, as well as the traditional distribution of power between them (Tortzen, 2018). Yet so far collaborative innovation researchers have been particularly interested in analyzing how top leaders can limit innovation barriers through innovation management (Torfing, 2012, Aagaard, Sørensen og Torfing, 2014; Bason, 2010), and paid less attention to middle managers. The top management is the one who fronts the organization externally, and those at the bottom are concerned with daily production. Some of the flexibility lies at the middle management level, which often has played an important coordinating role (Rønning, 2007).

This is a paper about the role middle managers play in developing collaborations with social entrepreneurs. This case-study focusing on the middle managers role in a large city municipal, within the sector for children and youth, as they were challenged by the political and administrative leadership to seek collaboration with social entrepreneurs. By focusing on the "middle management perspective" this paper can contribute to a more holistic picture of collaborative innovation processes.

The paper is based on a qualitative content analysis inspired by Graneheim and Lundmann (2004). The middle managers in the study are employed in a municipality with over 100,000 inhabitants. Data collection is done over a two-year period and consists of observation, interview and document analysis.

For the diffusion of innovation in a large public organization it is not enough with support from the political and administrative leadership. The middle managers control vital resources and do in practice have wit of power.

The fact that the collaboration initiatives were initiated and managed from above, proved to be a challenge to realize collaborative innovation. The initiatives were stopped by the middle managers on the basis of professional assessments and lack of perceived needs. This illustrates that professional knowledge is a resource that contributes to power in collaborative processes initiated within new forms of network management.

## **Social Entrepreneurs – The motor behind public service innovation networks for social innovation?**

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Researchers have started to pay attention to the emergence of new types of innovation networks in the public sector. The literature, is, however, still immature concerning Innovation Networks dealing with innovation in public services with focus on Social Innovations (Sørensen and Torfing, 2010).

The purpose of this paper is to investigate the role of individual social entrepreneurs in the co-initiation and co-development of social innovations within the context of public service innovation networks for social innovation (PSINSI) (Desmarchelier et al., 2019).

We apply the literature on public service innovation networks which conceptualizes innovation as a collaborative and collective process that involves many and different actors over time (Fuglsang and Scupola, 2019). In cases where public service innovation networks are directed towards social innovation, social actors are often involved. However, while these are also described in the literature as collective actors, we still need to understand the particular role of the individual social entrepreneur and their networks in the development of social innovation.

This study uses a qualitative research approach to investigate the research question. Specifically, the study has 2 steps. The first step is an extensive literature review of PSINSIs in the Danish context (Fuglsang and Scupola, 2019). The second step consists of 5 Danish cases of social entrepreneurs in the context of public service development. The cases focus on understanding the central role of social entrepreneurs in PSINSIs. Data collection includes qualitative semi-structured interviews with the social entrepreneurs and other key actors as well as secondary material such as company brochures, reports and press articles.

Our findings suggest that individual social actors' role can be described setting the scene for collective processes of public service innovation networks. As such, they appear critical for the sense making process of such networks. However, their approach may also be prolific for scaling up innovations. Thus, we expect to fill a research gap in the literature on public service innovation networks in conceptualizing the role of the individual social actor for developing public innovation networks and thus potentially creates a foundation for further research.

### **References**

Desmarchelier, B., Djellal, F., & Gallouj, F. (2019). Towards a servitization of innovation networks: a mapping. *Public Management Review*, 1-30.

Fuglsang, L. & Scupola, A. (2019). Theoretical and empirical evidence of public service innovation networks for social innovation (PSINSI) in Denmark: A Systematic Literature Review. Paper presented at R&D Management Conference , Paris, France.

Sørensen E., Torfing J. (2010), Collaborative Innovation in the Public Sector: An Analytical Framework, Working paper n°1/2010, Research project (CLIPS) funded by the Danish Strategic Research Council, Roskilde: Roskilde University.

## **FASTER Project: development of innovation in rescue technologies for international disasters**

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FASTER (First Responder Advanced Technologies for Safe and efficient Emergency Response) <https://www.faster-project.eu/> is an H2020 research project funded by the European Commission, with the participation of the Madrid Emergency Service SUMMA112, Madrid Firefighters and Rescue Dogs, of ERICAM. It is an international search and rescue team for disaster that wants to improve the communication difficulties and risks of those involved during the disaster by developing technology in a proactive way.

To increase the quality of the response in disasters, developing a digital platform that improves communications, security and general coordination in the disaster.

Optimization of wearables for emergency professionals to confirm their safety during their work in the field.

Develop procedures with drones and autonomous vehicles to increase the efficiency in catastrophes.

CERTH, and others STEM companies, specialists in communication, robotics and unmanned aircraft; have developed technology that SUMMA and Firefighters have tested and confirmed the improvement of our procedures, with the tools for continuous monitoring of first responders, the network for all participants, and autonomous vehicles. The latter provide 3d air and ground information on the risk areas, without the physical presence of the emergency professionals.

The use of drones and 3D applications helps in the work of search, assessment of the disaster, and organization. They are also very important for risk detection.

The communication platform optimizes the work of the teams in the field, with immediate communication and coordination between them, allowing also to share information and We have created joint, ethical collaborative, and synergistic procedures.

In the Madrid Pilot, the technologies mentioned have been tested; following the international guidelines of INSARAG; for the search and rescue procedures and integrating the use of drones and autonomous vehicles within the search procedures.

The conclusions of the validation have allowed for feedback, improvement of components and more efficient coordination and joint work of public emergency services, reducing deployment and action times. We have also developed a preventive procedure of Covid, and optimized the procedures for location, search, detection, and rescue of victims trapped in debris.

The project provides innovative instruments for collective action in emergency situations, in order to rescue the greatest number of lives in the shortest time possible, with coordination between all those involved, reducing action times and risks and increasing quality and efficiency.

## **Innovation in Designing Territorial Platforms for Elderly Homecare Services**

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In the current context of demographical transition, our main purpose is to consider the answers made to the widely spread wishes for the elderly to stay at home longer when they become dependent.

New trends are currently emerging: we will select some significant experiences in order to highlight their main features and analyze them. We intend to examine how they meet the present expectations and needs, provide an appropriate and full bunch of services for homecare and lead to a transformation for the elderly.

After establishing the picture from the needs for the dependant elderly who want to stay at home longer, we will address the issue of the current experiments and their benefits.

There is in particular a new model for the establishments for the elderly (in French, *Établissement d'Hébergement pour Personnes Âgées Dépendantes*, EHPAD), called “out of the walls” (in French, “EHPAD hors les murs”) and some territorial examples are meaningful. We aim at pointing out both the breakthroughs of such new models and the problems remaining to solve.

The current experiments may represent the first steps to a change of paradigm for organizing homecare on a large scale. The transformation may only be possible by breaking down the barriers between different sectors in the French system, namely medical, medico social and social sectors.

Innovation could be supported by new scopes for the coordination between all the different stakeholders at home and the exchanges of data for improving and securing homecare.

## Universities as Strategic Actors to decarbonize the economy

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The UN publication of the *8 millennium goals* in 2000 shed some light on the links between environmental sustainability, extreme poverty, health, and education—the primary objective. In 2015, the UN agenda for 2030 included 17 UN's global development goals. The education goals have been enlarged and appear more clearly for the European countries. Some researches, as those of the Shift Project, are focusing the attention of the university presidents and professors about their role in educating students on sustainable development issues, regardless of their discipline. As of today, the academic commitments to sustainability are considerably different from one place to another. Why so few results are visible on a large scale? Why differences are so important between European universities? Can we define some pedagogic methods?

Some hypothesis are interesting to study

- As universities are service suppliers, they did not appear as consuming a large amount of energy or water, as sources of pollution ...
- The question of global warming has been mainly popularized by the scientific researchers of IPCC, but social sciences researchers were not involved in the research teams. For many social sciences professors, at a first glance, it does not appear that SD has something to do with geography, psychology, philosophy, and literature. However, educated citizens must master the necessary knowledge to understand the challenges of sustainable development and the impacts on their own field of activity.
- In 2000 with the millennium agenda, and furthermore in 2007 when the UN launches PMRE, some universities, as innovative knowledge service producers, began to build eco-campuses. However, the question of the innovation service pattern appears as a real obstacle in universities structures that are not so widely opened on the world.

To catch data and information among universities we have leaned on the main international networks the present author is belonging to: the *Research Network on Services and Space* (30 European Universities), the FIUC (International Federation of Catholic Universities, providing 42 answers out of 225 participants). We have also read the results published by the *Shift Project* following their inquiry, involving 34 major French Universities, as well as a substantial amount of sustainability development pages over several academic sites.

It has taken time for academics to realize that their own scientific skills did not exclude them from the appropriation of more transversal knowledge. Now, we have data that allow academics to question certain forms of teaching. Through the experiments, the advances made in some universities and countries, it seems that new transversal knowledge could be proposed to students. This academic function could be improved by a deep innovation effort, taking into account the innovation service pattern.

## The configuration of service innovation capabilities

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Services are increasingly playing an important role in modern economies. Besides an orientation to service activities, the pervasiveness of services is improving value generation across diverse economic sectors (Gallouj, 2002). Also, the widespread implementation of digital technologies is setting the pace of competition on the 21st century. This environment challenges firms because it enhances services aspects, such as focus on relationships, co-production, and an experience imperative. All these features affect how firms provide services, and also how they organize to change their processes (Djellal, Gallouj & Miles, 2013; Lusch & Nambisan, 2015).

Considering this, the debate on innovation becomes fundamental. On the one hand, it is known that service innovation does not necessarily follow a serial technological path, but instead requires a complex and interactive process involving multiple actors (Gallouj & Weinstein, 1997; Sundbo, 1997; Toivonen & Tuominen, 2009). However, how service innovation takes place is still not well described. This is identified through the distinct routines of innovation, in essence service innovation capabilities.

The evolutionary economics approach (Nelson & Winter, 1982) enlightens the discussion of innovation capabilities, but most studies have been dedicated to manufacturing issues. In order to expand the concept, Zawislak et al. (2012) define that every firm performs a combination of four capabilities, i.e. development, operations, management, transaction. But how are these capabilities presented in service organizations? The aim of this study is, thus, to identify the characteristics of innovation behavior of service companies.

In order to achieve our objective, we will conduct a firm-level multi-case study following the rationales of Gadrey's proposal (2000) (i.e. assistance or intervention; provision of technical capacities; entertainment or performance). The exploratory character of this study puts evidence on the elements of service innovation capabilities. All data analysis will be supported and triangulated using the Nvivo software.

Matching Zawislak's et al. innovation capabilities model (2012) with collected data, enables the adaptation and the proposition of a framework encompassing services specificities. The particular aspects of services impose an alternative approach to the innovation process and set a distinct configuration of firms' innovation capabilities.

For instance, the relational character of services indicates that transactions might influence more than one capability. For that reason, we expect to find in the Transactional Capability, a sort of leading role compared to the others. Furthermore, Management Capability is expected to be relevant because of services necessity of system orchestration.

# Track 3: DIGITAL transformation in public services

## Digital transformation in the public sector: A systematic literature review and future research agenda

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Over the past decades one of the main changes in governments around the world has been digitalization – making attempts to harness digital technologies to change and improve how governments are organized and function (e.g., Barbero *et al.*, 2019). In this context, the construct “digital transformation” has become frequently used, yet its meaning is insufficiently understood (e.g., Mergel *et al.*, 2019) and the evidence base for the transforming power of digitalization is fragile (e.g., Omar *et al.*, forthcoming).

The objective of this proposed paper is to conduct a systematic literature review on digital transformation in the public sector in Europe in order to shed light on the conceptualizations underlying digital transformation and assess the existing evidence on the presupposed transformative impact of digital technologies. To this end, we will use the following guiding research questions:

1. How is digital government transformation conceptualized in the literature and how robust and useful are available definitions?
2. What specific digital technologies are supposed to lead to government transformation?
3. What types of digital government transformation can be distinguished?
4. What factors and causal mechanisms can explain whether, why and how digital technologies drive government transformation?

We will follow the PRISMA guidelines for meta-analyses and systematic literature reviews (Moher *et al.*, 2009). We will search for eligible studies in Scopus and Web of Science over 2000-2020 using the keywords [digit\*], followed by the search terms [transform\*], [radical change] and [gov\*] in order to find studies that pertain to digital government transformation rather than organizational transformation in general or digital transformation in the private sector.

This research is expected to lead to the following results:

1. A reliable and empirically-useful definition of digital transformation in government, which can be further used by the academic community to advance the field of digital government;
2. A set of systematic findings on the impact of digital technologies on government transformation, which researchers can build upon and test in other research settings, and policy makers use in decision making on whether and what digital technologies are likely to lead to transformation;
3. A list of factors that facilitate or hinder transformation and causal mechanisms that are at play in explaining the relationship between digital technologies and government transformation.

## References

Barbero, M., Lopez Potes M., Vancauwenbergh G., Vandenbroucke D., Nunes de Lima V. (2019). (Ed.), The role of Spatial Data Infrastructures in the Digital Government Transformation of Public Administrations, Publications Office of the European Union, Luxembourg, ISBN 978-92-76-09679-5, <https://doi:10.2760/324167>, JRC117724

Mergel, I., Edelmann, N. and Haug, N. (2019). Defining digital transformation: Results from expert interviews, *Government Information Quarterly*, 36: 1-16, <https://doi.org/10.1016/j.giq.2019.06.002>

Moher, D., A. Liberati, J. Tetzlaff and D.G. Altman (2009). 'Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement', *Annals of Internal Medicine*, 151, 4, 264–69.

Omar, A., Weerakkody, V. and Daowd, A. (forthcoming), Studying Transformational Government: A review of the existing methodological approaches and future outlook, *Government Information Quarterly*, <https://doi.org/10.1016/j.giq.2020.101458>

## **Understanding Collaborative Innovation In The Public Sector: A Case For Increasing Scholarship Dialogue**

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Innovation in the public sector has been researched much from different perspectives. Collaborative innovation is any collaboration (intra- and inter-organizational and involving the ecosystems of actors surrounding public organizations) for fostering digital innovation. The concept of collaborative innovation has been used in both the digital government (DG) and public management (PM) literature, however under different labels and adopting different sets of synonyms. The aim of this paper is to create an integrated perspective by reviewing and contrasting the literature of these communities.

The adopted methodology is made up of two phases: first, a preliminary quantitative analysis to identify trends and pinpoint possible synergies between usage of concepts by DG and PM literatures; second, a twofold literature review tailored onto where the debates within each of the two scholarly communities typically takes place. In order to ensure the clarity of these results, the review of DG publications was performed adopting the Digital Government Reference Library (DGRL), the institutionalized reference for DG scholars. As no counterpart of the DGRL exists for the domain of PM, six high ranked journals were selected that are considered the reference of current debate in PM. In doing so, we used the keywords ‘collaborative innovation’, ‘co-production’ and ‘co-creation’.

The results showed a small overlap between the two communities, revealing that dialogue is absent and debates on the topic are still being conducted in “bubbles”. Moreover, the analysis unveiled the lack of clear-cut definitions of researched terminology (even within the two communities). Authors attribute to the terms “co-production” and “co-creation” a variety of meanings that stretches from complete overlap and synonymy to explicit divergence, and with different degrees of vagueness and comprehensiveness. When it comes to collaborative innovation, little work is done in literature to go past the idea of involvement of more than one actor.

Thus, we conclude by calling for a common effort to substantiate the notion of collaborative innovation, in order for scholars to converge on a sharp definition and clear reference and for it to accounting for the ecosystems the public bodies are embedded in.

## Co-Value Creation and Digital Service Transformation: The case of Denmark

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Public administrations are investing heavily in the digital transformation of their services. It is, however, unclear how value is created and what these value creation processes look like. This paper looks specifically at co-value creation in digital transformation projects and investigates the following research question: how can public administrations digitally transform public service delivery and create public value in the process? We distinguish the types of public value that emerge in the different phases of the co-value creation process in digital transformation in four different forms of public values. We have chosen one illustrative – and successful case of Denmark where we applied our conceptual model of co-value creation to study of digital transformation.

This study uses a qualitative research approach to investigate the research question and applies an inductive research design. We first conducted eight expert interviews with Danish public sector digital transformation experts to extract the digital transformation efforts from an expert viewpoint. As a next step, we reviewed the necessary policy changes in a policy tracing approach to understand how Denmark was able to build policy and core digital infrastructure top down. From these results, we theoretically derived a specific agency, the Danish Business Authority (DBA), to understand how digital transformation was then used to co-create public value bottom-up. Here we conducted an additional seven case interviews to understand how DBA has co-produced value in its digital transformation projects together with citizens.

The theoretical and empirical analysis shows that Denmark has first provided the institutional and political context top down, before engaging in co-value creation steps bottom up. Our findings suggest that three main top-down initiatives supported the successful digital transformation of public administrations in Denmark:

- Collaboration and cooperation with different stakeholders (e.g., state, regions and municipal governments)
- Mandatory online service delivery (e.g., e-box)
- Adjust existing regulation to fit with the digital transformation (e.g., “Agreement on digital-ready legislation”)

Finally, the case of DBA illustrates in detail the model of centralization of decision making together with co-value creation with stakeholder that has been found at governmental level. The Danish Business Authority (DBA) has close cooperation with all its stakeholders including businesses and business organizations. DBA has involved them, and still involves them directly or indirectly in all phases of the co-value creation process, such as co-creation activities take multiple forms including co-initiation/co-commissioning, co-design, co-implementation, co-delivery, and co-assessment.

## **Social media in local governments: Comparing determinants of adoption and use across multiple platforms**

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In the last few years, social media has been used as a strategy for digital transformation in public services (Picazo-Vela et al, 2012). In this endeavor, local government organizations have progressively expanded their online presence by adopting multiple social media platforms (Bonsón et al., 2015). Although several studies have addressed the drivers and challenges of adopting specific platforms, such as Facebook or Twitter (Bonsón et al., 2017; Guillamón et al., 2016), they have not differentiated between factors that drive adoption and determinants of use and have not considered the whole array of platforms that governments have adopted and used. Given this gap in the literature, our study aims to contribute to this discussion by answering two research questions: 1) what are the determinants that influence the adoption of multiple social media platforms in local governments? and 2) once adopted, what are the determinants that influence the level of social media use in local governments?

We used a survey administered in 2014 to public managers responsible of social media in local governments in Catalonia (Spain). The survey was built by the authors and tested before distribution through online invitation. In total, 264 valid responses were received with at least 75% of survey questions answered. The two dependent variables (social media adoption and social media use) are measured respectively by the total number of social media platforms adopted and the average activity in those social media platforms. Based on a review of existing literature, we argue that organizational, institutional, and contextual factors are likely to have a significant impact on adoption and use. We therefore use 15 explanatory variables and apply a Poisson regression model to estimate adoption and an OLS model to estimate level of use.

Our preliminary findings show that the specific set of variables that affects adoption is different from the specific set of variables that impacts use. For instance, perceived importance of social media by public managers, managerial leadership, change in communication strategy, organizational culture, change management, and social media guidelines positively affect social media adoption in municipal governments. In contrast, political leadership and purpose of social media use positively affect the average activity of social media. Interestingly enough, public managers' perceived importance and managerial leadership negatively affect the level of social media use. Among other, our findings contribute to our understanding of different roles of politicians and public managers on social media adoption and use in local governments.

## Uncovering the intertwined nature of collaborative processes and structures in the digital transformation of state governments

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Several holistic frameworks for understanding collaborative arrangements as well as empirical studies have been published in the last 15 years (e.g. Emerson, Nabatchi, & Balogh, 2012; Provan & Kenis, 2008; Ansell & Gash, 2008; Bryson, Crosby, & Stone, 2006). Although the frameworks differ regarding attention to specific aspects of collaboration, they also have clear similarities: they all attend to important general antecedent conditions, more proximate initial conditions, internal processes, structural elements, and outcomes. Similarly, empirical studies have usually explored problem domains where collaboration may (or may not) be an appropriate strategy, elements of effective leadership in collaborations, the multilevel nature of collaboration, collaboration outcomes, and challenges of collaboration. Topics that have received less attention in this emerging literature include the contribution of collaborations to the creation of public value, the role of technology, the intersection of collaboration structures and processes, the influence of contextual variables on managerial or collaborative action, and complex accountabilities.

This paper contributes to address this gap through an in-depth analysis of the intersections of two components of collaboration: processes and structure. Therefore, our research is guided by the following research question: how do collaborative processes and structures work closely together in fostering digital transformation? To answer this research question, based on the work of Bryson, Crosby, & Stone (2015), this paper uses an analytical framework that highlights four particular areas in which research suggests interactions between processes and structures: leadership, governance, technology, and collaborative capacity and competencies. Further, we study collaborations among public organizations, which has been slow to develop (Agranoff, 2017).

We use a comparative case study approach including three cases of digital transformation in state governments in Mexico (Puebla, Yucatan, and the State of Mexico). Data was collected through 26 in-depth semi-structured interviews with government officials from the three states, conducted in 2011. The interviews focused on the digital transformation or the ways in which transformation happened, the configuration and governance structures of the networks, and the role of individuals and organizations in the collaboration.

Preliminary results emphasize the dual role of technology, as a facilitating tool and as a nonhuman actor, the importance of shared leadership at different levels, and the presence of a lead-organization governance structure. Yet, they also show that the organizational networks and collaborations are different in the three cases and that, therefore, their dynamics are as well.

## Government strategies used in the development of citizens competencies to complete the income tax return in E-Gov

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This study analyses the government strategies used to develop citizens' self-service skills using electronic government platforms (e-Gov). The specific objectives are: to analyse which governments use stimulus strategies to develop taxpayer skills; compare these strategies in the Brazilian and international e-Gov systems, used for the declaration and payment of the income tax; and, empirically, to investigate the influence of technical and cognitive skills of Brazilian citizens when using self-service via e-Gov without the help of third parties. Although e-Gov is a valuable resource for the public sector (Keramati, Behmanesh, & Noori, 2018), bureaucracy and information restrictions make difficult the communication between governments and citizens (Mergel, Schweik, & Fountain, 2009), and this affects the development of citizens' skills to use e-Gov.

The research is descriptive, qualitative, and quantitative, based on primary data obtained from a survey of 500 Brazilian taxpayers. The data of this research were analysed by logistic regression, having as a dependent variable: the "possibility for the citizen to fill out the income tax return without assistance from third parties, via e-Gov" and as independent variables: "the domain of technical and cognitive skills demonstrated by the taxpayer". As for the secondary data analysed by the content analysis, these were taken from the "United Nations Electronic Government Survey 2016: Electronic Government in Support for sustainable development" (UN, 2016), with a sample of 54 countries, which were classified as the best e-Gov services.

The results demonstrated positive stimuli such as education and the encouragement of citizens to be more participative in the execution of self-service within the scope of e-Gov. Negative stimuli such as the obligation to use the e-Gov to complete and send the income tax return and the punishments and sanctions to the citizen due to errors or failure to send the return. As for the empirical analysis of the income tax return in Brazil, we concluded that 260 (52%) of the sample of 500 taxpayers outsource the income tax return service and that the mastery of technical and cognitive skills increases the chances the citizen registering and filing the tax return without help, even though in Brazil this is a mandatory service and subject to penalties in case of errors. Citizens who complete and submit the annual income tax return without the help of third parties demonstrate greater mastery of technical and cognitive skills than those who resort to third parties.

## The digital transformation of French public services: from the government to local public agents. Tools, methods and limits

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Digital transformation of public action and public services is a major deal for governments in the context of digital innovations and international incentive for e-government (OECD, OGP). The French government since 1978 engaged policies to adapt public action as well as the equipment of the territory to ICT innovation waves. If these policies are in accordance with European Union incentives, we will discuss the implementation of national policies at local levels, that is to say the question of adoption of innovations. After sections about theoretical backgrounds and research methodology, we will focus on the last decade of French policies to analyze the organization, tools and methods implemented by the government to pilot digital transformation. The aim is to understand management processes inside the ministries then the processes by which the government is able to diffuse the best practices from top level to local level. The changes in policies and organization could reveal the limits of traditional policies and explain the shift to cocreation experiments with public agents.

The paper is based on case analysis realized for the H2020 Co-VAL project. In 2019, we had conducted in depth interviews with managers of different departments in the DINSIC (interministerial directorate for digital and Information systems), a service of the Prime Minister. The interviews were completed by the analysis of documents on websites and social networks (twitter) used by the government and other administrations to promote public innovations. We also observed participatory sessions in Paris or in the Hauts-de-France Region to understand the way the governmental incentives are implemented at a local level. These information was analyzed then through the analytical grid of the Co-VAL project Work Package dedicated to digital transformation in public services.

The comparison between the interviews in the DINSIC (called DINUM since November 2019), the examples of public innovations promoted on the official websites and discussions with local public actors, allows us to discuss the traditional political practice that imagines innovations as a diffusion process from government to local levels. The analysis of the different levels of public action for the digital transformation in administrations and the creation of innovative digital services shows that the government is in balance between the necessity to control and measure the transformation processes, on the one side, and, on the other side, the necessity to co-create new services with local public agents to ensure the social acceptability of changes.

### References

Liefoghe, C., (2019). The DINSIC at the heart of the digital transformation of the French State and public action, Report for WP3 / D3.3, Co-VAL [770356] "Understanding value co-creation in public services for transforming European public administrations".

Mergel, I. (2019). Digital service teams in government. *Government Information Quarterly*, xx(xx), xxx-xxx. doi:<https://doi.org/10.1016/j.giq.2019.07.001>

Mergel, I., Scupola, A., Liefoghe, C., Lepczynski, S., Mureddu, F., & Gago, D. (2018). Policy and process tracing of international digital transformation practices, WP3 / D3.2, Co-VAL [770356] "Understanding value co-creation in public services for transforming European public administrations".

Pezziardi P., Verdier H., (2016), Des Start-up d'Etat pour transformer en souplesse l'administration, *Le journal de l'école de Paris du management*, n°120, p. 22-29.

## AI, data scientists and wicked problems: a case study of collaborative teams in the Norwegian Labour and Welfare Administration

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Policy planners have called for big data and artificial intelligence (AI) to meet high demands and complex sets of needs in public services. However, there is still little knowledge of how data science can contribute to transformational shifts (Mergel et al. 2016; Pencheva et al. 2020). In the public administration literature, the notion of wicked problems has called at the complex nature of vast problems cutting across existing policy fields, of e.g. unemployment and mental health (Head and Alford 2015). Collaboration has been emphasized as a mode for overcoming the challenges by establishing a ground for exploiting their differences and creating public sector innovation (Crosby et al. 2017; Torfing 2018). Still, it is little knowledge of how collaborative data networks can overcome the challenges (Bjørkquist 2018; Chen and Lee 2018; Sun and Medaglia 2019). This paper contributes to understanding how data science can coordinate problems cutting across existing policy fields and develop new public services in collaborative teams.

The paper discusses results from a case study of how data scientists work in developing new public services in the Norwegian Labour and Welfare Administration (NAV). NAV was among the first public organizations to apply data science to deal with the tangled problems of increased demands and expectations for more individualized services, in establishing a special data science unit: NAV AI-lab. Data collection is by the methods of document analysis of public strategies and internal notes, by personal interviews with data scientists and professionals in teams, and public available podcasts of interviews of the data scientists in NAV.

The case study of NAV AI-lab demonstrates that the organization of the work of the data scientists are critical for handling wicked problems. The NAV AI-lab has had various organizational forms, and has now a matrix form where the data scientists join a team of professionals. Here, the data scientists collaborate tightly with relevant professional groups: executive officers of welfare services, social workers, doctors, user groups, service designers, data analytics, etc. Thus, simply bringing the knowledge of one data scientist into the organization is not enough. The data scientists need to be integrated into coordinated units of various professional competences that establish a ground for collaborative innovation.

## **City apps : A contribution to the fluidification of the digital administration information system**

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Within 5 years, mostly all the web services turned to mobile applications. The city of the second decade of the XXI st century has no more choice to improve app platform and become service oriented. The challenge for public services will be to produce, if possible, in real time, proves, and traces of the real benefits obtained generated by the new public's services applications. In a prospective service approach, which we will also have to integrate new environment modified by an intelligence that becomes artificial. Roles are questioned. Are the citizen going to be considered users, as designers, co producers of the services? Are the politics be able to manage privacy and transparency. The researcher is first questioned on the reality of the situation before approaching the methods and tools that could be used, to propose seamless services to the citizen and drive the new architecture of information system. In this prospective service approach, the researchers will have to integrate an environment modified by an intelligence that becomes artificial. This article) will attempt to refere the experiences already carried out by 4 pioneers cities and from one public syndicated structure mostly in Ile de France

- Data will be brought through the use of cities applications and from Opendata produced through etalab.fr (French opendata national platform).
- Interviews of CIO will complete the quantitative data and be held through the first semester of 2020.
- Preliminary the research will pose a diagnostic on the real use of local application provided by cities.
- We will try to improve the level of the implication of the citizen in the production of the local services
- Try to find the between the use of local and national services

## The impact of blockchain in the public sector: a systematic review

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Distributed Ledger Technologies and, in particular, blockchain promise to be one of the most significant technologies to be introduced over the next few years in the private and, also, in the public sector. Nevertheless, although a literature has emerged dramatically over the last three years, general knowledge on the topic within the disciplines of the Social Sciences is still incipient. This paper seeks to remedy this situation, by providing the first systematic review to bring together everything that is known theoretically and empirically across the Social Science literature on the potential benefits and risks of using a wide range of disruptive technologies – particularly, blockchain - in government and the public sector.

This paper will develop a systematic review of the literature analyzing, both theoretically and empirically, the introduction and impact of blockchain on the public sector and government. The evaluation framework will analyze to what extent introducing blockchain is viable, feasible and desirable in the public sector, by examining the potential social impact of blockchain on citizens, governments, public servants and the third sector. When so doing, a four dimensional framework will be used in order to examine the political, socio-economic, legal and cultural implications of disruptive blockchain and their acceptance or otherwise in the process of public sector transformation.

The results of the systematic review will show the characteristics, trends, field/sector diversity and methods used in the literature dealing with the introduction and impact of blockchain in the public sector. From this literature, the systematic review will highlight the political, socio-economic, legal and cultural impact of blockchain on citizens, government, public servants and the third sector, discussing the potential benefits and risks of the introduction of this technology in the public sector.

## Understanding How BOSA's DG DT is Implementing Digital Transformation within the Belgian Federal Government

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<sup>1</sup> Cabinet de la Secrétaire d'État Barbara Trachte

<sup>2</sup> Lisbon Council

The article will discuss the FEDICT, the former Belgian Federal Public Service for Information- and Communication-Technologies. FEDICT was created in 2001. Hence, in March 2017, a new, horizontal cross-ministry, named BOSA, saw the light of day. The directorate-general Digital Transformation is one of the six directorate-general of Federal Public Service Policy and support (BOSA), which is the result of the merging into one entity of the federal agencies of personnel and management, budget and management control, and ICT. FEDICT was created to build the back office for the public sector in view of creating efficiency and economies of scales. The task was to build ONE common back office, so that on the front side, the federated entities could be digitally enabled to run their specific business (paying pensions, collecting taxes, etc.). Besides that, FEDICT was asked to launch an electronic identity card (eID); and as soon as 2002, Belgium became the first country in the world to issue an eID. With the federal government that came to power in 2015, the new deputy prime minister and digital agenda minister, Alexander de Croo, had the vision for radically changing FEDICT. He thought that there was an opportunity to build a new organisation, not just an ICT one – a real digital transformation office.

With the reorganisation in 2017, DG DT was tasked to guide and accompany the digital transformation of the federal government, which means that DG DT had to go for the first time to the front office, meeting citizens, industry as well as ministers and civil servants (the colleagues from other ministries, called the Federal Public Services) and accompanying them into the digital transformation exercise. In other words, DG DT became the guardian of the fifth pillar of the Digital Belgium strategy (<http://digitalbelgium.be/>), which deals with making the public sector digital. The vision for DG DT is to move towards the “government-as-a-platform” concept, that is an environment where the government is the partner and facilitator for all the actors in the ecosystem, i.e. the citizens, businesses and civil society.

The authors carried out an extensive documental analysis, as well as 14 semi structured interviews.

The expected results consist in a thorough analysis of:

1. Co-creation activities in digital transformation
  - a. Co-initiation/ co-commissioning.
  - b. Co-design.
  - c. Co-implementation and co-management.
  - d. Co-delivery.
  - e. Co-assessment.
  - f. Implementation challenges.
  - g. Some successful measures to overcome challenges.

2. Value co-creation in digital transformation
  - a. Economic value
  - b. Administrative value
  - c. Democratic values
  - d. Citizen values

Finally, the authors will analyse success stories such as The Digital Dashboard, which is a tool that allows the Belgian federal government, to sum up the level of digitalisation of their services and utilisation since the beginning of the term in 2014, and the Belgian eID and itsme®, which is the secure key that allows citizens to interact in many ways with the Belgian administration, when they pay their taxes online for instance, or when they access social security services, or want to get an estimate of the pension they are entitled to.

## **Lights and shadows in the development and implementation of the National Platform for Data Verification**

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The Data Verification and Consultation Service: Intermediation Platform was born in 2007 as an important innovation resulting from inter-administrative cooperation in Spain.

Already in 2014, it was the UN award for the Improvement of Public Services, one of the most prestigious international recognitions for excellence in the public sector.

But the truth is that the deployment and implementation of the almost 100 data services to be verified is very uneven in the different Spanish administrations.

We will review the use situation with data until January 2020 and provide the experience of a benchmark such as the Government of the Basque Country with the keys to its success.

Using the source data in: DataOBSAE Indicators - General Secretariat for Digital Administration of the Ministry of Territorial Policy and Public Function, we will see the evolution of the consultations carried out as a whole and by the different administrative levels of Spain.

Contacts by email have been asked to contacts in the governments of the Basque Country, Aragon and the Balearic Islands about the possible causes of excellent results in the former and very poor results in the latter.

At the level of the Spanish administrations as a whole we continue to progress in the implementation: in 2015 a little more than 53.5 million queries, for 124.5 million in 2019.

But there is a great disparity of use for every 100 inhabitants, an indicator of homogenization, both at the level of the Autonomous Communities and municipalities.

The key to the success provided by the government of the Basque Country, the best Autonomous Community, is to have automated the consultation and verification of data from the moment when the computerization of each new procedure or service was undertaken. Failure to do so, implies, as I have verified in La Rioja, that even having designed and authorized the query in some procedure, it is not used because it is not automatic.

Depending on the time / space available, we will provide not only the global data, but also the data of the services most used in the verification: identity, residence, death, etc.

<b>Data transmissions - PID by Assignee Scope</b>					
	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
General State Administration	37.466.633	30.053.851	51.359.824	43.081.756	74.311.729
Autonomous Administration	11.785.843	14.653.521	19.033.318	27.701.016	35.970.106
Local Administration	698.867	1.014.375	2.123.117	5.489.423	9.101.472
Universities	834.108	691.702	825.976	600.421	631.146
Otras Instituciones	2.811.325	3.645.041	3.799.591	4.086.865	4.438.984
Others	---	---	---	49º	---
	53.596.776	50.058.490	77.141.826	80.959.530	124.453.437

## Doctor On Demand: Finnish Patients' Experiences of Online Medical Video Consultations

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Advances in e-Health are transforming healthcare delivery in many countries, including Finland. Today, many patients are tech-savvy and ready to become partners in their own healthcare through different e-Health initiatives. e-Health can be defined as the use of information and communication technologies (ICT) to enable health improvement and provide healthcare services. In a time of increased pressure on healthcare systems due to aging populations, shortages in qualified healthcare professionals, budget cuts and now also COVID-19, e-Health services have great potential for improving the quality, efficiency and safety of healthcare delivery. Currently, however, there is limited qualitative data on patients' experiences of many new e-Health services, such as online medical video consultations. At the same time, e-Health services are predicted to increasingly complement traditional face-to-face medical services during the current COVID-19 epidemic as well as in the future. Consequently, the purpose of this study is to explore the experiences of Finnish patients who use online medical video consultation services.

This study uses in-depth interviews. Such interviews offer major possibilities to gain insights into patients' experiences. Interviews have been conducted with 40 Finnish patients that have experience of using Finland's three most common online medical video consultation services. Snowball sampling (i.e. respondents assist the researcher by recruiting future respondents from their own network of family and friends) was used to identify and recruit an age- and gender-balanced sample of respondents.

The findings of the study will contribute to healthcare and service research as well as provide valuable insights to private and public healthcare providers currently offering, or planning to offer, e-Health services such as online medical video consultations. Preliminary results suggest that a main benefit of using online medical video consultation services is the convenience of getting care from the comfort of your home, without the need to travel to a hospital or health station. This benefit seems to be particularly relevant in the current COVID-19 era. However, also a few negative aspects of online medical video consultations were brought up during the interviews. For example, the lack of a physical exam and in-person interaction with the doctor was a concern for some of the respondents. Also, waiting for even 5 minutes in a "virtual waiting room" seems to have a much larger negative impact on patients' satisfaction and overall experience than waiting at the clinic, which patients are used to and routinely do.

## **Building government capacity through co-production. Evidence from a case of digital transformation.**

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Just over three years after the introduction of the digital identity system, more than 6 million Italians have benefited from an innovation that today offers them a direct gateway to numerous (online) services. This new service is not a mere instance of service digitalisation. It is an innovation that requires a re-design of the process of service delivery, a new interaction interface with citizens and technology.

Under the pressure of delivering better public services, various public administrations are now facing the need to shift away from the internal, efficiency-driven logic towards an external, open and co-productive logic that emphasizes value for users and society. Recognizing that at the heart of service delivery is co-production and value for both internal and external users means also acknowledging the quality of government and the need for capacity building in public administration. The scope of this study is to assess how co-production activities of public agencies contribute to different dimensions of public value and stimulate digital transformation.

The paper adopts a qualitative, case study design and analyses how the Italian public administration has embarked on the journey towards digital transformation, developing adaptable and scalable solutions across multiple layers of jurisdiction. Previous efforts in exploiting technology potential has highlighted the perceived failure in government attempts to bring better and more efficient services following NPM precepts (Dunleavy et al. 2005). Italy, in particular, has been a slow adopter of technology with poorly coordinated actions, resulting in heterogeneous levels of digitalisation across the country and low service innovation at the expense of citizens' benefits (Nasi, 2013).

The response of governments around developed countries, including Italy, has been the creation of small teams inside government to lead the transformation from inside using agile approaches and lean management (Mergel 2019). The reason we focus on this unit is the high potential associated with it to catalyse change in the government. These governance units work across the spectrum of innovation from incremental improvements to radical transformations (Puttick et al. 2014).

By focusing on organisational capacity, such as resource mobilisation and attraction of human talent, as well as adopted approaches for collaboration required during different phases of innovation trajectory, this study provides evidence about the conditions enabling digital transformation taking into account the nature of state tradition and the cultural context.

## **Effectiveness of flexible working arrangement as a form of digital transformation from the perspective of government officials**

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The spirit of digital transformation in the working places has supported a new working arrangement that is more flexible both time and place. Particularly during the COVID-19 pandemic throughout the world, flexible working arrangement become a necessity and apparently will be future trend. Its advantages and disadvantages for individual and organizational productivity are progressively being discussed. In the government institutions in Indonesia, the opportunities and technical concepts of flexible working arrangements are still being formulated. However, the experience of working from home (WFH) applied during the last 3 months (March-May 2020) during the pandemic can be used as a preliminary measurement. Therefore the objective of the study is to analyze the effectiveness of flexible working arrangements from the perspective of government officials.

A questionnaire has been filled by 745 respondents or 18.6% of total officials in the Ministry of Communication and Informatics showed the perception of employees from various groups of ages, occupations, and positions.

The results showed that the majority of employees (> 80%) thought that working from home (WFH) experiences had positive impacts on individual performance, and at the same time maintained organizational performance. Some challenges remained are related to the availability of internet access, disruption of household affairs, and coordination difficulties.

## Getting non-profit organizations fit for digital transformation

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<sup>1</sup> Fraunhofer IAO

Most non-profit organizations (NPOs) have limited resources and scope for innovation that would allow them to exploit the potential of the digital transformation. In the “Digital laboratory for non-profit organizations 4.0” project funded by the German Federal Ministry of Education and Research (BMBF), Fraunhofer IAO is collaborating with additional partners to support NPOs in trying out and implementing digital applications and cooperative forms of organization. To date, little research has been done regarding NPO-specific needs with regard to the design and implementation of digital applications. That is why Fraunhofer IAO is supporting non-profit organizations in their digital transformation. To this end, it first identifies areas for action relating to the use of digital technologies for transformation to a non-profit organization 4.0. In doing so, it focuses on three use cases: virtual volunteering, digital organizational work and digital learning. For these three areas, the project team designs approaches for introducing digital solutions and tools.

“The pandemic is now making it clear that companies are not the only ones in urgent need of systematic support for the digital transformation – so are non-profit organizations, most of which have fewer resources and less money for this topic,” says Dr. Mike Freitag from Fraunhofer IAO. To provide the best possible support for NPOs, the Fraunhofer IAO researchers first identify what degree of digitalization their partners in the field have achieved, what kind and level of support they need, and what challenges the non-profit organizations face when going digital. With these findings as a basis, their next step is to develop suitable prototypes – in the form of software solutions and digital course offerings – using design thinking methods and service engineering.

In collaboration with all the partners in the project, Fraunhofer IAO is developing the “NPO digital laboratory” – a pop-up workshop. This transfer tool enables them to present the approaches and digital tools developed in the project and to let others experience them, so tools and solutions can be customized for different target groups and making it possible to transfer these to additional non-profit organizations. The project partners include the Stiftung Evangelische Altenheimat (evangelical nursing home foundation), VDI Württembergischer Ingenieurverein (a german association of engineers), ver.di and ver.di b+b (trade unions), the University of Stuttgart and Input Consulting and additional transfer and value partners.

### References

Bruhn, M. (2013): Konzeptionelle Grundlagen eines Qualitätsmanagements für Nonprofit-Organisationen. In Qualitätsmanagement für Nonprofit-Organisationen (pp. 43-63). Springer Gabler, Wiesbaden.

Dufft, N.; Kreutter, P. (2018): Digitalisierung in Non-Profit-Organisationen: Strategie, Kultur und Kompetenzen im digitalen Wandel. In Zukunftsorientiertes Stiftungsmanagement (pp. 105-115). Springer Gabler, Wiesbaden.

Meyer, K. (2020): Vom Service Engineering zum Social Service Engineering – Anforderungen an die Schnittstelle zwischen Dienstleistungsentwicklung und Arbeitswissenschaft. Zeitschrift für Arbeitswissenschaft, 74(1), 52-58.

Sivesind, K. H.; Arnesen, D.; Gulbrandsen, T.; Nordå, Å. D.; Enjolras, B. (2018): An organizational landscape in transformation. In Scandinavian Civil Society and Social Transformations (pp. 67-116). Springer, Cham.

Simsa, R.; Meyer, M.; Badelt, C. (Eds.) (2013): Handbuch der Nonprofit-Organisation: Strukturen und Management. Schäffer-Poeschel.

Yamakami, T. (2012): A four-stage gate-keeper model of social service engineering: Lessons from golden rules of mobile social game design. In 2012 9th International Conference on Ubiquitous Intelligence and Computing and 9th International Conference on Autonomic and Trusted Computing (pp. 159-163). IEEE.

Yamakami, T. (2013): Servicenics approach: A social service engineering framework. In Eighth International Conference on Digital Information Management (ICDIM 2013) (pp. 358-362). IEEE.

## **Industry 4.0 and Social Innovation: How industry 4.0 affects its social impact on education, labor and healthcare**

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Industry 4.0 should be analyzed in respect to how it will impact education, labor, healthcare and why these areas are significant in terms of social innovation. Social innovation is one of the key ideas examined in the following analysis, and it will be maintained that the transformation of work under Industry 4.0 will have a significant disrupting impact on how we work and how we live.

Moreover, some of the potential damaging impacts on the economy as a whole will be analyzed.

In these three domains, it will be maintained that while there will be a significant impact, and this is measured largely in terms of projected high rates of unemployment, underemployment, and the deskilling of work, little has measured the social impacts created by this trend.

The focus of research was aimed at gathering current research on Industry 4.0. Keyword searches were used in EBSCO Business Database, Google Scholar and LexisNexis. From a list of titles and abstracts, the topics were narrowed down to sources that were primarily about Industry 4.0. And, the topics were likewise narrowed to sources that had a significant amount of information on social innovation, education, labor and healthcare. In turn, the analysis of the documents became the primary means of extracting information. Particular attention was paid to the methods and data used in the resources. Further, this analysis looked only at peer-reviewed academic journal articles and peer-reviewed books. Therefore, sources were also scrutinized in terms of the format of the media and whether or not it was a source taken from academic sources as opposed to sources from the popular media that were discarded for this discussion.

Like previous revolutions in industry (I1, I2, and I3) jobs will become redundant by the use of automated and machine driven technologies. However, what separates I4 from its predecessors, is how the coming rise in unemployment will not be sufficiently countered by employment in growing areas. There is no question that this is a growing area and therefore, a sector with employment opportunities. However, these will be opportunities for the highly skilled and those with advanced education.

The question this raises, asks whether the improvements in education and health-care will be greater or less than the social impact caused by significant changes in the work-world.

Finally, it was outlined that the social impact of unemployment, underemployment and the deskilling of labor is not a key theme in the I4 literature so far.

# Track 4: Measuring value co-creation and innovation in services (METRICS)

## **Efficiency of judicial conciliation activities in French courts: Evidence from a bad-output Data Envelopment Analysis (DEA) framework**

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The purpose of this article is to evaluate the performance of judicial conciliation. Conciliation is an Alternative Dispute Resolution (ADR) that may occur during a trial or out of the court. It is a step proposed to disputants to foster negotiation instead of long and costly litigations in civil, commercial or rural cases. The specificity of this device is that it is a delegation of judges' duty to voluntary citizens, who want to take part to the functioning of the judicial system. Conciliators are volunteers and receive no payment for their services even though the activity is regulated.

Considering that France experiences important delays in courts proceedings (ranked 20th among 25 countries; CEPEJ-EU Justice Scoreboard, 2018), policy makers expectations have implemented services delivery and administrative and organizational innovations related to conciliation (Judicial Map Reform, 2008; Law of Modernization of Justice; 2016; 2018-2022 Justice Programming Bill). Despite the call from French Government and European Commission for Efficiency of Justice for performance metrics, the issue of the efficiency of ADR remains relatively unexplored.

The purpose of this article is to propose performance metrics to evaluate the conciliation activity, to assess its contribution to the overall efficiency of courts and to identify the factors that affect courts' performance.

Based on yearly data of the 447 French first instance courts from 2003 to 2018, we investigate the performance of conciliation in two stages. In a first stage, we introduce a DEA bad-output framework to assess the efficiency of the courts' ADRs. The efficiency metric may be defined as the ability of the court at simultaneously maximizing the settlement and minimizing the delay incurred by the cases while considering the means available. The duration is viewed as a negative externality of the settlement to minimize, while maximizing the settlement rate.

In the second stage, we estimate, with the Simar and Wilson (2011) bootstrapped truncated regression, the role of conciliators and courts characteristics on the efficiency of the conciliation activity. Furthermore, we estimate the relation between the efficiency of the ADR and the settlement rates and duration of the first instance court.

Results provide evidence of the ability of efficiency metrics at evaluating justice in their contradictory objective functions: minimizing delays and appeal while maximizing settlement rates. We observe that duration of the trial is negatively associated with conciliation efficiency. We also note that the gender, the experience of conciliator and its previous occupation (especially retired CEO) are strong determinants of efficiency.

## Effect of strict graders on service scoring: An analysis with mystery shopper's data

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Service platform business like Trip Advisor or Yelp usually presents a score for each service, which is graded by a part of users who have experienced it. Thanks to that, consumers can anticipate the value of services before they consume. Unlike a physical product, performance of which can be objectively expressed by product specification, basically, the valuation of service cannot be done until users experience it, and moreover it is valued subjectively. Due to such subjectivity nature, the valuation criteria differ among people: some people strictly grade it and the others do not. As a result, a service valuation score varies for the same service, depending on grader's subjectivity. These differences in strictness of grading among people will misread the quality of the service and cause unmatching of consumers and services. Therefore it is necessary to clarify how this difference of strictness of grading affects the overall valuation.

For our research objectives, we used mystery shopping survey data on restaurants (17777 surveys by 4,973 trained mystery shoppers, from Dec. 2018 to Dec. 2019). The score of revisit intention is used as an overall valuation for a restaurant. This score is graded based on the level of each service attribute (e.g., cleanliness, tastes, etc.), which are also graded by mystery shoppers. Since these attribute levels are graded based on the manual of the mystery shopper company, we assume these levels reflect the true quality of each attribute. We defined the strictness of grading as the way mystery shoppers reflected these attribute levels to the overall valuation, and we analyzed the effect of this strictness on the overall valuation. We also checked the relationship between this strictness of grading and mystery shopper's demographic variables.

We find that the strictness of grading at respective attribute levels actually affects the total valuation. Also, we clarify the relationship between these strictness extent and mystery shopper demographic variables. These results would help clarify a general mechanism of how strictness of grading scores forms the overall service valuation and also help construct an appropriate score presentation scheme.

## **Basic payment accounts: an analysis of the transparency performance of financial institutions in Spain.**

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Access to basic payment services has been recognized as essential for social integration by the European Commission through the Directive 2014/92/EU on Payment Accounts, which guarantees any citizen the right to have a bank account. This objective, part of the EU public policy for financial inclusion, requires that the private bank sector offers competitive basic services, accessible to any citizen, particularly to people facing social exclusion. Our work evaluates the level of implementation of the basic payment accounts in the Spanish banking offer, as well as their transparency and accessibility. Thus, we propose a model of assessment based on the European policy for financial inclusion.

The methodology has been based on the review of digital information and 13 visits to bank offices of three different Spanish cities. We have conducted interviews with the commercial agents, through a 'mystery shopper' technique. These interviews have been supported by a semi-structured script. The information collected has been analyzed under the proposed indicator model.

The results show that Spanish banks meet the legal requirements of information and publicity, but do not go further in terms of cost facilitation or developing marketing strategies to promote the product, particularly among the socially and financially excluded population. The discussion of the results aims to contribute to the debate on the co-responsibility of private industry and the public sector in the provision of basic services, identifying the key points of the co-creation of value in this area. And the conclusions raise recommendations for the development of the European policy of access to financial services.

## Measuring Public Innovation in Europe. The STARPIN Methodology

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The paper is based on the StarPIN project – Statistical Reporting on Public Innovation – carried out for Eurostat by the Università degli Studi di Urbino Carlo Bo, Italy, with the support of Dialogic of the Netherlands. A theoretical and a methodological framework is proposed for enriching the measurement ability of public sector innovation, and the implications for data collection and analysis are discussed. A preliminary test of the framework is carried out by means of pilot applications to specific public services. The paper focuses on public service innovation as a key locus of value creation for society, choosing an object-based rather than the more commonly adopted subject-based approach. Issues concerning the measurement of public service innovation are addressed in statistical terms and consistently with the official public sector functions classifications. A particular emphasis is placed on web scraping to capture the technological level of websites used by public administrations, and to evaluate the degree of innovativeness of specific services within selected public functions. Data collected through web scraping are combined with administrative data at the level of individual services. Based on pilot applications to specific public services in a limited number of countries, the paper draws the lines for an extension of applications to potentially all public service domains and all EU member states.

Public service innovation, innovation measurement, innovation data source, web scraping, administrative data.

The StarPIN team was composed by Annaflavia Bianchi, Giovanni Marin, Giulio Perani, Robbin Te Velde, Antonello Zanfei, and Emilia Zecca.

The StarPIN approach relies on three conceptual pillars: (1) placing public service innovation at center stage, (2) adopting an object-based approach, and (3) interpreting public innovation as an increase in public value. We derive these conceptual pillars from two largely complementary strands of literature. The first stream of contributions – focusing on public service dominant logic – draws the attention of scholars and practitioners to the fact that services are the most important dimension of public sector activities. Hence it is this area that the analysis of public innovation must focus upon. Emphasising this dimension of public sector activities is consistent with the widespread perception that service provision is a fundamental mandate of government at all levels, even in an era of shrinking public budgets. Moreover, the key role of public services also reflects a general trend that can be observed towards the “servitisation” of the economy as a whole. The second strand of literature – the one on public value creation and co-creation – highlights the need for a reflection on the economic and social consequences and outputs of public service development and the identification of aims pursued through public innovation. From this perspective, a focus on public R&D expenditure and technology adoption makes sense only if associated with

a consideration of actual usage/effects in terms of new or increased value created for the society, either considered as a whole or in its components.

The consistency between public functions, public institutions and public service classifications is discussed. The National Accounts' classification by Functions of Government (COFOG) has to be kept as the main reference for international comparison purposes. As an integration, the NACE classification – not always easily matched with COFOG's divisions and groups – was replaced by the Classification of Products by Activity (CPA), where “activities” are just those included in the NACE classification, so a full consistency among the three classifications can be assured.

The project is based on the integration of statistical data, data collected through web scraping and administrative data, all referred to a set of services and to the institutional and geographical entities involved in their provision. Services are associated to specific characteristics that can be ordered according to a hierarchical “ladder” in terms of innovativeness. Institutions involved in their provision can thus be classified as more or less innovative in the provision of each individual service by observing the level they appear to have reached in the ladder of innovation capacity. While the analysis was conducted in view of its application to specific public sector domains, the method described can be applied to any category of public services. The steps described include: the identification of public services, in correspondence with extant classifications, and of institutions involved in their provision; the description of service characteristics that can be associated with different levels of innovativeness; the singling out of descriptive tools (a list of keywords and of logically grouped sets/”baskets” of keywords) that can be managed via web-scraping techniques; the running of web-scraping using appropriate techniques; the organisation of results of data obtained through the web-scraping process; the validation process through the use of complementary data sources, including administrative data.

(A description of the web scraping source is provided in the full research paper and details of the preparation activities for setting and running the tool are organised in the User manual: <https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-GQ-19-002?inherentRedirect=true&redirect=%2FEurostat%2Fpublications%2Fmanuals-and-guidelines>).

The main result of the research consists of the definition of the phases of the process for collecting data on public service innovation based on web-scraping, and drawing from different statistical and administrative sources for additional controls. The main steps of data collection identified are: A. Identifying and selecting the public service; B. Identifying institutions involved; C. Capturing the degree of service innovativeness; D. Defining the tools for web-scraping; E. Running the web-scraping; F. Organising the results according to the innovativeness indicator and analysing the process outcomes; G. Validation phase and cross-sectional data analysis. On this last phase, the innovativeness level score obtained through the described process using web-scraping techniques is then ‘controlled’ checking its coherence with administrative and statistical data related to the service studied and with the actions and phenomena related to it.

The StarPIN methodology exhibits a high potential in terms of data generation with implications for our knowledge and understanding of innovation in public sector innovation.

The main results stemming from the pilot application of the methodology are shown and commented for 5 EU countries, with illustrative analyses based on the newly collected data. The bulk of data collection and elaborations refers to the Waste Management service domain, built and refined in two pilot countries in particular, Italy and the Netherlands, and extended to Portugal, Slovakia and Sweden. It is shown that the methodology has the potential to capture at least part of the innovation phenomenon in this sector. Some expectations, based on previous surveys and data collections at a more aggregate level, have been largely confirmed, as in the case of the positive performance of Nordic countries. Nevertheless, the data allow describing a more substantial heterogeneity across countries in terms of innovativeness of service provision. Furthermore, the StarPIN methodology allows exploring innovation at a much more detailed and significant level, as it allows some inference on innovativeness of municipalities in the provision of individual services. The richness of micro-level data can be exploited to evaluate patterns of innovation, their determinants and effects on (public) value creation.

## References

Bianchi A., Cozza C., Marin G., Perani G., Te Velde R., Zanfei A., Zecca E. (2019) Measuring public innovation in the EU: the STARPIN methodology. 2019 Edition, Eurostat, Manual and Guidelines, Luxembourg: Publications Office of the European Union, ISBN 978-92-76-01095-1 ISSN 2315-0815, doi: 10.2785/215876 KS-GQ-19-002-EN-C available at: <https://ec.europa.eu/eurostat/web/products-manuals-and-guidelines/-/KS-GQ-19-002?inheritRedirect=true&redirect=%2F eurostat%2F publications%2F manuals-and-guidelines>.

## Human-centered co-evaluation method to support the renewal of public education

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Co-production is one of cornerstones of public policy reform. Transformation of public sector services requires new ways of citizen and service user engagement as well as understanding impacts of public services (Osborne et al 2013).

Human-centered co-evaluation method (Hytyinen, Saari & Elg, 2019) clarifies the multiple values of public services, leverage scaling-up and enhance the service organization's ability to learn throughout development process. Method integrates multi-criteria evaluation (Djellal & Gallouj, 2010, 2013; Hytyinen 2017) and developmental evaluation (Patton, 2011; Saari & Kallio, 2011). To enrich evaluation it contains survey data generated by 'Inclus' -software.

The method facilitates interaction between developers and potential supporters and, thus, provides an alternative to support the continuous development and learning throughout the service development process. However, implementation does not happen spontaneously, but requires an evaluation capacity building of the organization (Ensminger et al. 2015).

We apply evaluation method to support the public service development in the field of education. Focus is on 12 educational experiments carried out by Innovation Centre at the Finnish National Agency for Education. The experiments bring together students, their families, teachers, developers school management and policymakers to co-create new ways to develop better human-centred education services on the local level. Role of the Innovation Center is to enable co-creation by the support of human-centered evaluation method, and to enhance information flow from the local to national level and thus to support scale up of services.

Our empirical analysis contains three data sources: 1) survey data targeted to 12 experiments and gathered with Inclus-software, 2) two hours participatory workshop targeted to one experiment, 3) expert interviews targeted to experts in Innovation Centre.

The evaluation process brought professionals and potential distributors together and made them to evaluate multiple impacts of the experiment in accordance with the evaluation method. Methods made visible benefits from the perspective of variety of stakeholders. In addition it brought up challenges and development ideas, which helped to redirect the targets during the development process. Integration of the Inclus-software helped to quantify impacts from the perspective of multiple stakeholders, visualize data in understandable manner, support dialogue between people and thus result in building common ground and commitment for decisions.

Results also generate understanding if the evaluation method helps building evaluation capacity in Innovation Centre and if tool is used permanently to support development and evaluation of experiments.

## **The Educational and social impact of science museums. The case of the Granada science park**

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The knowledge society has shown over the past two decades that science can be available to the inhabitants without giving up its rigor or its strict methodological procedures. Assessing the impact of scientific centres and museums is a growing field of study, due to trends such as increased competition and financial pressure, demands for greater public accountability and transparency, and policies government agencies that require public institutions to demonstrate their achievements in a variety of areas. Our general objective is to check if the activity of the Granada Science Park has any kind of positive educational and social impact. In particular, in a first analysis, we wanted to check if the visits to the Granada Science Park have had some kind of positive relationship with the number of students pursuing some kind of university careers of the University of Granada.

For instance, Garnett (2002) conducted an international investigation on the impact of scientific centers. The study of this author was funded by a group of 13 science centers from different countries, which demonstrates a generation of considerable interest in this type of research. It is interesting to highlight that Garnett analyzed 180 reports of different science museums and found out that the majority (87%) of the reports provides insight into personal or educational impact of science museums. The rest of reports has focused on the measurement of economic and social impacts of such kind of establishments. Similarly, Jacobsen (2016) determined that museums and science centers have educational, economic and social impacts.

Woolnough (1994) obtained evidence that extracurricular scientific activities encouraged students to study science at school and pursue scientific careers. Coventry (1997) surveyed college students and found that 80% of students pursuing science-based careers had visited the science center in Perth, Australia at least once, while only 64% of students who were not studying science-based careers had visited the Perth Science Center. Salmi (2000) achieved similar results in Finland and indicated that there is evidence that youth programmes in science centres have encouraged participants to pursue careers in science teaching. Taking into account these and other similar research, and only for guidance purposes, we wanted to check, in a first phase, whether there was any statistical relationship between the historical evolution of the total visitors of the Science Park of Granada and the number of university careers at the University of Granada. To this end, a statistical test has been carried out consisting in following the evolution of the number of students enrolled in certain careers of the University of Granada to estimate their statistical correlation with the number of visitors from Granada and the province to the Science Park.

The result of the first phase of the research indicates that there is a positive and significant correlation up to 5% between the total visitors of the PCG of Granada or province and the careers of Archaeology, Science and Food Technology, Biotechnology, Optics and Computer

Engineering. If the statistical significance is fixed up to 20%, the careers of Electronic Engineering, Physics and Medicine would be added. And if this significance is increased to 30%, the Chemistry race would be added. Clearly, with this statistical test it cannot be concluded that the activity of the Science Park is generating scientific vocations. Other statistical experiments or quasi-experiments are necessary to conclude in this regard. But with this first approach we only seek to reinforce our working hypothesis that there is this relationship, which would be in line with what Coventry already discovered in 1997, that 80% of the university students who were pursuing careers had visited the center science in Perth in Australia at least once. From an educational and social point of view, a second part of this study will revolve around determining whether there is a potential impact of science park on the local community. The research questions could be of the type: What is the effect of the Science Park on the attitude of students?, What is the effect of the Science Park on its attitudinal decisions regarding its professional choices?.

## References

Coventry , V. (1997). Mayor influences on career choice: a study conducted on behalf of Scitech Discovery Centre. *Perth, Australia: Scitech Discovery Centre.*

Garnett, R. (2002). *The Impact of Science Centers/Museums on their Surrounding Communities: Summary Report.* Canberra: Questacon.

Jacobsem, J. (2016). *Measuring Museum Impact and Performance: Theory and practice.* MD, USA: Rowmanand Littlefield.

Salmi, H. (2003). Science centers as learning laboratories: experiences of Heureka, the Finnish Science Centre. *International Journal of Technology Management, 25*, 460-476.

Woolnough, B. (1994). Factors affecting students' choice of science and engineering. *International Journal of Science Education, 16* (6), 659-676.

## The effects of user co-creation on innovation outcomes in the public sector: a QCA analysis of survey data

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We apply qualitative comparative analysis (QCA) to identify combinations of eight factors that public sector managers use to obtain good outcomes from a self-reported “most important” service or process innovation. QCA assumes that there are multiple possible solutions to a problem, such that managers can combine different sets of resources to produce an innovation.

The data are obtained from a 2019 survey sent to a random sample of managers in six European countries (France, Hungary, the Netherlands, Norway, Spain and the UK). The factors include 1) senior management support for innovation, 2) employee motivation and empowerment, 3) innovation management methods, 4) research conducted to identify the problem and solutions, 5) prototyping and testing, 6) the use of external sources of assistance, and the involvement of users in co-creation activities, divided into two methods of involvement: 7) interactive (one-to-one discussions, focus groups, brainstorming sessions) and 8) non-interactive (analysis of existing data and user experience of a prototype).

Survey respondents were asked to describe their most important innovation in the previous two years, which could be a service or process innovation. The limitation to a single innovation is used to obtain accurate data on both the inputs used to develop the innovation and its outcomes. The description of the innovation was used to identify service innovations, which can include complementary process characteristics, and process innovations, which contain no characteristics of a service innovation. Service outcomes include user experience, user access to information, safety, and service quality. Process outcomes include simpler procedures, time to deliver a service, ability to target a service to those in need, employee satisfaction, safety, and reduced costs. The users for service innovations are defined in the survey as often “individuals”, but can include “government employees, businesses or community groups”. The users of process innovations are defined as “government employees that operate the process”.

Each factor is divided into a ‘high’ and ‘low’ level of use or presence. The number of positive outcomes are summed and divided into high and low outcome levels. Analyses are limited to 209 respondents for the service innovations and 105 respondents for the process innovations and in addition everyone reported evaluating their most important innovation after implementation.

The analyses find nine combinations (solutions) for service innovations, with total coverage and consistency of 0.527 and 0.910 respectively. There are no necessary conditions (none of the factors are present in all solutions). Although user involvement is present in seven solutions, neither interactive nor non-interactive user involvement is present in two solutions,

indicating that successful outcomes are possible for service innovation without user co-creation. Non-interactive methods of involving users are also more common, present in six solutions, while interactive methods are present in three solutions.

There are five solutions for process innovations, with total coverage and consistency of 0.383 and 0.930 respectively. In contrast to services, the use of prototyping and pilot testing is a necessary condition, present in all solutions. Furthermore, one form of user involvement (interactive, non-interactive or both) is present in all five solutions, with both methods present in three solutions, only non-interactive methods in one solution, and only interactive methods in one solution. The greater use of prototyping and pilot testing and of user involvement for processes is probably because these methods are easier to use for processes than for services. Users are easily at hand and do not need to be identified from the general public, while prototyping and pilot testing can also be conducted in-house.

These results show that user involvement is common in most solutions that result in good innovation outcomes, but it is not necessary for services. In addition, less costly and demanding non-interactive methods of involving users occur in more solutions than interactive methods. The cause of these differences is likely to be due to a combination of the cost and effort of including users and differences in the need for user involvement, both of which are expected to vary by the characteristics of an innovation.

# Track 5: Service DESIGN and co-creation methods for services

## Why co-creation in service ecosystems needs an architectural view

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This article demonstrates the relevance of architecture for implementing the process of value co-creation. From the service ecosystem perspective, we show how architecture can (1) set the institutional arrangements for the coordination and involvement of actors, thereby (2) creates the prerequisites for resource integration and (3) enables value to be co-created through the process of applying resources. In this context, architecture allows the asynchronous elements of institutions and processes to be linked together. Thus architecture creates the basis for institutional agreements to be shared by self-adjusting and resource-integrating actors and value to be co-created through the process of service exchange.

Based on the theoretical foundations of service science, service-dominant logic, service dominant architecture and the institutional theory a conceptual framework for describing and analyzing value co-creation will be developed.

The contribution aims to develop a generic conceptual framework for demonstrating and analyzing the relevance of architecture in the context of value co-creation.

## The co-creation strategy adapted to the type of service

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Our analysis focuses on the co-creation strategies of companies according to their sector of activity. The study consists in listing the different co-creation methods according to their characteristics. Our objective is to identify how companies benefit from co-creation. Indeed, numerous studies have analyzed how the different types of customers can contribute to innovation (Poetz and Schreier, 2012; Kristensson et al., 2004; Magnusson, 2009).

However, the type of co-creation to be implemented depends on the type of service but also on the sector concerned. Co-creation will be advantageous provided that the method used is appropriate.

The different types of co-creation that exist are studied for different services in order to establish which type of co-creation is appropriate for certain services.

The first step is to identify a set of existing co-creations in the service area. The term customer co-creation is used when customers are actively involved in the innovation process of a firm. Co-creations are also a source of innovation. They facilitate the development of innovation.

In a second step, the types of co-creations identified are analyzed in order to establish which co-creation to implement for each service. Indeed, which co-creation should be implemented to foster the innovation of a service.

Therefore, the analysis focuses on the strengths that a co-creation should have depending on the service to be developed. The study also seeks to highlight the value of developing a typology of co-creation that allows for the development of service innovations to make co-creation even more beneficial.

The objective is to show the interest in identifying the type of co-creation adapted to the service developed. A certain number of aspects are thus analyzed in relation to the service in question to underline the importance of having a real co-creation strategy in order to obtain a new innovative service.

In this way, the service firm will be able to take advantage of co-creation to obtain a new successful service. Indeed, the likelihood of new service success increases for the firm by fulfilling customer needs (Von Hippel, 2001; Kristensson et al 2004; Magnusson, 2009; Poetz and Schreier, 2012).

The aim is to establish a typology of co-creation types according to the firms' service area. Indeed, there are a variety of possible co-creations, but it is necessary to choose the one that is appropriate for the service that one is seeking to develop. The implementation of co-creation adapted to the service will give a definite advantage to the firm that has used it judiciously.

## A systems approach to understanding creative innovation in gastronomy services

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In the early 2000s, the New Nordic Cuisine manifesto was launched, aiming amongst other things, to reintroduce seaweed in the Nordic diets as part of the broader picture to increase vegetable consumption. Using the example of how elite Nordic chefs use a relatively novel food such as seaweed in Nordic cuisine, we describe and develop a model of creative innovation in gastronomy services from a systems perspective. Seaweed has long had a connotation of poverty and austerity in the Nordic regions and had thus been a forgotten or marginalized food ingredient.

25 relevant industry sources were identified to help develop our model of understanding innovation in gastronomy services. The data gathered were transcribed and used to build a small data corpus. The data was analysed using both VOSviewer and AntConc for content analysis. Using a four quadrant systems framework, we identified some of the major challenges and barriers to innovation in gastronomy services. They include, seaweed being a new food, a lack of advanced mechanised harvesting technologies and regulatory uncertainty in terms of harvesting rights.

Our corpus data revealed that phycogastronomy in the context of Nordic cuisine remains an emerging concept that leaves potential for innovation in food services. It is challenge is reflected through the entire supply chain from harvest to consumer acceptance. Within our small corpus, several chefs and food enterprise owners as stakeholders have voiced how technology affects their businesses, as well as given them inspiration towards new ways to co-create / enhance dining experiences for consumers by offering new types of services. Our data has found a clear effect of technology enablers in gastronomic services innovation. They include digital, technical, and novel food preparation technologies. It has, according to those who implement it, accelerated, and structured the process of creative services innovation, suggesting that there are clear advantages of a more widespread implementation of such technology enablers.

## **Service design method in co-creation of public services on example of a polish pilot project representing the CoSIE project**

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This paper presents a small part of co-creation process from a CoSIE Project, which is exploring opportunities to co-create public services in Europe. The project has two overarching objectives - to accelerate the shaping of public service priorities by the beneficiaries and to involve citizens in the joint design of public services. The CoSIE project is a complex process that has been divided into 6 tasks, however, the most important part of this task - the pilot project will be presented below. In micro scale, a pilot programme was carried out in Wrocław (Poland) to seek solutions to the problem of loneliness of elderly people through forms of co-habitation. An attempt was made to identify the needs of seniors and which of those needs are satisfied locally, what are the relations between neighbours and the attitude towards cooperation.

Pilot project, which was a part of a bigger structure, was based on Service Design method. This approach was innovative, but thanks to the identification of local leaders to stimulate dialogue and cooperation despite different stakeholder perspectives, it adapted to local contexts and beneficiaries. All stages were carried out with the participation of different groups of future recipients, the diversity in this case was desirable. Stakeholders were involved at different stages of the process. In this way, the aim was to co-create public innovation with all the groups associated with the final product – service. This was based on the premise that social innovation should be based on three main dimensions: meeting human needs, social change, increasing socio-political capacity and access to resources. To meet these challenges, the focus has been on involving citizens in co-creation, which is also a fundamental principle of the Service Design process.

Participation of the public in the joint actions of governments, designers and individuals to eliminate the boundaries between "recipients" and "providers" of services in order to build a better quality of life. The participation of groups that were previously marginalised, such as the elderly and the disabled, in order to provide a lot of value, information and inspiration, which is also important for the rest of the society. As part of the pilot program, to find out the most important problems and needs of senior citizens concerning the housing estate and to work out the solutions together with the elderly.

## The changing role of healthcare professionals in the public services sector co-creation process

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In the era of administration-driven governance, public sector professionals were responsible for providing insights on the services needed by citizens. The current paradigm of public administration and management emphasizes co-creation. While co-creation has proven to be a promising approach as part of public service innovation, less emphasis is placed on public sector professionals' participation in the co-creation process. The term professionals refers to a wide range of public sector employees working at different levels of the organization. The co-creation approach, which seeks to solve need-based problems through a multi-stakeholder approach, challenges the new role of professionals in the public sector innovation process. Professionals are seen as important actors in the networked co-creation process, for example, in organizing collaboration and interaction with end users. However, the co-creation process and methods are often unfamiliar to many professionals and they are understood differently. Thus, such an approach requires a new role along with capacity-building for public sector professionals as important actors in the co-creation process. This is exactly what this paper focuses on. **The aim of this paper** is to deepen understanding of public sector professionals as actors in the co-creation process.

The methodology of the study follows multiple case study research to examine the different roles and involvement of public sector professionals in the co-creation process in a complex healthcare setting. The research data was gathered during the Co-created Health and Wellbeing (CoHeWe) project. The aim of the project is to support four Finnish cities in transforming their role from service providers to innovative service enablers through a co-creation approach. During the project, participating cities (Helsinki, Vantaa, Tampere and Oulu) develop and implement customer-oriented social, health and well-being services to promote health and well-being and prevent illnesses. The research data consists of one case from each city.

The preliminary results indicate that 1) the operating culture of a public organization should support the co-creation process in order to enable professionals at different levels of the organization to bring their knowledge into the co-creation process; 2) the co-creation process must be clearly defined so that professionals with various backgrounds are able to identify the objectives of the process and the interrelationships between its phases; and 3) the co-creation process must be embedded in the organization's operating structure in order to allow a flexible allocation of professional resources.

## Public Service Logic and Service Design - Value propositions through framing

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This paper aims to contribute to the scholarly debate on the Public Service Logic (PSL) by integrating PSL with Service Design. PSL holds that public service organizations do not create value for citizens and users, organizations merely facilitate service users' value creation. This facilitation relies on the provision of service offerings, also termed value propositions. The literature has so far highlighted value propositions as a central element of PSL, but there are scarce understandings of how novel value propositions are developed. To address this, the current paper examines the role of service design in the development of novel value propositions, based on a multiple case study and a cross case analysis. The analysis shows how the development of value propositions involves processes of framing and reframing, and the paper contributes by demonstrating how service design and the concept of framing may advance new insights of PSL and PSLs relation to service innovation.

The paper is based on findings from a multiple case study of service design projects in five European countries (UK, Norway, France, Spain and Hungary), carried out as part of the H2020 Coval-project. The case studies are based on qualitative, interpretive research methods. The analysis of the empirical cases follow the principles of cross-case analysis as outlined by Stake (2013), and the aim is to synthesize findings across cases.

The findings indicate that the developments of new value propositions are embedded in framing or reframing processes which may take place at different levels and of different scales. Reframing involve shifts of perspectives on the role of a specific service, or in understanding a specific problem. We suggest that service design projects may be involved in developing new value propositions within specific organizations or units within organizations, but the work on new propositions tend to be linked to broader reframing processes within service sectors and in political discourses at macro levels. With this backdrop, we outline a set of analytical categories which depict different trajectories of how new value propositions are sought developed and implemented through service design.

## Quick and dirty: misuse of design thinking and UX design in public action transformation. Lessons from State, regional or metropolitan administrations in France

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In France, design is usually understood as a practice to improve aesthetics and functionality of objects, or communication efficiency, or public spaces in cities. More recently, design thinking, service design and UX design were introduced in public management practices in order to accelerate the modernization of public services in an international context of digital transformation and e-government. User-centered approach, open innovation and agile methods are developed to accelerate innovation in private companies, at lower costs. The transfer of these concepts in public action is linked to budget reduction context and political incentives. The objective of this paper is to highlight how implementation and scalability of design methodologies forces different departments of a ministry or different administrations at a regional or metropolitan scale to work together despite professional routines and conflicts. In France, the creation of new larger regions in 2015, or new national strategical policies that has to be implemented at a local level is a driver to imagine new ways of public action transformation.

The paper is based on a case analysis realized for the H2020 Co-VAL project and on professional experience of two designers working for the Ministry of social and ecological transition. In depth interviews were conducted in 2018 and 2019 with managers of the DINSIC (directorate for digital and IS), of the General directorate for sustainable development and of some Regions or Metropoles. The interviews were completed by an analysis of official websites and by observation of participatory sessions in Paris or in Lille. From a professional point of view, the two authors/designers lead design sessions with administrations at different levels and can share their experience with the author/researcher in order to confront practices and scientific approach.

After sections about theoretical backgrounds and research methodology, we will focus on French experiments at a national, regional and local levels in Service design and UX design. Tools and methods promoted by the government (DINUM and DITP) will be exposed, but also the network of actors that adopt design methods in order to invent new public services or improve their quality. If the State acts as facilitator in the diffusion of design methodologies, operationalization of those methods often leads to a misuse of collective intelligence: too short sessions, not enough participants, few deliverables and mostly not real transformation of administrative routines. Through some examples, authors will present how design experiments could lead to a design management approach in administrations.

### References:

Borja de Mozota, B., (2002). Design Management, Paris, Editions d'Organisation.  
Lefooghe, C., (2019). The DINSIC at the heart of the digital transformation of the French State and public action, Report for WP3 / D3.3, Co-VAL [770356] "Understanding value co-creation in public services for transforming European public administrations".

Liefooghe, C., (2019). Four cases of Living Labs in France, Report for WP5/D 5.2: In depth case studies of how living lab approaches are used for co-creation and co-innovation, Co-VAL [770356] “Understanding value co-creation in public services for transforming European public administrations”.

Røhnebæk M., Bjerck M., Stroksch K., Cui T., Francois V., Arnaud P., Peralta, A., Rubalcaba L., Carrillo-Hermosilla J., Kiss N. (2020), D4.2 Report on in-depth case studies for WP4: Service design, Co-VAL [770356] “Understanding value co-creation in public services for transforming European public administrations”.

Von Hippel E. (2005). Democratizing Innovation, The MIT Press, Cambridge, Massachusetts.

## Caught in the middle: Frontline employees' ambivalent role in service design

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While demand for dementia care services rises due to aging populations and demographic transitions, scholars address ways of enhancing well-being through innovation and explorations of alternative forms of caregiving (Anderson et al., 2013; Patrício, Teixerira, & Vink, 2019; Rodgers, 2017). Related to this, service design is suggested as an approach for enabling user focus and co-creation as means for public service innovation.

Service design highlights the pertinence of designing services with and around service users. This can be interlinked with involvement of front-line employees, who learn and gain knowledge from service users through daily service interactions (Cadwallader, Jarvis, Bitner, & Ostrom, 2010; Engen & Magnusson, 2015; Karlsson & Skålén, 2015). At the same time, there is research pointing out that frontline employees may hamper renewal and innovation, especially in professionalized public service contexts (Ferlie et al., 2005; Koch & Hauknes, 2005; Heartly et al., 2013). Professional frontline employees tend to be nested in communities of practice shaped by certain sets of rationales and perspectives, which may yield 'professional resistance' in innovation efforts (Koch & Hauknes, 2005; Sundbo, 2011). Thus, the literature grants frontline employees an ambivalent role in design and service innovation processes.

The objective of this paper is to explore this underlying ambivalence of frontline employees, by zooming in and out of a service design process set in dementia care. We study how the role of frontline employees is discussed and handled among those managing and coordinating the design processes; and we study how frontline employees perceive their roles through interviews with informants set inside and outside the design processes.

This study is part of a broader research project carried out over four years (2018-2022), where we follow the planning, development and implementation of a 'Dementia village' in Norway. The analysis draws on empirical material from a process study during the fall of 2018 and spring of 2020. Methods used in this period are document studies, observations of the design processes and interviews.

In total 26 interviews are conducted: The project team (4), frontline employees from three different health units (12) and frontline employees/other employees participated in the design process (10).

This paper will present results that contribute to new knowledge about frontline employees' roles in service innovation and service design. We analyse, theorize and discuss the ways in which frontline employees may contribute to and hamper public service innovation.

## **The organizing of the co-design process underlying assumptions and mechanisms: A conceptual framework and a research agenda**

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The rationale behind and objectives of this paper is to develop a conceptual framework that integrates the organizing perspective with research on co-design to increase the understanding of how different forms of interdependencies occur and can be managed in co-design.

Several scholars in service and design research point at the strategic importance of co-design. Co-design is often framed as a collaborative effort of collective creativity where firms and users join forces to share their knowledge and ideas in an interdependent design and development processes. Doing so, previous research points at the importance of interdependence of tasks and actors involved in co-design processes. Yet, few if any scholars focus on how the organizing of co-design may create such interdependencies or how these can be managed. This article focuses on the organizing of co-design as a human centered, participatory and interdependent process. We argue that the organizing of co-design processes is of key importance to avoid cooperation and coordination failures that impede successful implementation of co-design.

We use a multidisciplinary approach and relate the field of organization design to service and design research on co-design through a literature review.

Starting with universal principles of organizing, we will show how considering and managing possible organizational challenges before and during the co-design processes either may support collaborative success or failure. Further, we discuss how the key organizing mechanisms affect co-design processes to create an understanding of how managers can avoid devastating cooperative or coordination failures in such processes.

We will develop a framework of propositions on how to manage interdependences in co-design based on our literature review.

Research on organization design contends that careful consideration and subsequent management of interdependencies are key mechanisms behind successful or failing integration of effort. Interdependences can be ascribed to tasks, actors or both. Research shows that depending on the form of interdependences different challenges occur that the managers have to cope with and to consider in advance, when organizing processes. Different forms of task division, task allocation, reward and linking mechanisms can be used to alter interdependencies in co-design processes to avoid collaborative failures that may lead to malfunctioning outcomes.

## Co-creation, power and democracy

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Co-creation is seen as an important tool for how public sector will solve societal challenges and changes in user needs. In addition to increased user involvement, co-creation is also recognized as a democratic form of governance. However, co-creation in a democratic form can be difficult to contribute to, for public organization that are inherently hierarchical in their structure and exercising of power. The drivers and barriers for co-creation has often been searched for through structural conditions. For example has the Nordic Model with short power distances been seen as likely to foster co-creation. Less attention has been given to power as a dynamic factor that is exercised and realized in a social context. In this article we explore and discuss how a democratic way of exercising co-creation is likely to involve a different way of exercising power, and how this power typically will contrast the hierarchical power structure of public sector.

Based in a processual understanding of reality and Mary Parker Folletts (1924) understanding of democracy connected to power-with, rather than the hierarchical power-over, we explore how power-with and power-over is exercised and negotiated in a municipal co-creation project. Through qualitative interviews with participants where some are public employees and others were “ordinary citizens”, we identify “meaning turns” and how power is exercised in these turns, and how this also contributes to re-considerations of power relations.

Through the findings, we give insight in how power-with can play out in a co-creation project. We demonstrate how participants create possibilities for co-creation through exercising power-with, and how a different way of exercising power also can change the validity of certain power acts.

Further, we discuss how the exercising of power-with is a relationally different way of understanding collaboration, where enabling becomes a possibility through re-interpretation of social identities.

The paper contributes to the understanding of drivers and barriers in realizing true co-creation by offering another route to understanding power. As such, it also provides a theoretical framework for exploring potential drivers and barriers as emerging factors in social contexts.

## Catalysing systems thinking through service design doing.

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Design has been proposed to aid the transition from production oriented approaches towards a more service logic position, through its approaches and practices (Wetter-Edman et al 2014). In parallel design is forwarded as an approach to address challenges within the public sector (Bason, 2010; Kimbell 2015), transformation (Wetter-Edman et al 2018) and policy renewal (Considine 2012). However, recently voices have been raised to what extent service design may deliver what is promised (Blomkamp 2018; Clark & Craft 2018; ).

The purpose of this study is to critically discuss the potentialities as well as the shortcomings of using design approaches for policy renewal. The results shed light on strengths, difficulties and weaknesses of using service design as a transformational driver towards a more systems oriented public sector. The study also highlights the way the different actor-networks defend themselves from new ideas.

This study draws on two empirical contexts: 1) Swedish healthcare through an intervention research project, of a 8 month design project, across 5 Swedish municipalities and a county council 2) Five national agencies involved in a design driven exploration initiated by the Government Offices of Sweden. The experiments made use of design methods and approaches for their realization (Junginger 2018; Kimbell 2014) and systems thinking to understand the dynamics of the actor-networks (Chapman 2004).

Data was collected through participant observations, reflection diaries, document studies, audio and video recordings and interviews with participants.

The analyses identified in all nine categories to be either supportive (5 categories) or indicative (4 categories) of the use of a design and system approach for within the context of Swedish public sector organizations and their work with policy renewal.

## Service Design and Learning Experience Development in Higher Education

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The intensifying competition on the education market, pressures from international higher education rankings, as well as the need of attracting financial resources, are pushing universities to do more. Higher education institutions have to prove their relevance on a day-to-day basis and Service Design (SD) can be a tool to approach this challenge with.

Our case study presents a SD development project and its results from a Hungarian private university to improve student learning experience (Lx). It aims to assess the applicability, benefits and challenges of the SD methodology in the public sector.

Within the project the university has been working with an external partner in two cycles since December 2017. As a private university that is funded by tuition fees exclusively, there is strong pressure from the students' side to respond to their expectations. Accordingly, the main purpose of the project was to explore how students experience the learning process at the university, how they feel about its operation, how satisfied they are with the services provided, and to identify areas where the university should make improvements.

The case study is based on semi-structured interviews (2 consultants, 1 senior and 2 middle managers) and analysis of documents and reports of the consultancy process (8 documents). The interviewees were selected on the basis of a preliminary interview with the senior consultant of the project, followed by snowball sampling method.

The project created broader commitment to seek out students' voice to define the university's institutional development strategy, making SD-based service development a long-term strategic tool. The project also attracted the attention of the Hungarian Higher Education Accreditation Committee, which is a notable external impact.

## **Co-designing the client's civic queuing experience based on human ethology: the challenges of welcoming the homeless in a social public institution in Geneva**

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Given its growing influence on the image and reputation of organizations, the customer experience is now one of management's main responsibilities. The private sector has been aware of this for many years. Public administrations must also take an interest in it. This is particularly the case for the Geneva social institution we studied, which, with its public and social role and its duty to guarantee total equality of treatment to its various users, seeks to offer them a customer experience that is as personalized, meaningful and complete as possible. The main objective of this research is to define the main elements of perceived value of the welfare office "queuing experience" such as equality and dignity. We focus here on the specific case of the homeless and use a service design approach based on human ethology.

Each service encounter corresponds to a "queue network" where a queue system is connected to servers. We assume that each type of production service (in this study, the welfare office) requires a tailored queue design in order to maximize the user's perceived value for any given service experience. The advantage of human ethology over ethnography is that it is not based on cultural theory. This is indeed very important in the case of homeless people. Through human ethology, we have been able to design "all-round cultural" queues for all users who come to the welfare office. We used different techniques of human ethology (participatory, non-participatory observation, breaking experience as well as quasi-experience) to simulate different designs of queues that minimize the risks of orientation, confusion and distortion of equality.

The results have already been integrated into the new configuration of the social reception queue of the Geneva social institution under study. Our main recommendation was to move the reception desk dedicated to the homeless at the beginning of the month from the waiting area to the appointment area. The strips delimiting the first line were also moved to create a funnel in order to ensure that all users enter the queue and to prevent some from being tempted to go straight ahead. Improved steps were to guide clients to the queue, to include a separate waiting area for the homeless as well as a redirection to a neutral counter.

## **Home-living elderly' experiences with eHealth technologies in care coordination: How the design thinking perspective can help**

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Research shows that eHealth technologies are seen as promising for care coordination, and thus important for the quality of healthcare services. However, research regarding eHealth technologies in care coordination for older patients living home indicates mixed outcomes. The design thinking perspective in the development of new eHealth technologies may result in valuable solutions for users. Design thinking is an iterative, holistic problem-solving framework that focus on the users to create or improve solutions or services. The objective of this study is to explore multimorbid home-living elderly' experiences of e-health technologies in care coordination, and how design thinking can affect the user experience.

To achieve in-depth insight into the elderly' experiences of e-health technologies in care coordination in municipal healthcare, a longitudinal qualitative study is undertaken in an urban/rural mixed Norwegian municipality. We have conducted individual semi-structured interviews with multimorbid elderly patients over 65 years, their primary general practitioner (GP) and their home health care nurse. A total of 60 participants joined the study, 20 elderly persons, 20 GPs, and 20 home care nurses. A follow-up interview is done after 4-6 months, as this is an ongoing research project. Data is planned to be analyzed using qualitative thematic analysis.

Preliminary results indicate that secure electronic messages between the GP and home health care nurse about observations, concerns and medication issues regarding the elderly patient are important for care coordination. However, elderly patients are not included in this information loop. Elderly patients report that they prefer to use the telephone to get in touch with their GPs regarding issues. Some participants report on having used technology when they were healthy. However, a major reduction in physical ability and energy levels make it demanding to use and learn new eHealth solutions. This study gives a unique insight into municipal healthcare services for a complex patient group. With a focus on the design thinking perspective, there is an unused opportunity to design healthcare services and eHealth solutions to meet the elderly's lack of ability to use digital tools due to hearing difficulties, visual impairment or poor fine motor skills. Several participants stated that next-of-kin helped with using internet solution when necessary and therefore next-of-kin should be included in further research and development of eHealth technologies to coordinate care.

## **User-testing and co-designing a mobile application for self-management of serious mental illness and service integration"**

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Mobile health applications are being developed at a fast pace and are suggested as efficient in promoting knowledge of health behaviors, and measures to stimulate behavioral change to chronically ill patients. Mobile health apps also provide an opportunity for the person to monitor physical activity and mental health symptoms. Technology-Supported Self-Management Intervention for people with severe mental illness has received attention. One example is PeerTECH app (Fortuna et al. 2018a,b) which is based on research on psychosocial interventions "integrated illness management and recovery": 1) Education that improves knowledge about managing mental illness; 2) Behavior change; 3) Training to prevent relapses and 4) Increased coping (Bartels, DiMilia, Fortuna and Naslund, 2018). A core feature of PeerTech app is the added components of peer support, sharing lived experience and self-determination. For digital tools to have high acceptability and likelihood to fit the context and service users' needs, it is important to identify facilitators and barriers to uptake and use in existing services. Participatory research designs and co-design methods when developing and adapting digital interventions can ensure the relevance and appropriateness of digital tools and interventions.

The objective of this study is to explore the use of digital tools in community mental health services and to conduct user testing of the digital application, PeerTECH, in a Norwegian community mental health setting.

We conducted a semi-structured interview and usability study using verbal probing and the think-aloud approach. Study participants were recruited from community mental health services in two municipalities in western Norway. We performed individual interviews with mental health service users, mental health professionals, and peer support workers. The interview guide was based on the consolidated framework for implementation science research and included open-ended questions about the use of digital technologies, facilitators, and barriers to the use of digital tools in services provision, and the role of peer support. We employed task analysis to assess features and the user interface of the PeerTECH mobile-to-mobile smartphone app.

By engaging service users, professionals, and peer support workers considering what is important to them it will enable us to ensure the contextual fit of the PeerTECH application

to services users' needs. This is particularly important for a vulnerable population such as individuals with severe mental illness, who bear a high burden of diseases and potential cognitive limitations that may impair ability to engage in self-management. The study will provide useful and relevant knowledge about the use of existing digital tools in community mental health services, issues that will influence the use of PeerTECH smartphone app in the community mental health services.

## User-centered design in a school-based health education program

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Health education is aimed at inducing lasting changes in knowledge, and attitudes about health as well as actual health behavior of individuals. Providing health education activities in a way which meets the wants and needs of the target group is essential in order to be effective. Primary education has a significant role in forming the health behavior of young children, however, the influence of family background is strong and unavoidable.

Our case study reviews a pilot project of an 8-session-long health club carried out in primary schools by teachers and school nurses in Hungary in 2015. Health development activities included sessions about dietary habits, physical activities, sleep, relationships, television, computers and phones as well as the operation of health providers. The main (and novel) idea was the direct inclusion of parents in the activities: dual attendance of a child and a parent was a requirement for enrolling in the program. Participants' satisfaction level was outstanding, improvement in health knowledge and attitudes was moderate – and still, the pilot project was not followed by a wider-scale adoption of the program.

We aim to evaluate how user-centered design during the program development contributed to high level of acceptance and satisfaction by users and the discontinuation of the program at the same time.

Document analysis and interviews were carried out in order to prepare the case study. The original project documentation (from 2015) was reviewed: documents included memos about both the development and implementation phases as well as evaluations prepared by participants and service providers. In 2019 interviews were conducted with experts working on the curriculum, service providers, and a group of children who participated in the club.

Project outcomes (in terms of improvement of health knowledge and attitudes) remained limited due to selection bias: those families who have already been living a healthy lifestyle were more willing to participate in this pilot program. This fact reflects the difficulty of reaching the right target group during service development. Meeting users' expectations have been the primary focus, which led to the formulation of a program with high resource use (time consuming for all the participants). A development project can devote much more resources to "being user-centered" than standard, every day operations allow. Sustainability of the service should be taken into consideration to a greater extent, even if it puts a limitation on how user-centered the service can be.

## Scenario-Based Design Process for Digital Technology Assisted Service System

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Recent digital technologies such as Internet of Things (IoT), Artificial Intelligence (AI) and social robotics are rapidly progressing in various scenes in our society. However, there is a growing social concern of negative impacts by digitalization such as a privacy issue and security breach. Although some principles and guidelines for development and use of digital technologies have already been released, less research has addressed the question about how to design a service system by integrating digital technologies while mitigating their negative impacts on human and society.

This study aims to develop a design process of digital technology assisted service systems, which we call DSS. This design process is characterized by the reflection of diverse opinions and values of stakeholders involved in the DSS.

The design of DSS requires the structural understanding of DSS while taking stakeholders' subjective values into account. To satisfy these requirements, we propose the design process using the structural model of DSS, which we call the four-layer model [Watanabe et al., 2020] and a scenario-based design approach.

Scenarios are described in a narrative format, which helps various stakeholders easily understand how DSS works for them and its impact. Scenarios are effective to describe and evaluate ideas about how to use the digital technologies in service systems. The four-layer model of DSS, which includes value-, actor-, digital, and institutional layers, is a framework to represent a DSS in a comprehensive manner. The DSS design team collects and organizes the information and ideas from draft scenarios by using the four-layer model, and revises the scenarios by rearranging components in the four layers.

For testing the concept of the design process, we carried out a design workshop about a fictive case of a monitoring service for seniors using a robot. The core digital technology we assumed here was a dog-like animal robot. The purpose of the DSS was to secure the safety of a senior person who lives alone.

Through the workshop, we first created multiple DSS scenarios. By analyzing the scenarios using the four-layer model, we created more DSS scenarios in a structured manner. Based on the workshop result, we also identified diverse subjective values through analysis. We will further discuss the effectiveness and limitations of the proposed design process to explore desirable DSS ideas with the involvement of real-world stakeholders.

# Track 6: Living-LABS and co-creation spaces for services

## Living labs in response to the tensions of the circular economy

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The concept of circular economy is not yet well defined, and each gives its own definition (Kirchherr et al, 2017). Furthermore, its conceptualization often consists only in a modified representation of the linear economy considering recycling at the end of the process (European Commission, 2014). Some authors have highlighted the barriers on a micro scale to set up the circular economy (Ritzén, Ölundh Sandström, 2017). Others have highlighted the limits and challenges on a macro scale (Korhonen et al., 2018). Different practical approaches have set up strategies to manage both waste limitation issues and depletion of resources. Some approaches go further than the mostly considered triptych (refuse, reduce, recycle) (Kirchherr et al, 2017). Thus, Reike et al (2018) consider up to 9 strategies (9R) related to the circular economy. Our question focuses on the tensions that must be considered by the multiple stakeholders in the field of construction, in order to implement a circular economy. In addition, we consider that living labs can be vectors for implementing the circular economy in a territory by helping to deal with identified tensions.

Our methodology is based on the collection of primary and secondary data from several actors (Cycle up, Icade, NoE, Circolab, Camposphère, Democles, Matabase...) in the real estate sector and more specifically construction. In addition, we focus on different living labs from the real estate sector located in different regions of France (TUBA Lyon, TUBA Mulhouse, Bordeaux Euratlantique). Theoretically, we mobilise the theory of the helix innovation system (Rang, Etzkowitz, 2013) and the grounded theory.

It allows us to identify the tensions of a circular economy system that could call into question the primary circularity (waste-collection-reuse). Indeed, the circular economy cannot be implemented by a single actor, regardless of the territory where its activities are located, and need coordination. The territory consists of a set of actors, locally available materials and rules. We consider here that some elements usually integrated in the cycle of the circular economy do not actually belong to the cycle but constitute tensions which must be treated by the actors. Indeed, we hypothesize that the circular economy is based on a fundamental circular production cycle (design, construction, use and recycling, which integrate the 9R) and tensions to overcome (materials, distribution and pickup / collection). This brings us to a proposal to modify the cycle traditionally accepted in the circular economy and to consider living labs as potential actors to solve the tensions by finding solutions with all the stakeholders.

### Reference

EUROPEAN COMMISSION, Towards a circular economy: a zero waste program for Europe, Communication from the commission to the European parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, document COM(2014) 398 Final, Brussels, 2.7.2014.

KIRCHHERR J., REIKE D., HEKKERT M., 2017, Conceptualizing the circular economy: An Analysis of 114 definitions, *Resources, Conservation & Recycling*, 127, Pages 221-232.

KORHONEN J., HONKASALO N., SEPPÄLÄ J., 2018, Circular Economy: The Concept and its Limitations, *Ecological Economics*, Volume 143, Pages 37-46.

RANGA M, ETZKOWITZ H. 2013, Triple Helix Systems: An Analytical Framework for Innovation Policy and Practice in the Knowledge Society. *Industry and Higher Education*, 27(4):237-262. doi:10.5367/ihc.2013.0165

REIKE, D.; VERMEULEN, W.J.V.; WITJES, S., 2018, The circular economy: New or Refurbished as CE 3.0? Exploring Controversies in the Conceptualization of the Circular Economy through a Focus on History and Resource Value Retention Options. *Resources, Conservation & Recycling* 135 246–264.

RITZÉN S., ÖLUNDH SANDSTRÖM G., Barriers to the Circular Economy – Integration of Perspectives and Domains, *Procedia CIRP*, Volume 64, 2017, Pages 7-12, ISSN 2212-8271.

## Data-Driven Journalism Living Lab: Concepts and Challenges

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The media landscape has changed the last decade. Co-creation and Collaboration in news reporting, news authentication and news consumption have transformed existing traditional values and create in-depth knowledge for all the involved actors and the society. The scope of this study is to briefly present the general concept framework of the Data-Driven Journalism Living Lab as a knowledge-transfer and innovation hub for co-design and collaborative activities on journalism, news consumption and production from the perspective of the establishment of an ecosystem fostering openness and synergies of various stakeholders in the New Media era.

To draft a comprehensive and methodologically acceptable plan for the establishment of its DDJ-LL, exploring the value of operating a LL in the media field and taking into account the existing resources, experiences and knowledge from previous activities, the MIL has adopted the Living Lab Triangle theoretical framework, established in 2013 to conceptualise the characteristics, aims and outcomes of Living Labs, adjusting its own context to the initial model approach. In accordance with the original Triangle framework, the LL Context pillar includes and evaluates all the operational-level specifications of a living lab, including all the technical and human resources, the real-life environment for the LL experimentation, as well as a series of processes and drivers for the scaling-up of the established concept and the sustainable exploitation of the LL outcomes and achievements.

The DDJ-LL exploits knowledge and resources from MIL's previous research, also taking the advantage of a well-structured community of multiple stakeholders, to build a systematic participatory research approach, with respect to the LL's methodology and adopted to its specific research field needs, to create value for both professionals and journalism students, as well as for the whole society fostering innovation and new local context policies. There is a need of a real test bed and an experimentation environment where users and producers can co-create tools, methods, policies and promote innovation. More than 150 stakeholders are expected to get involved in planned co-design activities and pilot trials in order to evaluate the vision and the mission of the LL, during the first year of its operation. All the exploitable and research outcomes, the produced knowledge and skills, as well as the extended multi-stakeholders' network, will cultivate a fertile ground for innovation offerings for both the LL and the local society.

## Inception, activities and performance of Spanish living labs: a comparative approach

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This paper is founded on the work undertaken under H2020 project COVAL on living labs. Although living labs have emerged as increasingly relevant open innovation entities, systemic approaches on their role to spur public innovation are still scarce. A major shortcoming has to do with the absence of robust and comprehensive conceptual frameworks envisioning living labs as the concurrence of a) the inception of an idea; b) a set of activities developed and undertaken; and c) performance measurement.

This “life-cycle approach” of living labs unleashes a wide array of analytical perspectives that may be addressed to help categorize the different types of public-based living labs. For example, on the “inception phase”, different organizational models of living labs and different perceptions of what they are may arise. As for the set of activities, it is relevant to study distinct ways of understanding what co-creation means by the stakeholders involved. A similar rationale applies to performance measurement, where, for example, public value may be diversely understood and interpreted.

The methodology is based on case study comparison undertaken through interviews and ethnographic observations from three different Spanish living labs: a) INTRAS-IDES (a living lab providing opportunities to people suffering from mental illness and cognitive impairment; b) CONSORCIO FERNANDO DE LOS RIOS-GUADALINFO LIVING LAB (a network of living labs enhancing opportunities both to rural population and population living in disadvantaged areas in Andalusia; c) LIBRARY LIVING LAB (an open innovation space in a public library based in Barcelona).

The three living labs addressed are rather different in nature and scope, and accordingly, organizational/managing structures, living lab activities and performance & metrics should reflect such diversity. Notwithstanding this, it may be that some convergence and shared points may be found, thus evidencing the existence of some “common ground” features.

## **Social innovation in coordination of health services for people with serious mental illness**

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People with serious mental illness have a high incidence of medical diseases and a life expectancy that is 10-30 years shorter than the general population. Coordination of mental and medical health services is essential for providing high-quality care and integrated services to safeguard the individuals' mental and medical health. Poorly coordinated services is a major challenge in international mental health care. Innovation across specialist and municipal health services is crucial to improve the coordination of services. The objective of the study is to develop and carry out seminars where service providers from specialist and municipal health services, service users and peers (individuals with a lived experience with a mental illness and in recovery) are working together cross-boundaries, focusing on essential coordination activities to improve coordination of health services for people with serious mental illness.

The study has a qualitative exploratory design. Seminars will be conducted in two municipalities twice. The seminars will be an arena for the participants to articulate opportunities for innovations in the coordination of health services for people with serious mental illness. We will perform lectures and simulation of coordination activities as innovative techniques to explore the participants' ideas, views, and voices regarding innovation in coordination of services. Qualitative data will be collected by taking field notes at the seminars to document the innovation process. Qualitative interviews with service providers from specialist and municipal health services, service users, and peers will be conducted to explore their experience of participation in the seminars.

Expected results from the study are that the coordination activities from the seminars will be tested in clinical practice in order to improve coordination of municipal and specialist health services for people with serious mental illness. The focus in clinical practice will be on establishing accountability for service users' care, and information sharing among involved stakeholders (e.g., service providers, service users, and family members). Facilitating admissions and discharges between municipal and specialist health services, and to map and follow up service users' needs for services are also essential coordination activities that should be included in clinical practice.

## Living Labs as a method for value co-creation

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Living Labs are a new approach to introduce innovations into bureaucracies with the goal to enhance service delivery of the public sector organizations. They provide a physical space to experiment with new modes of service delivery and redesign government services by including users in the service design process. In the existing literature, the innovation capabilities of living labs are a dominant subject. However, we argue, that the outcomes produced by living labs go beyond specific innovative products, but impact public value itself. Therefore, we apply the concept of value co-creation as a theoretical framework to analyze living labs in the public sector to capture the outcomes produced by living labs. Our research question is threefold. We ask: how do living labs enable value co-creation in the public sector, which organizational factors influence the process of value co-creation within living labs, and which values are produced by living labs?

To answer these research questions, we collected data from living labs on all three levels of government (local, state and federal) in Germany and Austria. To understand value co-creation processes we selected 22 interview partners and conducted semi-structured interviews with them. Our qualitative comparison of the transcripts showed that living labs employ different methods to involve users in the redesign of service-delivery processes.

In Austria, the living lab GovLab is located on the federal level and is therefore primarily concerned with strategic operations rather than service delivery or direct interactions with citizens. The value GovLab Austria creates affects the supplier side of government services: it mainly coordinates the efforts of the Austrian public administrations to enable better service delivery and introduce innovation methods. The values created by the living labs in Germany, the state-level GovLab NRW and city-level Verschwörhaus are directly related to the involvement of citizens and other users of government services. They provide a space for citizens and government officials to meet up and redesign government services by using design thinking methods and user research.

Overall, our paper contributes empirical evidence to the literature on value co-creation because integrating users in the design stage of the service delivery process creates added value. We also add to the literature on service design by providing evidence on how user needs and perspectives are integrated early in public administrations' redesign processes, how citizen needs are fully represented in the prototyping stages, and therefore increase the likelihood that user-friendly services are delivered.

## Living labs as a path to public innovation and co-creation

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Researchers have focused on a shift in public administration from new public management (NPM) to new public governance (NPG) (Torfing and Triantafillou, 2013) and a related emergence of new forms of innovation in the public sector based in collaboration and co-creation (Torfing, 2016). The notion of co-creation (Voorberg et al., 2015) has come to the fore and opened for both new terminologies and practices of public sector innovation. However, these studies are still in the beginning, and there is a lack of knowledge about how co-creation of innovation in the public sector can actually be done and legitimised stressing the public aspects of innovation.

This paper discusses how living labs (Gascó, 2017) frame and carry out innovation and co-creation in the public sector. The theoretical framework applied is a multi-level and framing analysis (Battilana et al., 2009; Geels and Verhees, 2011; Martin, 2016; Howaldt, J. and Schwarz, M. (2016). Living labs are seen as niche activities that tell us something about how public innovation and co-creation can be done and justified, and moreover they hold the potential to create a new frames for innovation and co-creation relevant to the public sector.

The paper is based on a multiple case study encompassing 21 living lab cases across 9 European countries. The case studies have been subject to a cross-case analysis (Stake, 2006) emphasizing common themes across cases, and not the single case per se. Based on a careful reading of 21 case reports and the cross case-analysis, we study how living labs frame innovation and co-creation in terms of what the problems are (diagnostics), what the solutions are (prognostics), what the aspirations are, and how they frame to empower and resist, as well as how they seek to frame public value.

The analysis of the empirical cases reveals that living labs frame innovation and co-creation in at least three different partly overlapping ways that represent three pathways of public sector innovation and co-creation: processual learning, space/place, and democratic engagement. The paper unravels these frames and discusses how these approaches imply different notions of empowerment and resistance to co-creation and innovation, and what public values tend to be emphasised and what value is lost.

## References

Battilana, J., Leca, B. and Boxenbaum, E. (2009), 'How actors change institutions: Towards a theory of institutional entrepreneurship', *Academy of Management Annals*, 3, 65-107. doi:10.1080/19416520903053598

Gascó, M. (2017), 'Living labs: Implementing open innovation in the public sector', *Government Information Quarterly*, forthcoming, 90-98. doi:<http://dx.doi.org/10.1016/j.giq.2016.09.003>

Geels, F. W. and Verhees, B. (2011), 'Cultural legitimacy and framing struggles in innovation journeys: A cultural-performative perspective and a case study of Dutch nuclear energy (1945-1986)', *Technological Forecasting and Social Change*, 78(6), 910-930. doi:10.1016/j.techfore.2010.12.004

Howaldt, J. and Schwarz, M. (2016), *Verifying existing social theories in reference to social innovation and its relationship to social change. Social Innovation – Driving Force of Social Change (SI-DRIVE deliverable 1.3)*, Retrieved from

Martin, C. J. (2016), 'The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism?', *Ecological Economics*, 121, 149–159.

Stake, R. (2006), *Multiple case study analysis*, London: The Guilford Press.

Torfing, J. (2016), *Collaborative Innovation in the Public Sector*, Washington, DC: Georgetown University Press.

Torfing, J. and Triantafillou, P. (2013), 'What's in a name? Grasping new public governance as a political-administrative system', *International Review of Public Administration*, 18(2), 9–25.

Voorberg, W. H., Bekkers, V. J. J. M. and Tummers, L. G. (2015), 'A systematic review of co-creation and co-production: Embarking on the social innovation journey', *Public Management Review*, 17(9), 1333–1357. doi:10.1080/14719037.2014.930505

## Co-creating public services and policies leveraging on the opportunities provided by Living Labs

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In the last decade, several scholars have underlined the central role of the user in the innovation process (Almirall and Wareham, 2008; Følstad, 2008; Schuurman et al., 2011; Leminen et al., 2012). Successful design firms such as IDEO, Continuum and Frog pioneered innovation approaches that use emerging approaches such as User-Centered Design (Kelley, 2001; Lojacono and Zaccai 2004), Human-Centered Design (Buchanan, 2001) and more recently Design Thinking (Brown, 2008 and 2009; Martin, 2009). According to these emerging approaches, users not only act as sources of information, but also directly contribute to the innovation process by acting as testers, developers, and even designers. The progressive shift from User-Centered paradigms (with the user as a subject) to Participatory paradigms (with the user as a partner) requires new methodologies and tools to valorize the contribution provided by users (Sanders and Stappers, 2008; Leminen et al., 2015).

Even if there is not a common and widely recognized definition of Living Labs (Eriksson et al., 2005; Almirall and Wareham, 2008; Kviselius et al., 2009; Schuurman et al., 2011; Tang et al., 2012), Dell'Era and Landoni (2014) argue that the Living Lab methodology can provide new perspectives in the transition from User-Centered to Participatory Design; they define a Living Lab as an example of design research methodology that is aimed at co-creating innovation through the involvement of aware users in a real-life setting. In other words, the Living Lab methodology is based on two primary elements: i) a real-life test and experimentation environment and ii) the users who are aware that they are co-involved in the innovation process. The analysis has been grounded on the empirical research of the MEF Living Lab case study.

In early 2018, the Directorate for Information Systems and Innovation (DSII) of the General Administration, Human Resources and Services department of the Italian Ministry of Economy and Finance (MEF) established a Living Lab (LL), also known as an Experience Centre at the MEF premises. The Living Lab uniquely serves a dual purpose. It partially functions as an open innovation environment, where users participate in the creation of new services and products, yet it also hosts formal technological experiments to gage digital usage (i.e. staging test beds as real life settings for usability testing purposes). It covers a wide range of activities and rather than having a fixed objective and restricted set of methodologies, it aims at exploring different engagement modalities and different ways of putting the users at the core of the service design and implementation. The case study is based on a series of interviews with the Living Lab manager, involved stakeholders and surrounding observations on the Living Lab operations. The role and involvement of the users at the Living Lab is understood both as reactive informants as well as active co-creators (Dell'Era & Landoni, 2014). The peculiarities of the empirical setting provide interesting insights about the potentialities of Living Labs in supporting the development of public services and informing appropriate policies.

## Smart Campus Initiative: The Campus Approach to Living Labs and Co-creative Service Innovation

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The onward march of digitalization is fundamentally changing the way public services are provided and delivered. The integration of customers and end users at an early stage of the service engineering process plays a key role in this development. However, municipalities are not always equipped to deal with the complexities of digitalization. In many parts of Germany, the willingness to experiment is inhibited by a lack of clear objectives, limited resources, inadequate structures for managing innovation projects, a poor understanding of the interests of customers and user groups, and doubts concerning the legal implications. As a result, few efforts are being made to investigate how and to what extent digitalization could help improve public services.

This situation is what motivated Fraunhofer IAO to launch the *Smart Campus Initiative* at its training campus in Heilbronn, enabling it to be used as a living laboratory and involving students in the co-creative process of developing new digital services for the utilities that supply customers on the campus.

The *Smart Campus Initiative* permits the training campus to be used as a living laboratory for the development and testing of innovative, smart public services. As such, it can serve as a platform for cross-institutional projects in which students, researchers, campus management, private enterprises, and municipal/regional authorities can work together on (digital) services to improve campus life. In addition to a physical laboratory for the development of services, an open data platform will also be set up. This platform will be stocked with data supplied by the institute and by external sources, and made available to the public. Using co-creation formats, the diverse players that make up the training campus will develop new services and improvements to existing services based on the analysis of this data. The resulting solutions will then be piloted on the campus and analyzed to determine their added value.

The objective of this project is to design, test and evaluate new formats for co-creative, data-driven service innovation. The solutions developed in this way will then be piloted on the campus and their added value determined. Finally, approaches will be sought that will allow them to be replicated in the urban environment.

The planned activities outline the potential of the *Smart Campus Initiative* to serve as a model for the development of local public services, focusing on applying the co-creative approach to projects that are already in the development and implementation pipeline.

## Simulating the social learning and innovation of living labs and social hackathons: the Living lab simulator

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The rising influence of citizenry and users' participation in the design and implementation of public services is notorious in all countries and regions. It has been argued that the new public governance drive is able to foster inclusion and better and stronger social and environmental returns of new services. But we see a lack of analyses and models of how living labs and social hackathons, as examples of collective initiatives for co-creation of public services, produce their intended outcomes, or what those outcomes actually are.

The LivLab-Simulator (LivLab) goal is to create a simulator of living labs and other collaborative events as public policy tools for social and inclusive innovation. We intend it to help analyze and monitor the social learning that happens within the working groups of these collaborative events and which group, social and relational outcomes they produce.

For the development of the simulator, we will use a PLS-agent approach to model the collaborative events as complex adaptive systems:

- 1) We will study the working groups within living labs and collaborative events as promoters of social innovation using a static model of structural equations and the partial least squares (PLS) algorithm over a sample of about 230 participants. This will provide the PLS-agents or paths connecting the different behavioral characteristics of the individuals and their interactions, and the resulting outcomes of their discussions
- 2) We will then build a simulator of the working groups using an agent-based modelling environment aiming to simulate the PLS-agents and their interactions and emergent phenomena when they gather for group, social and relational outcomes

LivLab is conceived as a decision-making tool: it should help identify new labs and events, plan the quality of their outputs, test the different experimentation methods and analyze (estimate) the consequences and outcomes of these events.

Complementing this main expectation, with LivLab we will also develop a set of indicators, metrics and controls of public services and policies to adapt the labs to different governance paradigms (top-down or bottom-up). And we will further develop a new methodological framework (the PLS-agent) for future studies on this promising field.

This project has received funding from the Fundación COTEC under their Open Innovation Program (PIA).

## Living labs business models in France

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Living labs are ecosystems in which end users (customers, patients, citizens, etc.) and other stakeholders are involved over a long period in the development of an innovation, in a real life context, using an iterative approach combining different research methods (Schuurman et al., 2012). The creation of a living lab is the result of various initiatives. While some are supported by research organizations, others are carried out by companies, public organizations or even non profit associations or individuals. Although their structures are different, they are characterized by five common dimensions (Ballon and Schuurman, 2015): (1) active user involvement, (2) real life environment, (3) participation of multiple stakeholders, (4) multi-method approach and (5) co-creation. In spite of the expansion of the number of living labs worldwide since 2000, Schuurman (2015) notes a mortality rate of 40% on living labs labeled by the largest network of living labs, European Network of Living Labs (ENOLL). A large number of living labs thus have an unwanted temporary nature (Leminen et al., 2012). The question of the business model is crucial. The main objective of this research is to find out the main dimensions of the business models of living labs.

This exploratory research studies the business models of nine French living labs according to five different dimensions: nature of the value, model of revenues, value sharing, structure and governance. On the basis of a questionnaire, it makes it possible to propose a first draft of typology taking into account the nature of value generation and the methods for sharing the value.

This research first outlines the fragility of the business models of living labs. Then it highlights three forms of value generation: knowledge creation, social impact and economic value. Revenues can be exclusively public, exclusively private or mixed. As regards the sharing of value, it is a concern for several living labs which respond by ensuring the dissemination of their innovations to a wide audience. Only research-oriented laboratories have intellectual property protection practices. The main finding is a proposal of a typology completing and enhancing the one proposed by Leminen et al. (2012).

## **Living Labs and cocreation for new public services : the territorial dimension matters. The case of French metropolitan or regional Living Labs**

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The academic literature about Living Labs often deals with user innovation, open innovation, participatory design, and so on. More recently, these methodologies, invented in universities and for technological firms, were applied to improve innovation in public services (Fuglsang, Vorre Hansen, 2019). So, apart from papers about the way to implement those methodologies in public services, others focused on specific domains such as health, elderly people, social services or even smart city. Some tended to evaluate the role of the Living Lab approach. Less papers analyzed the spatial dimension of Living Labs, except perhaps at the urban scale (Leminen et al., 2017 ; Steen, Van Bueren, 2017). When the geographical dimension is explored, it is often about the role of place (often the building) where the Living Lab localized, or the role of the local environment. The objective of this paper is to highlight how the territorial dimension matters in the implementation of participatory and experimental methods to co-create public services with citizens and others users. Created at a regional, metropolitan or more local scale, what are the impacts of the scale(s) for new practices in public services, for the stakeholders ecosystems and the results of the Living Labs addressing changing needs and social problems?

The paper is based on case analysis in French different regions in the framework of the H2020 Co-VAL project (Liefoghe, 2019). We conducted in depth interviews with the Living Labs managers, completed by documents, websites or some participatory sessions. Information was analyzed through the analytical grid of the WP dedicated to Living Labs. As it appeared that the geographical dimension was important in the creation, evolution and results of those Living Labs, it was explored in addition to the planned guideline.

After theoretical backgrounds about the geographical and territorial dimension of Living Labs, we will discuss the research methodology to explore our cases. Our 4 French cases are divided into two scales : the metropolitan scale (LIVE in Lille, Erasme in Lyon) and the regional one (SILAB in Hauts-de-France, Autonom'Lab in Nouvelle Aquitaine). As these labs were initiated by policy makers, the territorial dimension (rural, metropolitan, regional) is important in the objectives and organization of these participatory arrangements. Nevertheless, the inter-scale dimension is the heart of our analysis: enlargement of French regions that changes the stakeholders ecosystems, role of EU funds, scaling up and spatial diffusion of innovations.

### **References**

Fuglsang, L., Vorre Hansen, A. (eds.), (2019), A cross-country comparison of the use of innovation labs in the public sector, Report D 5.1 for WP5: Living labs for co-creation and co-innovation, Co-VAL [770356] "Understanding value co-creation in public services for transforming European public administrations", january.

Leminen, S., Rajahonka, M. & Westerlund, M. (2017). Towards third-generation living lab networks in cities. *Technology Innovation Management Review*, 7(11), 21-35. doi:10.22215/timreview/1118, 21-35.

Liefoghe, C., (2019). Four cases of Living Labs in France, Report for WP5/D 5.2: In depth case studies of how living lab approaches are used for co-creation and co-innovation, Co-VAL [770356] "Understanding value co-creation in public services for transforming European public administrations".

Roux E. & Marron Q. (2017). Les Living Labs, de nouveaux dispositifs d'action publique pour penser les métropoles et les territoires. *Canadian Journal of Regional Science / Revue canadienne des sciences régionales*. 40(1). 33-41.

Steen, K. & Van Bueren, E. (2017). The Defining Characteristics of Urban Living Labs. *Technology Innovation Management Review*, 7(7), 21-32.

## Living Labs as Co-Creation Environments for Value-Creating Public Services: The Case of Turkey

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Living labs are one of the effective channels to create concrete policies and services by including all shareholders in the innovation process. Although the importance of living labs in policy making and implementation, public innovation and data-based administration has become prominent in recent years, there is a gap in the field within the scope of studies on processes and services that create value in public administration, especially for developing countries. This study aims to measure the potential of living labs to support the process of “valuable” service development and value-creating innovation in terms of service delivery quality domain. Thus, the study will discuss the ability of projects developed in a living lab environment to convert the traditional service delivery into new services that maximize user needs.

The empirical analysis of the research targets Başakşehir Living Lab which is located in Istanbul, Turkey. This paper presents the most common methods of data collection used in qualitative research: interviews and focus groups. We conduct semi-structured interviews with living lab managers, public executives, government officials and project owners. Focus groups are used to generate a comprehensive understanding of citizens' experiences and opinions about the projects developed in Başakşehir Living Lab with regard to their potential to increase service delivery quality.

Public administration is obliged to support innovation to achieve quality in service delivery that is one of its existential requirements. In order to provide services that create value in the public sector and to enhance innovation processes, public organizations need to develop new strategies to improve their organizational structures and workflows. Living labs seem to meet the need for new strategies. As a result of this study, we expect that the potential of living labs to design valuable public services in accordance with their purpose and users will be empirically supported.

# Track 7: Servitization, Smart services and Industry 4.0 (SERVIT)

## Application of Modularity to Product-Service Systems and Servitization: Insights from the Literature

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Within the product-service continuum, literature has highlighted that product-service systems (PSS) deal with the provision of an integrated product-service solution, while servitization refers to adding services to a product core. Providing services and the complexity of combining them with products are common features to both streams. Consequently, modularity has a role as design strategy to the challenges of managing service complexity and networks for PSS and servitization. Therefore, the objective of this article is to identify the application of modularity to PSS and servitization domains in order to identify the main features of this application as well as highlight future research opportunities.

Firstly, bibliometric analysis was used in order to identify the main theoretical pillars as well as the most discussed topics within this intersection of research streams through co-citation and keywords networks. Secondly, content analysis was carried out in order to provide a deeper knowledge on the topic, uncovering the main patterns and proposing new topics for future research. This research combined Web of Science Core Collection and Scopus databases totaling 38 articles for final content analysis. Research strings used in the databases were: "product-service system\*" OR "product service system\*" OR "servitization" OR "servitisation" OR "service dominant logic" OR "service-dominant logic" AND "modular\*".

Findings suggest that the application of modularity to PSS and servitization highlights different approaches. In PSS, modularity is a design tool aimed to decompose solutions into modules - consisting of both product and service modules – and how interfaces are defined and managed later along the value chain.

For servitization literature, the application of modularity departs from the strict sense of partitioning modules and defining their interfaces as in the PSS field, but emphasizes the platforms as organizing strategies to services as well as the complexity in managing a growing service network.

## **Data management for servitization: a new framework for manufacturing companies**

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Nowadays, manufacturing companies have realized that services can be a crucial part of their business, generating new profits and less imitable competitive advantages. It is not surprising therefore that many companies are increasingly moving from product-centric offerings to services and solutions, in what has been defined as servitization. This transformation has recently been accelerated by digital technologies that are enabling novel and sophisticated service offerings. Despite this, companies frequently struggle to exploit all the potential behind what has been defined as “digital servitization” as it still represents a tricky and complex transformation. In particular, the relationship between IoT technologies, (big) data and servitization seems to be still not understood by companies. This is also due to the fact that few models in literature have tried to consider all the relevant factors in the data management process from a servitization perspective. To fill this gap, this paper aims to provide a hierarchical framework to assess how manufacturing companies are addressing the potentiality offered by the data collected from product to improve service business.

To point out the key elements to be evaluated about the topic and previous models, we searched the scientific databases through specific keywords. The contents emerged from the literature have been codified and the results of this analysis provided the inputs for the identification dimensions and variables of the hierarchical levels of the framework proposed in this paper. Then, five exploratory case studies were conducted in order to: (i) apply and test the framework and (ii) analyze how data collected from the field can be used to improve the service business. To guide the empirical application, a specific research protocol has been designed in order to enhance the reliability and validity of the data collected during the interviews.

This paper provides a hierarchical framework to describe and operationalize the data management process to support servitization in manufacturing companies. The model is organized in four dimensions. Each dimension has been analysed through specific variables that investigate different relevant aspects and provide an operationalization of the data management process in the servitization domain. The empirical application shows the potential usefulness of the framework in practice and its potential use as a management tool that can support companies in identifying actions that can be implemented to better manage data collected from product in order to develop new added value services.

## How are B2B services co-created? An investigation of servitizing manufacturing firms

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Servitization inherently is an act of collaborative manner. Undoubtedly, providing services to customers results in closer collaboration and increased customer intimacy (Visnjic Kastalli & Van Looy, 2013) in order to align the processes of a firm with its customers' (Raddats & Easingwood, 2010). As such, customers' involvement is crucial in developing services (Hedvall, Jagstedt, & Dubois, 2019). Namely, customers' willingness to adopt providers' offerings, share knowledge, and integrate resources in the process of developing services affects the success of delivering customer-oriented offerings that create sufficient customer value (Tuli, Kohli, & Bharadwaj, 2007; Valtakoski, 2017). Co-creating services refers to the collaborative activities taking place in the provider-customer interface associated with the service (Oertzen, Odekerken-Schröder, Brax, & Mager, 2018). Research shows that collaboration with customers enhances service novelty and meeting customer needs (Heirati & Siahiri, 2019).

Still, despite the recognition for the key aspect of customer embeddedness in servitization (Storbacka, Windahl, Nenonen, & Salonen, 2013) we know little on how services are jointly developed. This research aims to explore the key activities and customer roles in the process of collaborative development of servitized services. Hereby, the research seeks to provide insights into how the collaboration activities shape the process and the success of the developed services. As such, provider firms have a better understanding of how to successfully manage the service co-creation process.

A multiple case study will be conducted of firms who are in the process of co-creating a service with their customers. Data has been collected of two cases already. Table 1 gives an overview of these companies and the key informants. We conducted semi-structured interviews with several key members of the companies. Interviewees are asked to describe the activities happening in the process of developing the service.

Case	Employees	Industry	Service	Key informant
A	73	Vegetable processing	Condition-based monitoring system	CEO (1) Manager Engineering (1) R&D Engineer (1)
B	10.000	Beer brewing	Condition-based monitoring system	Service Manager (1) Global IoT Manager (1)

**Table 1. Overview of key characteristics of companies.**

The service co-creation process is classified according to Malshe and Friend's (2018) classification of collaborative processes: defining, designing, deploying, and debriefing services. Customer roles are based on Aarikka-Stenroos and Jaakkola's (2012) typology. The preliminary findings show that co-creating services is a non-linear process with continuous interaction in and parallel execution of the phases where customers take on multiple roles throughout the process.

## **Designing digital services through human-centred service design in the servitization context. A practical case in the packaging manufacturing industry**

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User centricity has gained importance as digitalization increases. Therefore, human-centred design has changed significantly the way service companies develop new services based on ICT technologies. However, cases in the manufacturing industry are still scarce. This paper illustrates how human-centred service design has been applied in order to develop a new digital service in the context of manufacturing servitization. In particular, we describe a human-centred design process, based on participatory workshops, for the design of a condition monitoring service for the packaging manufacturing industry.

We employed a research through design methodology. Research through design is an iterative qualitative research approach that employs methods and processes from design practice. This approach is appropriate for exploratory studies. Through intervention, action and reflection, knowledge is gradually gathered, integrated and contextualized while at the same time a solution is developed with the participation of the researchers. For data collection, we observed the design practices during the workshops and we conducted interviews with the participants.

Results show that the applied human centred-design process was able to materialize the servitization strategy of the case company into a specific service value proposition, including the identification of resources, the definition of all frontstage and backstage processes, as well as the identification and development of all service touchpoints. In addition, the participatory nature of the workshops helped to the alignment of the participant employees with the ongoing servitization process undertaken by the company managers.

## Drivers and barriers of digital servitization: evidence from the textile manufacturing industry

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Digital servitization has just started to be explored in current literature with a paucity of contributions exploring the main forces acting as drivers and barriers and less is known at the industry-specific level. Embracing servitization through digitalization is perceived as more problematic for organizations operating in traditional sectors, such as the textile manufacturing industry. Addressing this gap, through the lens of the contingency theory and semi-structured interviews directed to managers and practitioners in the industry, our study investigates drivers and barriers of digital servitization in the textile manufacturing industry.

## Digital Transformation and Servitization in Offshore Wind Industry – Learnings from the private sector (Ørsted A/S)

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The rapid change in the digital transformation and servitization of the wind power industry due to technological innovation and more complex technical systems call on a new ‘digital business model’ (DBM) for the energy companies. It also means new skills to secure the dynamic capabilities of the energy companies within this changed business model (Teece 2018).

The purpose of the study is to show how Ørsted A/S as a vital global energy company has managed to make this transformation in the DBM, to comply with changes in the business eco-system, and to develop dynamic capabilities that support integrated energy solutions based on renewable energy technologies.

The study builds on a review of the literature on digital transformation and servitization in manufacturing (e.g., Martín-Peña et al. 2018, p. 95) focusing on 1) The critical role of the company’s digital transformation for the configuration of DBM, 2) DBM as a unit of analysis, 3) A multidisciplinary view on how companies do business in the new digital scenario, and 4) An emphasis on value networks and business eco-systems.

The impact of the digital transformation and servitization of Ørsted A/S build on data collected from selected offshore projects and auctions in the Nord Sea area, where Ørsted A/S has been active in winning bids.

It also contains a study of the value chain of the offshore wind industry based on interviews with representatives from the value chain and the developing and operating company (Ørsted A/S).

The study contributes to the research in digital transformation and servitization in various ways:

*Firstly*, it extends the analysis of the digitalization and servitization of manufacturing and services to a new context – the production and offerings of renewable energy, and

*Secondly*, it contributes to our understanding of the impact of a new and changed eco-business system in the energy industry characterized by zero-subsidy regimes and new institutional rules (public regulation).

*Thirdly*, it focuses on the crucial role of dynamic capabilities to stay competitive and innovative in the green transition from fossil-fuel energy production to renewable energy production.

*Lastly*, it has some managerial implication for the organizational practice of energy companies, e.g., that management should continuously examine what capabilities are needed to operate a successful Digitalized Business Model.

## Dynamic capabilities and (digital) servitization

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Servitization is one of the most used strategies by manufacturers in order to survive in the current competitive context, because it allows to meet customers' needs, thus attaining sustainable competitive advantages (Kindström et al., 2012; Kucza & Gebauer, 2011; Story et al., 2017; Windahl, 2015).

Recently, the servitization strategy has made increasing use of new digital technologies, given life to the so-called digital servitization (Vendrell-Herrero et al., 2017; Kohtamäki et al., 2019; Paiola & Gebauer, 2020; Paschou et al., 2020).

However, numerous scholars (e.g., Huikkola et al., 2016; Kindström et al., 2013) suggest that success in adopting these technologies is linked to the understanding and adoption of dynamic capabilities (Teece, 2007; Teece et al., 1997) by manufacturing firms.

Thus, this paper aims to understand which are the dynamic capabilities that manufacturers need to develop and apply in the servitization and digital servitization context, in order to provide a comprehensive and useful framework (for both scholars and practitioners).

In order to reach its aim, this paper performs a systematic literature review (Tranfield et al., 2003) of all the articles addressing dynamic capabilities in servitization and digital servitization contexts, following the different phases identified by Denyer and Tranfield (2009).

In particular, the following two research strings are going to be used:

1. ((“servitization”) OR (“servitisation”) OR (“product-service system\*”) OR (“product service system\*”) OR (“PSS”) OR (“integrated solution\*”) OR (“service transformation\*”) OR (“service infusion”) OR (“digit\* serviti\*”) OR (“digit\* product-service system\*”) OR (“digit\* product service system\*”) OR (“digit\* PSS”) OR (“digit\* integrated solution\*”) OR (“digit\* service transformation”) OR (“digit\* service infusion”))
2. ((“dynamic capabilit\*”) OR (“dynamic competenc\*”) OR (“dynamic skill\*”) OR (“microfoundation\*”) OR (“micro-foundation\*”) OR (“micro foundation\*”))

within three different research databases: Scopus, EBSCO, and WoS.

The results of the systematic literature review are going to be analyzed through a thematic analysis (Mayan, 2009; Spiggle, 1994).

Basically, this research works aims to identify a list of specific dynamic capabilities for a successful implementation of both servitization and digital servitization strategies.

In doing so, the paper will provide theoretical contributions (to the resource-based view and to

the dynamic capability perspective in the servitization and digital servitization contexts) and practical implications (by helping managers in identifying the needed dynamic capabilities for a smooth transition from servitization to digital servitization).

## Reference

Denyer, D., & Tranfield, D. (2009). Producing a systematic review. In D. A. Buchanan & A. Bryman (Eds.), *The Sage handbook of organizational research methods* (p. 671–689). Sage Publications Ltd.

Huikkola, T., Kohtamäki, M., and Rabetino, R. (2016), "Resource Realignment in Servitization", *Research-Technology Management*, Vol. 59, No. 4, pp. 30–39.

Kindström, D., Kowalkowski, C., and Nordin, F. (2012), "Visualizing the value of service-based offerings: empirical findings from the manufacturing industry", *Journal of Business & Industrial Marketing*, Vol. 27 No 7, pp. 538–546.

Kindström, D., Kowalkowski, C., and Sandberg, E. (2013), "Enabling service innovation: A dynamic capabilities approach", *Journal of Business Research*, Vol. 66 No. 8, pp. 1063-1073.

Kohtamäki, M., Parida, V., Oghazi, P., Gebauer, H., & Baines, T. (2019). Digital servitization business models in ecosystems: A theory of the firm. *Journal of Business Research*, 104, 380-392.

Kucza, G., and Gebauer, H. (2011), "Global approaches to the service business in manufacturing companies", *Journal of Business & Industrial Marketing*, Vol. 26, No. 7, pp. 472–483.

Mayan, M. J. (2009). *Essentials of qualitative inquiry*. Walnut Creek, CA: Left Coast Press.

Paiola, M., & Gebauer, H. (Available online 21 March 2020, In Press). Internet of things technologies, digital servitization and business model innovation in BtoB manufacturing firms. *Industrial Marketing Management*.

Paschou, T., Rapaccini, M., Adrodegari, F., & Saccani, N. (Available online 27 February 2020, In Press). Digital servitization in manufacturing: A systematic literature review and research agenda. *Industrial Marketing Management*.

Spiggle, S. (1994). Analysis and interpretation of qualitative data in consumer research. *Journal of consumer research*, 21(3), 491-503.

Story, V. M., Raddats, C., Burton, J., Zolkiewski, J., & Baines, T. (2017). Capabilities for advanced services: A multi-actor perspective. *Industrial Marketing Management*, 60, 54-68.

Teece, D. J. (2007). Explicating dynamic capabilities: the nature and microfoundations of (sustainable) enterprise performance. *Strategic management journal*, 28(13), 1319-1350.

Teece, D. J., Pisano, G., & Shuen, A. (1997). Dynamic capabilities and strategic management. *Strategic management journal*, 18(7), 509-533.

Tranfield, D., Denyer, D., & Smart, P. (2003). Towards a methodology for developing evidence-informed management knowledge by means of systematic review. *British journal of management*, 14(3), 207-222.

Vendrell-Herrero, F., Bustinza, O. F., Parry, G., & Georgantzis, N. (2017). Servitization, digitization and supply chain interdependency. *Industrial Marketing Management*, 60, 69-81.

Windahl. C. (2015), "Understanding solutions as technology-driven business innovations", *Journal of Business & Industrial Marketing*, Vol. 30, No. 3/4, pp. 378-393.

## Value co-creation in service innovation: how the firm can enable the client

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More and more firms expand their innovation activities through value co-creation (Mahr et al., 2014). However, the studies on value co-creation in service innovation are scarce (Frow et al., 2015; Islam et al., 2015) and conditions under which value co-creation leads to successful innovations remains underdeveloped (Gemser and Perks, 2015). Value co-creation in general and service innovation are collaborative processes between the firm and one or more relevant stakeholders (Vargo et al., 2015). The clients are one of the most important stakeholders for firms (Jaakkola et al., 2015). While co-creation improved our understanding of the role of clients in value creation, the role of service provider enabling the client to take part in value co-creation has become more unclear (Ehret and Wirtz, 2018). Therefore, the research question is the following: what service provider's activities, methods and means could enable the client for value co-creation in service innovation. The aim of our study is to reveal how service provider could enable the client for value co-creation in service innovation.

The study will be performed in Lithuanian engineering service company, which operates in various European, Asia and Africa countries. There are two reasons why engineering services were selected as context of the study. First, engineering services related to infrastructure, buildings, electricity, urban transport, water systems are the innovative creator of new methods and new products, processes, and methods for almost every organization (Siegel, 2019; Baark, 2001). Second, engineering service innovations are not developed without the client demand that is clearly articulated by the client's requirements for a proposed new project, therefore, the engineering service provider should have and manage the set of activities, methods and tools that would enable a client to co-create the value in service innovation.

Mixed methods strategy will be used to provide deeper insight into phenomena than would be achieved if either quantitative or qualitative methods were used alone (Halcomb, 2019). Three methods will be used for data gathering – (1) documents analysis, (2) semi-structured face-to-face interviews and (3) paper-based survey. Project managers as key contact persons will be invited as participants of semi-structured interviews. The survey will encompass the company's employees that have direct interaction with the clients in the engineering service innovation projects.

We expect to reveal service provider's activities, methods and means that could enable the client for value co-creation in service innovation. Moreover, we will try to identify if and how these activities, ways and tools differ during various stages of particular engineering service innovation projects.

### References

Baark, E. (2001, June). Routines and innovation in engineering consultancy services. In *Proceedings of DRUID's Nelson-Winter Conference, Danish Research Unit for Industrial Dynamics, Denmark*.

Bughin, J. (2014). Three ways companies can make co-creation pay off. *Retrieved August, 25, 2015.*

Bujor, A., & Avasilcăi, S. (2015). Creativity and innovation by empowering the customer: The case of Mulino Bianco. Part II: The digital customer value added. In *IOP Conference Series: Materials Science and Engineering* (Vol. 95, No. 1, p. 012147). IOP Publishing.

Ehret, M., & Wirtz, J. (2018). Ownership of Co-creation Assets: Driving B2B Value Propositions in the Service Economy. *Journal of Creating Value*, 4(1), 42-60.

Frow, P., Nenonen, S., Payne, A., & Storbacka, K. (2015). Managing co-creation design: A strategic approach to innovation. *British Journal of Management*, 26(3), 463-483.

Gemser, G., & Perks, H. (2015). Co-creation with customers: An evolving innovation research field. *Journal of Product Innovation Management*, 32(5), 660-665.

Halcomb, E. J. (2019). Mixed methods research: The issues beyond combining methods.

Islam, M. A., Agarwal, N. K., & Ikeda, M. (2015). Conceptualizing value co-creation for service innovation in academic libraries. *Business Information Review*, 32(1), 45-52.

Jaakkola, E., Helkkula, A., Aarikka-Stenroos, L., & Verleye, K. (2015). The co-creation experience from the customer perspective: its measurement and determinants. *Journal of Service Management*.

Mahr, D., Lievens, A., & Blazevic, V. (2014). The value of customer cocreated knowledge during the innovation process. *Journal of Product Innovation Management*, 31(3), 599-615.

Siegel, N. G. (2019). *Engineering Project Management*. John Wiley & Sons, Incorporated.

Vargo, S. L., Wieland, H., & Akaka, M. A. (2015). Innovation through institutionalization: A service ecosystems perspective. *Industrial Marketing Management*, 44, 63-72.

## Opportunities for Value Creation Enabled by Data Economy - Study in Five Domains

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The ways in which we collaborate in the economy in order to create value - the structures of value co-creation - are in constant change. Servitization is an important example of this change and digitalization is an important enabler in it. Service innovation allows for the value creation models in organizations and their networks to change, leading to change in business ecosystems and the whole economy.

As digitalization has progressed, companies are now collecting huge amounts of data. However, the data is still often scattered in heterogeneous silos. The data has high potential value, but harmonizing and interconnecting is needed to unleash its value. This would allow for disruptive new business ideas and new ways to create value for customers. There are huge opportunities for value creation for customers, companies and the whole society. Data has potential for productivity improvements as well as improvements in other aspects of wellbeing, and raising the overall performance of the economy. The purpose of this research is to study the opportunities for this new value creation in eight domains and their cross-sections.

The research is based on semi-structured interviews of experts in five domains. The studied domains are energy, transport, health, food, and manufacturing.

The result of this research will be an overview of possible new value creation models enabled by data economy and in particular data sharing. Specific emphasis will be put on cross-sectoral opportunities.

## **Generating unique selling propositions through digital business innovations in SME especially crafts**

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The digital transformation requires companies and organizations to radically rethink and innovate traditional business models. Especially small and medium sized enterprises (SMEs) face difficult challenges due to the shortage of financial, human or financial resources. This paper examines how service innovations generated by digitalization can generate or identify new unique selling propositions for SMEs, especially crafts.

Research by design is characterized by a continuously interactive setting, in which participants in the design process are placed in the position to creatively exchange, collaborate and develop new knowledge together. In each stage research is brought into the design process analytically, in the beginning with a focus on what Is there, analytical. The second phase is characterized by what is conceivable and possibly feasible in the future and is of an explorative nature. The final stage is reflective on what will be there. (Roggema, 2016, 15) The research by design approach fits perfectly with the systemic-approach applied in our study.

In our research Project about service innovation and transfer for SME and crafts we work with a process design that is based on the Solution Cycle (Bergmann; Daub, 2009) which consists of three main steps: diagnosis step (analytical stage = diagnosis), realization (“could be” stage = therapy) and reflection (“will be” stage = reflection). Innovations are systemic developments that cannot be characterized by causal attribution processes (Bergmann, 2014).

On the basis of our research, our results casts a new light on the potentials of digitalization for SMEs, in particular for crafts, to generate or to identify new unique selling propositions (usp).

We formulate a first approach of a concept, which supports the evolution of new smart digital service innovations for SMEs, in particular crafts, which leads to new usp's. Experiences from first case studies will be shown.

## Uncovering the possibilities of modularity by service system decomposition: the case of Public Employment Services

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The new Public Management reforms seek to make the work and cost of the public sector more efficient by using market-type mechanisms and management logic (Hammerschmid et al. 2019), e.g. quasi-markets, user-choice mechanisms, etc. (Dan & Andrews, 2016). Such reforms introduce the idea of treating citizens as clients and making public services more customer-oriented (Van de Walle, 2018). Knowledgeable and demanding citizens insist that public services should be tailor-made to meet their individual needs (Torfing et al., 2019). Yet public institutions are faced with the challenges on how to reduce costs. Providers of public services seek new alternatives to offer more customized and efficient services. Modularity may be seen as one way to achieve this goal by improving service customization (Brax et al., 2017) and reducing the costs (Carlborg & Kindström, 2014). Modularization in services is still a new research area. Therefore, extending the conceptualization of service modularity and providing empirically proved findings on its application is necessary (Mattos et al., 2019; Silander et al., 2017; Dörbecker & Böhm, 2013). This is a special case of public services.

This exploratory research aims to reveal the possibilities of modularity by service system decomposition.

The study will be performed at the Public Employment Services (PES) provided by Kaunas Customer Service Department of Employment Services Under the Ministry of Social Security and Labour of the Republic of Lithuania.

The qualitative methodology used in the study allows understanding of a complex reality and the meaning of actions in a given context, by providing in-depth and illustrative information to recognize various dimensions of the problem under analysis (Gray, 2020). The case study design will be chosen as an appropriate way to achieve the aim of the study.

Data gathering methods will include documents' analysis, semi-structured interviews and focus groups. Collected data will be analyzed by using inductive qualitative content analysis.

Based on the obtained data, job seekers' service system, provided by PES will be divided into service modules where every unit fulfills a specific function. Thereafter, the "mind map" for labor market services will be created. It is the first step to show the possibilities of application of the modularization into PES and benefit which brings greater customer satisfaction based on the diversity by the modularity offering standard services. A significant expected result would be the identification of opportunities that could place job seekers in the co-creation value.

## Patterns of Service Co-production: Evidence from KIBS-Clients Interactions

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With the development of service-dominant logic concept in the early 2000s there was a shift in considering customers as active co-creators of value and co-producers of value propositions rather than passive purchasers of products and services (Vargo & Lusch, 2004). The processes of co-creation and co-production require intensive interactions between customers and service producers. Such active interactions are usually considered as one of the core features of knowledge-intensive business services (KIBS). For KIBS knowledge obtained or co-produced during customer interactions becomes an important asset that determines their competitiveness (Landry et al., 2012). Despite the fact that coproduction and customer interactions play an important role for KIBS, the impact of co-production with customers on KIBS producers' is underexplored (Cabigiosu & Campagnolo, 2019).

Current research is based on the survey data collected by HSE ISSEK in 2019 as a part of the project “Monitoring of Knowledge-Intensive Business Services in Russia”. The database contains information about more than 600 KIBS companies of various sizes and forms of ownership located in the largest Russian cities. The empirical part of the study includes two stages. At the first stage KIBS companies are clustered based on the intensity of customer interaction and co-production during 6 stages of service production processes (client problem analysis, idea generation, specification of solution, service development, implementation of results, project evaluation) using k-means clustering technique. At the second stage, the differences between clusters are analyzed in terms of the financial characteristics of companies, their innovative behavior and usage of digital tools for customer interactions.

It is expected to identify how companies with different patterns of customer involvement in coproduction of value proposition (i.e. low, medium, high, U-shaped) differs in terms of the following characteristics:

- Innovation behavior in terms of the innovation being implemented as well as overall innovation intensity;
- Revenues attributed to products and services with different level of standardization/ customization;
- The intensity digital communication tools usage for customer interactions;

### References

Cabigiosu, A., & Campagnolo, D. (2019). Innovation and growth in KIBS: The role of clients' collaboration and service customisation. *Industry and Innovation*, 26(5), 592-618.

Landry, R., Amara, N., & Doloreux, D. (2012). Knowledge-exchange strategies between KIBS firms and their clients. *Service Industries Journal*, 32(2), 291-320.

Vargo, S. L., & Lusch, R. F. (2004). Evolving to a New Dominant Logic for Marketing. *Journal of Marketing*, 68(1), 1-17.

## **The cost of data lifecycle in the development process of after-sales industrial services**

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In the context of industry 4.0, Data Driven Business Models (DDBM) offer new approaches to compete in a globalized market. In this sense, the objective of this paper is to present the results of a case study carried out in an industrial manufacturer, where a digital servitization process has been implemented. Thus, a conceptual and quantifiable data's life cycle framework will be presented, which identifies four main stages: (1) The production of data; (2) The so called "intermediate" phase, where a third party business is engaged in order to make a dashboard; (3) The production of information, and; (4) The production Data Driven Digital Services (DDDS).

The research approach is twofold. First, a comprehensive literature research has been conducted in the topic. Based on it, a first version of the conceptual and quantifiable data's life-cycle framework was defined. Secondly, an action research approach has been followed to further develop this model. This has been performed based on five major machines operations from an industrial manufacturer.

It is expected to develop a new method to measure quantitatively the value of data by computing the data-based service cost. This methodology identifies the added value and costs during the whole data lifecycle. Thus, we obtain the minimum selling price for the digital services of the firm.

## Artificial Intelligence in Smart Service Systems: A structured Quality Approach

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The advancing enhancement of physical objects with sensor technology and communication capability is changing value creation of service systems in nearly all industries and areas of life. By continuously collecting and processing data from networked physical objects, providers can draw comprehensive conclusions about the condition of the physical objects, their utilization by customers as well as their application-specific context. Based on this information, providers can offer Smart Services, which comprise highly individualized bundles of smart technologies, digital services as well as physically delivered services. Artificial Intelligence (AI) plays a key role for tapping the potentials of individualization and automation within Smart Service Systems, e.g. for information extraction from large data pools or automated service provision using digital or physical robots. However, only little is known about how users perceive AI-based Smart Services and how they can be designed in a way that added-value outweighs risks (e.g. lacking transparency of decisions or loss of privacy and control). In order to contribute to filling this gap, the paper presents a framework concept for addressing quality perceptions of AI-based Smart Services systematically.

The quality framework builds up on a systematic literature review to identify relevant aspects from existing quality models. In order to identify Smart Service and AI-specific aspects, a qualitative study among 20 international academic experts was carried out. In a third step, the framework has been applied within a research project in order to test a newly developed Smart Service System with potential customers.

The paper presents a quality framework for AI-based Smart Service Systems, which integrates known and novel quality aspects. Arranged in 12 design fields, the conceptual framework is structured in a way that it can be adapted to different design variants, development stages as well as contributions of development partners. In this way, our research contributes to the current discussion about an increasingly collaborative and interdisciplinary development and the distributed value creation on smart service platforms. Besides quality assessments for own or third-party services, the framework can be used to structure quality-related requirements or assess integration activities as a key task of platform operators. Furthermore, structuring along the service dimensions of resources, process and outcome enables a technical-logical compatibility with existing methods and tools of service engineering.

## Chatbots to enact value propositions

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Value proposition is a key element in business debate; it recalls one of the building blocks of business models (Amit 2010). Value proposition is also described as the way to drive value co-creation and expanding its effects to stakeholders instead of focusing just on B2B or B2C relationships (Vargo (2011) Kowalkowski, et al., 2012).

Nowadays, new technologies bring a major challenge for firms as well as for society, due to the ubiquitous availability of firms' offerings (Nylén and Holmström, 2015; Li et al., 2018). Value propositions turn into digital value propositions, a digital form of value demonstration (Ritter, 2020). The focus is more on new tools to support value proposition with integration between different intelligent and assistive technologies (Chatbot, Ai, ecc.). However how these technologies, and especially those that foster communication, shape value proposition is still in infancy. This paper aims at analysing the new forms of value proposition enabled by virtual or assistive bot (i.e. chatbot or computer programs that interact with users using natural languages) (Castellano et al., 2018).

This study adopts a multiple case study method (Gummesson, 2017), with 10 firms offering chatbots solutions in different industries and countries. These case studies have been identified through a cross analysis of Gartner and Forrester reports, with a rich data collection and an analysis aimed at describing (a) the main features of chatbots, and (b) the value proposition addressed through them. Data were collected through the website of the technology providers and of the firms implementing chatbots in their value proposition. This double perspective brings a more solid approach to the analysis.

The preliminary findings show that chatbots enhanced value propositions by enabling three main aspects. It supports companies in addressing information enriched value propositions that are value propositions improved with real time and personalised information, steering the way customers can be engaged and satisfied.

Also, chatbot supports the development of a content-enhanced value proposition i.e the way languages, images, suggestions can be used to convey much more than a product and multiplying the opportunities for marketing activities as well as innovation.

Finally, it supports actor's integrated value proposition. Integrated chatbot platform provides customers with that information and resources of other business participants and makes them easily available in ways that create significant value proposition both for customers and other partners.

In sum, chatbot enhances the value proposition in the way they expand the possibility of the interaction and the exploitation of contents and interaction both between business and customer and the wider business context.

## Reference

Castellano, S., Khelladi, I., Charlemagne, J., & Susini, J. P. (2018). Uncovering the role of virtual agents in co-creation contexts. *Management Decision*, 56(6), 1232-1246.

Gummesson, E. (2017). *Case theory in business and management: reinventing case study research*. Sage.

Kowalkowski, C., Persson Ridell, O., Röndell, J. G., & Sörhammar, D. (2012). The co-creative practice of forming a value proposition. *Journal of marketing management*, 28(13-14), 1553-1570.

Li, L. P., Juric, B., & Brodie, R. J. (2018). Actor engagement valence. *Journal of Service Management*, 29(3), 491-516.

Nylén, D., & Holmström, J. (2015). Digital innovation strategy: A framework for diagnosing and improving digital product and service innovation. *Business Horizons*, 58(1), 57-67.

Vargo, S. L. (2011). Market systems, stakeholders and value propositions. *European Journal of Marketing*, 45(1/2), 217-222.

Zott, C., & Amit, R. (2010). Business model design: an activity system perspective. *Long range planning*, 43(2-3), 216-226.

## **Human-Centred Design in the context of Servitization in Industry 4.0. A Collaborative Approach**

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The economic growth will increasingly depend on maintaining and further expanding a resilient and sustainable manufacturing sector whose competitiveness replies on maximizing the utilization of all available resources, empowering human intelligence and creativity, capturing and capitalizing on available information and knowledge for the total product lifecycle from design, production, through maintenance to end-of-life management. Whilst there have been some initial steps taken to harness new generation of informatics concepts in manufacturing, the theoretical methods, infrastructure and scientific knowledge needed to deliver the full potential of future smart manufacturing have yet to be established. Multidisciplinary and multi-sector networks of leading research centers collaborated with high value multinational manufacturing companies across Europe are brought together, which is call DiManD<sup>1</sup>, for strategically designing and developing the seamlessly integrated system framework to facilitate the development of cyber-physical systems. As a part of DiManD, beyond technical solutions, an appropriate new human-centered design method with advanced service innovation in industry 4.0 is also developed. This method will be validated in different European manufacturing sectors in order to design marketable advanced product-services in digital Manufacturing scenarios.

Based on the collaborative work of multidisciplinary and inter-sectoral teams constituted by the individual expertise of the universities, research institutes and industrial partners, an appropriate new human-centered design method with advanced service innovation in industry 4.0 is developed, taking state-of-the-art analysis and specification of industrial requirements into account. This method is also tested with European industrial cases in different sectors to validate its implementation and benefits.

The methodology will allow manufacturers to: (i) overcome internal organizational barriers for industry 4.0 offerings, (ii) identify the needs of the different value network stakeholders through user research techniques, (iii) co-create and prototype with the different value network stakeholders in order to offer more complete product-service offerings minimizing market failures, (iv) visualize and develop product-service scenarios using system visualization tools to help customers and providers to understand how advanced product-service offerings work, and (v) develop and deliver the appropriate customer solutions.

This project has received funding from the European Union's Horizon 2020 research and innovation programme under the Marie Skłodowska-Curie grant No. 814078.

# Track 8: Services globalization and trade; Economic geography of services

## **Topic: Public Choice and Decentralised Health Service Delivery in Lesotho: Assessment of views of service providers and users**

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Provision of quality services which meet the needs and preferences of local people play a vital role in achieving poverty reduction and the United Nation's Millennium Development Goals. Governments, including Lesotho, have implemented public choice's decentralised forms of service provision with the view of responding to the preferences and needs of the local people. It is believed that decentralised service provision will reduce all forms of political influence in decision making and make health service provision more cost effective; epitomised in utilisation, efficiency, affordability (in terms of cost) and accessibility to health delivery, especially to the poor. To what extent have these dreams been achieved is what motivated this study to be conducted to unveil the reality from health service users and providers point of view in Lesotho? To do this, qualitative study design was employed and the study accidentally selected 40 health service users (HUs) and 10 Health professions (HP) or health officials or health service providers for an in-depth interview. The result of the study shows improvements in health service accessibility, utilisation and affordability to the poor. The conclusions were that both health users and providers carry a good message for decentralised health services.

Public choice, health service, efficient health service, health service utilisation, decentralisation, local governments.

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<sup>1</sup> DiManD Innovative Training Network (ITN) is a European Training Network (ETN) programme that will provide a high-quality multidisciplinary, multi-professional and cross-sectorial research and training of high-achieving early stage researchers in the area of Industrie 4.0

## Recent developments in integration for services

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This paper extends and updates the one selected as one of the best papers of the 2012 RESER conference published as “*Does integration of services differ from integration of goods?*”, The Service Industries Journal, 35:4, 217-235.

The first paper provided the first ever estimates of how successful the EU internal market has been for services based on 18 countries for 2008. The estimates were presented for the different types of services and by country. It provided a benchmark for the pre-financial crisis situation against which subsequent progress could be measured. It showed that permanent presence was the dominant strategy for internationalisation of services.

It is now time to provide new benchmark estimates for the Single Market that take into consideration developments since the financial crisis but obviously before the coronavirus hit the EU economy. It should also look at how BREXIT is likely to affect the EU market for services as well as expanding coverage to more EU Member States and looking at developments over time.

The methodology employed will be the same as that in the original paper. Data is drawn from the structural business surveys, international trade in goods from COMTRADE, international trade in services from EBOPS, sales of foreign affiliates from FATS data and input-output tables to first calculate:

Apparent consumption = Production on the domestic territory – exports + imports

Apparent consumption is then broken down into the three constituent sources of supply: sales of domestic firms, imports and sales by foreign affiliates. These calculations are made in aggregate and for different services as well as country by country distinguishing between intra and extra-EU trade.

The paper will provide new benchmark results for 2018, the latest year for which sufficiently comprehensive data is available. It will expand coverage to all or nearly all EU Member States to answer the question whether commercial presence is still the dominant form of internationalization for services. For the original 18 countries it will examine how the three sources of supply have developed over the ten-year period by type of service. It will examine whether integration for services between Member States has converged or diverged within the EU over this period. It will provide a simulation of the EU market for services with and without the United Kingdom and how this affects the balance between intra and extra-EU trade in services.

## **Internationalization of the Knowledge Intensive Services “the Born Global firms”: mixed methods approach**

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The objective of this paper is to know the keys of the founder to convert Knowledge Intensive Services (KIS) resources and capabilities into dynamic capabilities.

For it, we are going to check if the proposed entrepreneurial strategies (founder characteristics: innovation, autonomy, proactivity, proclivity, competitive aggressiveness and provide innovative services, innovative culture technical and management skills) mean that the Knowledge Intensive Services are Born Global firms. Moreover we will confirm if there are alternatives to the proposed strategic configurations that make it easier for the Knowledge Intensive Services to be Born Global.

In this work we will use mixed research methods. Firstly, we analyse six cases of KIS (two KIS Born Global immediately upon its foundation, two KIS Born Global during the first three years since its creation and two other KIS that are not Born Global) in the south of Spain (Andalusia) from the renewable energy sector and consulting. The rigor and quality of the research has been ensured in terms of internal validity with personal interviews and by employing Sensemaking and Pattern-matching strategies. External validity is established through the use of rival theories and propositions and by carrying out individual and comparative analyses of cases, and reliability is ensured with the use of protocols.

Secondly, we will use the Qualitative Comparative Method (QCA) to include quantitative and qualitative determinants. For study was carried out using the dichotomous analysis of crips-set and from this we obtained the truth table and the sufficiency analysis.

For knowledge-intensive services companies carry out international guidance strategies for entrepreneurship, they will must to convert their own resources and capabilities into dynamics and, thus, be carried out an accelerated internationalization process, becoming Born Global firms.

## **Challenging the measurement of value in cultural activities: a framework for territorial impacts assessment**

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In a global world, increasingly mediated by new technologies, but where place, communities and territories assume even more importance, the valuing of culture and creativity faces new conceptual and operational challenges.

A diversity of anchoring mechanisms link global economic, social and cultural processes to the specificities of each territory. Cultural activities and creativity, which are central in these processes, are increasingly challenged by technologic mediation and by new forms of production and consumption. New intangible added values are generated, based on symbolic value and identity, where creativity, technology transfer, intangible heritage or craftsmanship are crucial components. All the traditional functions associated to cultural activities and creative processes (and the way they produced value and this value was recognized and appropriated) are facing new opportunities and threats, and the way the diverse (cultural, economic, social,...) value(s) of culture are perceived and measured need new conceptualizations and operative tools.

This paper addresses these challenges in order to question the measurement tools usually applied in valuing the impact of culture in society, drawing upon a set of research projects (including some collective research-action processes with communities) conducted in recent years, with the aim of proposing a new conceptual grid to assess (and allow self-assessment of) the impacts of creative and cultural activities in the societies and territories, in their diversity and multidimensionality.

This paper draws upon (and crosses) work developed in the scope of four different research projects in DINAMIA'CET-ISCTE in recent years (RESHAPE, ARTSBANK, IMPACTOS-ARTEMREDE, CREATOUR), which contribute to this discussion in several ways (working with artists, cultural promoters, creative tourism agents and public authorities, in several territorial contexts, both at Portuguese and European levels, assessing the impact of their activities in their communities).

Combining the work developed (and still under development) in these 4 research projects, we propose an impact self assessment toolkit which expresses the diversity and multidimensionality in value creation. A tentative conceptual grid to assess the impacts of creative activities in the territories and communities, has been developed and tested with cultural and creative actors in some of these projects, and we propose operationalizing this tool in a digital application/platform that allows systematization, self-assessment and self-awareness of value creation and their impacts by agents of the cultural/creative sector.

The paper proposes an analytical framework to help disentangling the increasing complexity and diversity of the mechanisms of creation of value in cultural activities and to facilitate the

assessment of its social impacts in a particular territory or community, in all their diversity. A specific grid is presented, comprising 5 main dimensions (cultural, economic, social, environmental; citizenship and participation), for assessing the territorial impacts of cultural activities. These are subdivided in 15 sub-dimensions, and operationalized in 75 different indicators. This analytical framework is now being transposed to a digital application/platform that allows the systematization, self-assessment and self-awareness of value creation and their impacts by the agents of the cultural/creative sector.

## **Transformación Regional del Sector Terciario de la Economía, a partir de la Gestión del Turismo Rural Vivencial; Caso de Monterrey de San Carlos, Costa Rica, 2019-2020**

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Explorar a partir de una evaluación en la gestión turística rural vivencial en el distrito de Monterrey de San Carlos su competencia respecto al sector terciario y su papel en la transformación económica de la región norte costarricense, un estudio 2019-2020.

La presente investigación fue de carácter exploratoria-descriptiva (Hernández et al, 1994). Su objeto de estudio, se focalizó en aquellos proyectos de mediana a alta escala productiva, de índole turístico, que en el periodo 2019-2020, estaban activos en la región y que, de alguna forma por su movilidad económica, generan impacto en la región.

Se utilizó la metodología de Van Dijk (1996) para el análisis de las respuestas a la entrevista, centrándose en los atributos de “texto” y “contexto” de cada unidad de análisis. Complementado con una triangulación de datos, que permitió rescatar la información relevante de ciertos actores estratégicos, vinculados al universo de la gestión turística rural vivencial de la región norte de Costa Rica.

La construcción del modelo teórico, se basó principalmente en los ámbitos de evaluación y gestión en el área turística desarrollados por Boullón (1990). Es un instrumento (entrevista) que permitiera realizar una primera aproximación entre lo que dicta la teoría de gestión en turismo y la gestión propiamente tal, en las distintas Unidades de turismo representadas en una región.

La comunidad de Monterrey es el distrito # 12 del cantón de San Carlos, con un potencial turístico muy alto, rodeado de montañas, donde se puede visualizar vastas llanuras de la zona norte, sus terrenos son ricos y fértiles, con clima fresco y bosque siempre verde. La riqueza y abundante de su espacio, permite el desarrollo de muchas actividades económicas.

En la realidad histórica del sector turístico de la región norte costarricense, se establecen crecimiento paulatino, yendo de lo netamente privado, a una participación protagónica de la comunidad, como espacio de desarrollo, progreso económico, social y cultural de su territorio: creando identidades locales, como el turismo rural vivencial, una propuesta nacida, desde el corazón de la misma comunidad de Monterrey.

La inmersión del aparato institucional y local en la región, ha configurado, una transformación en el desarrollo del turismo a nivel local; convirtiéndose en un escenario de actividad permanente y sustentable, tanto desde el punto de vista ambiental como económico. Sin embargo, la deuda más grande en este proceso paulatino de crecimiento del sector turístico, es la intervención del gobierno local, no está claro su función, sus programas, coordinaciones interinstitucionales, medios de comunicación con los espacios comunales. Actualmente no

son capaces de movilizar, ni participar, es un actor lejano, nublado, incoherente a nivel de discurso. Desde la visión de los proyectos turísticos rural vivencial, debe ser, un catalizados de procesos, por su carácter administrativo de sus funciones por ley.

Estratégicamente, la región adolece de esas estructuras comunales administrativas, que establezcan la direccionalidad del turismo rural vivencial. En todos los casos analizados cada proyecto turístico establece una soberanía sobre la coordinación del Turismo, el mismo ejecuta todas las funciones de gestión y planificación turística, esto no ha permitido, que se activen mecanismo en planificación, ordenación, proyección y consolidación de una marca identitaria que les abra las puertas a una globalidad del turismo practicado en la región.

En el mismo ámbito, de la planificación, es importante señalar la importancia de que las Unidades de administración del turismo a nivel local, cuenten con un plan de trabajo, que permita ordenar y priorizar sistemáticamente las actividades, que se realizaran en un plazo determinado. El plan de trabajo debe establecer un cronograma, responsables, metas, objetivos, medidas de evaluación y control. De esta forma se evita la improvisación diaria en el quehacer del turismo rural vivencial.

Las comunidades de la región norte costarricense, han optado por la actividad turística, como uno de los ejes productivos de su dinámica local económica, sin embargo, la carencia de equilibrio en herramientas administrativas, profesionales y financieras, es una de las deudas, que se pueden analizar a la luz de la investigación. Es una respuesta justa y necesaria, donde el rol de planificar, permita orientar el desarrollo turístico local. De manera que se busque la integralidad de los nuevos municipalismos y se enfrente con mejores condiciones la gestión sectorial del turismo rural vivencial.

En este mismo ámbito, cualquier destino que pretenda competir en el mercado internacional, deberá diseñar un plan estratégico que integre todos los productos turísticos del territorio en el que se ubica. De ahí la necesidad del compromiso colectivo de impulsar procesos de planificación y gestión en conjunto para garantizar un desarrollo de la actividad a largo plazo compatible con el entorno, con su patrimonio natural, cultural y que procure conservar la identidad de una zona con tanta historia.

Para lograr una gestión eficiente, se expresa con claridad, que CANATUR, es consciente, que, para desarrollar el turismo en la región, se requiere conformar una estructura de gestión público-privada con capacidad para impulsar programas y proyectos orientados a un propósito central: satisfacer las expectativas de la demanda turística.

De esta forma, la asignación de recursos, las decisiones estratégicas de programación, la definición de instrumentos de planificación y cualquier otra iniciativa orientada a la acción del sector público vinculada al turismo en el territorio debieran responder a dicho propósito. Es conveniente dejar claro que no se pretende duplicar ninguna estructura administrativa de base, existente en el territorio, sino aprovechar las instancias existentes que han ido evolucionando a lo largo de estos últimos años. Por ejemplo, las mesas de turismo, tour operadores, asociaciones de turismo, asociaciones de desarrollo integral, entre otras, que podrían asumir como una instancia de gestión local del turismo rural vivencial.

El estudio, nos permite hacer una correlación clave, en esos aspectos trascendentales y estratégico, que de manera natural han venido surgiendo, y consolidándose para un mejor desarrollo del turismo rural vivencial. Sin embargo, el trabajo, inicia, dado las condiciones de vulnerabilidad, que ha provocado las condiciones por la COVID-19, en toda la región, variable inesperada, durante la formulación de esta investigación y que su incidencia ha marcado un derrotero importante en el estudio.

## Programa para la prevención, detección y actuación coordinada municipal ante la violencia de género más seguras, más iguales

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El programa Más Seguras, Más Iguales es un programa integral para la detección, prevención y actuación municipal ante la violencia de género diseñado para formar equipos multidisciplinares especializados en erradicar la violencia de género desde la actuación municipal, por eso está alineado con la normativa autonómica, estatal y europea en materia de igualdad de género. Durante 2019, se implementó en 10 municipios de la Comunitat Valenciana.

El **objetivo principal** del programa Más Seguras, Más Iguales es convocar a todos los operadores locales, tanto dependientes del ayuntamiento como de otras administraciones (educativa, sanitaria, etc.) y **trasladar la cultura del trabajo en equipo como método indispensable para actuar con eficacia ante la Violencia de Género**.

Así como objetivos específicos, los cuales son:

- **Formar** a todos los operadores que intervienen en materia de detección, prevención y actuación ante la violencia de género para evitar que se produzca y para ser eficaces en la atención a las mujeres en situación de maltrato, así como a sus hijas e hijos.
- **Coordinación:** adquirir la destreza para **participar como equipo** de trabajo en las posteriores fases.
- **Constitución de una Mesa Local**, junto con la redacción de su reglamento de constitución y funcionamiento.
- **Redacción de un Documento de Actuación Coordinada** (DAC) municipal ante la violencia de género.
- Activación de la Mesa Local.
- **Promoción** de una acción comunicativa para que toda la ciudadanía conozca la existencia de este recurso y se implique en la lucha para conseguir una sociedad libre de Violencia de Género.

Este programa está dirigido a todos los operadores públicos que intervienen durante el proceso de asistencia a víctimas de violencia de género: equipo de igualdad, equipo social, gabinete psicopedagógico, atención jurídica, atención psicológica, fuerzas y cuerpos de seguridad, centros de atención sanitaria, centros escolares y cualquier otro agente que pueda intervenir en dicha asistencia.

Ficha descriptiva del Programa Más Seguras, Más Iguales:

<https://equalitymomentum.com/wp-content/uploads/2020/01/Dossier-MSMI-cas.pdf>

Enlace a la web de Equality Momentum. Programa Más Seguras, Más Iguales:

<https://equalitymomentum.com/programa-mas-seguras-mas-iguales/>

# Track 9: New paths in services research: digitalization and Jobs (PATHS)

## **Customer's experience of sharing hosting platform services: How to explain their intention to rebuy?**

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Our research focuses on the service experience that consumers have when they rent an accommodation on sharing platforms i.e., peer-to-peer online hospitality marketplaces (such as Airbnb). These platforms do not own any accommodation; they only organize the linking of non-professional accommodation suppliers and customers.

The terms ‘service experience’ and ‘customer service experience’ has been used in many studies. If they share many features, they focus on different actors: ‘service customer experience’ focus only on the customer while ‘service experience’ include all the relationships between organizations, processes, service employees and customers (Veiga Bueno et al., 2019). The customer service experience can be defined as the perception of all the tasks, actions and interactions experienced by the consumer during the service (Camelis, 2008a&b). If there is no agreement on a single definition of the customer service experience and no consensus on how to measure it (Jaakkola et al., 2015; Kumar & Anjaly, 2017), most authors agree on distinguishing the immediate experience of the service's delivery from the pre-purchase and post-purchase phases (Veiga Bueno et al., 2019).

In the case of hosting services marketed on sharing platforms (e.g. Airbnb), these distinctions are particularly relevant as the service proposed to the customer is fragmented between two different actors: Platforms provide only online services (management of the website, communication, financial aspects and customer service) in link with the pre-purchase and the post-purchase phase while the hosts provide mainly on-site services (reservations, customer contacts, accommodation, reception of customers...), specific to the second phase. The customer interacts thus between a virtual and a physical channel and that has an impact on his overall satisfaction.

The customer experience has become the focus of hotel management; they implement quality management systems (such as SERVQUAL) and analyze the gaps between an ideal service and its effective delivery. Some sharing platforms have set up such processes for their services but, unlike professional services, they cannot offer a full-service guarantee as the final completion of the service remains in the hands of non-professional suppliers.

This research is part of a larger research project on sharing and traditional hosting consumption, and aims to identify and measure the different dimensions of the consumer hospitality platform service experience and test a model that explains the impact of these dimensions on the customer's satisfaction and the intention to rebuy.

A questionnaire survey was conducted among a panel of people aged 21 to 74, representative of the French population (INSEE quota). The questionnaire studied the customers' motivations to use P2P hospitality services, their motives of satisfaction and their intention to use hosting

sharing platforms again. A sample of 240 users of P2P rental accommodation marketplaces was collected. To assess both the measurement and the structural models we choose the Partial Least Squares Path Modeling (PLS-PM) technique and used ADANCO 2.2 (Henseler, 2020).

The final model aims to explain consumers' intention to choose sharing accommodation (e.i. Airbnb) for their next booking. This intention is, as in models explaining loyalty to hotels, directly influenced by satisfaction which is itself directly impacted by the quality of service and the quality of the process. However, satisfaction is not the most influential antecedent. Indeed, two new factors have emerged and play an important role: garanties and trust in the platform on one side and well-being.

## References

Camelis, C. (2008a). Le contenu de l'expérience de service du point de vue du consommateur, *7<sup>o</sup> congrès Tendances du marketing*, Venise.

Camelis, C. (2008b). L'influence de l'expérience sur l'image de la marque de service, thèse de doctorat en sciences de gestion, IAE Aix en Provence, Université Paul Cézanne.

J. Henseler, J. (2017) Composite Modeling GmbH & Co., Kleve, Germany. [www.compositemodeling.com](http://www.compositemodeling.com)

Jaakkola, E., Helkkula, A., & Aarikka-Stenroos, L. (2015). Service experience co-creation: Conceptualization, implications, and future research directions. *Journal of Service Management*, 26(2), 182–205.

Kumar, A., & Anjaly, B. (2017). How to measure post-purchase customer experience in online retailing? A scale development study. *International Journal of Retail & Distribution Management*, 45(12), 1277–1297.

Veiga Bueno, E., Brenner Beauchamp Weber, T., Bomfin, L.E. & Takashi Kato, H. (2019). Measuring customer experience in service: A systematic review, *The Service industries Journal*, 39(11-12), 779-798.

## Extending the influence of Brand Image, Service Quality, Patient Satisfaction on Loyalty with an Importance-Performance Map Analysis

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In service marketing, a hospital's brand image (BI) plays a deciding role in determining its strategy using which hospitals can improve their current competitive position (Javalgi et al., 1992) and gain an advantage over their rivals. Following this logic, by having loyal customers, hospitals can not only increase their market share but can also reduce their operating costs. There exists extant research on brand image (BI), patient satisfaction (PS), service quality (SQ) and loyalty but these studies are highly fragmented. For this reason, it is important to have an integrated model that can throw light on the direct relationship as well as the mediating relationships among the constructs in the study (Vimla & Taneja, U., 2020). This study will help to understand the relationships among a hospital's BI –SQ – PS– Loyalty as perceived by health care practitioners and managers.

The objective of this study is to investigate the existence of loyalty among healthcare patients and its dependence on a healthcare provider's image, quality of its service delivery, and satisfaction of its patients. This study further examines the direct relationship from brand image to loyalty and mediating roles of service quality and patient satisfaction in creating loyalty among patients. This study also performs an importance-performance analysis using importance-performance map analysis (IPMA) to determine how to increase the performance of any of the constructs, i.e., BI, SQ or PS to achieve the desired results.

Cross-sectional research design is used in the study which is descriptive in nature. A sample of 210 data was collected from Indian hospitals using a structured questionnaire. This study uses partial least squares (PLS) structural equation modeling (SEM) to test and validate the research model (Hair et.al., 2017). Extension of PLS-SEM results, IPMA, is used to assess the importance-performance of various constructs used in this study (Ringle & Sarstedt, 2016).

This study makes a significant contribution by identifying the important and relevant role of a hospital's image in helping developing loyalty towards it. A strong and positive BI can lead to loyal patients. Therefore, BI and loyalty become dominant routes to attaining profitability. Using IPMA, it will be observed how different elements contribute to each construct. These results can then be used by managers and healthcare practitioners for decision making.

### References

Hair, J. F., Hult, G. T. M., Ringle, C., & Sarstedt, M. (2017), "A primer on partial least squares structural equation modeling (PLS-SEM)". SAGE Publications, Inc.

Javalgi R, Whipple T, McManamon M. et al. (1992), "Hospital image: A correspondence analysis approach", *Journal of Health Care Marketing*, Vol12: 34-41.

Ringle, C.M. and Sarstedt, M. (2016), "Gain more insight from your PLS-SEM results: The importance-performance map analysis", *Industrial Management and Data Systems*, Vol. 116 No. 9, pp. 1865-1886.

Vimla and Taneja U. (2020), "Brand image to loyalty through perceived service quality and patient satisfaction: A conceptual framework", *Health Services Management Research*, Sep 2020. doi: 10.1177/0951484820962303. Epub ahead of print. PMID: 32996357.

## Employer branding in times of sustainability and digitalization

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The latest research in the field of employer branding highlights a mix of marketing principles and recruitment practices, such as demonstrated by Backhaus (2018), Esch et al. (2019), and Walter and Kremmel (2016). This paper aims to investigate employer brand meanings when building a new understanding of a conglomerate of firms to signal advantages to attract more talent to an distinctive area that is after fresh talent. In this logic, any service-oriented organization is necessary and should include a brand management team to incorporate unmet business needs into future offerings, forecast demand , and manage capacity to meet demand in sustainability and digitalization.

This study examines the perceptions of interviewees on a region close to the German border, driven by small firms in the tourism industry and mainly family owned and mid-sized companies in the pharmaceutical and machinery industries. These areas are after fresh talent to ensure future growth and business success. The data collection for this quantitative study involved 15 semi-structured interviews with senior managers from firms in the focused region, including mid-sized enterprises, small businesses and public institutions followed by an online survey sent to 800 email addresses in this area. The respondents rate was 40,2%, ending up in a data sample of 325 full answers. We applied regression analyses to answer our research question regarding sustainability and digitalization.

Analysis of our data showed that organizations are increasingly competing to attract highly skilled talent in various professional areas, therefore, those organizations that attract the best talent will have a distinct edge in the marketplace. Employees in the age category of under 30 years are looking after above-average earning potential (see the given example of the regression model in the appendence), IT-jobs, work-life-balance, and leisure activities in nature, and themes regarding sustainability and digitalization. Furthermore, findings from the semi-structured interviews with managers suggest that employer branding remains at the early stage, consequently, a clear need exists for a more developed strategy in attracting new talent. The rationale for this 'extra mile' is that distinctive employer brand experiences tend to rely heavily on interpersonal interactions. By signaling those issues to fresh talent, companies will attract relevant future employees to cover human resource needs.

### References

Arasanmi, C.N. and Krishna, A. (2019), "Employer branding: perceived organisational support and employee retention – the mediating role of organisational commitment", *Industrial and Commercial Training*, Vol. 51 No. 3, pp. 174-183. <https://doi.org/10.1108/ICT-10-2018-0086>

Backhaus, K. (2018), "People make the brand: a commentary", *Management Research*, Vol. 16 No. 4, pp. 380-387. <https://doi.org/10.1108/MRJIAM-12-2017-0800>

Esch FR., Baumgartl C., Stahl M., Jaeger A. (2019) Employer Branding: Right Potentials gewinnen. In: Esch FR. (eds) *Handbuch Markenführung*. Springer Reference Wirtschaft. Springer Gabler, Wiesbaden

Hasan, Gilani and Cunningham, Lucy (2017). Employer branding and its influence on employee retention: A literature review. *The Marketing Review*, Volume 17, Number 2, pp. 239-256.

Kunerth, B. and Mosley, R. (2011), "Applying employer brand management to employee engagement", *Strategic HR Review*, Vol. 10 No. 3, pp. 19-26. <https://doi.org/10.1108/1475439111121874>

Maheshwari, V., Gunesh, P., Lodorfos, G. and Konstantopoulou, A. (2017), "Exploring HR practitioners' perspective on employer branding and its role in organisational attractiveness and talent management", International Journal of Organizational Analysis, Vol. 25 No. 5, pp. 742-761. <https://doi.org/10.1108/IJOA-03-2017-1136>

Myrden, S.E. and Kelloway, K. (2015), "Young workers' perception of brand image: main and moderating effects", Journal of Organizational Effectiveness: People and Performance, Vol. 2 No. 3, pp. 267-281. <https://doi.org/10.1108/JOEPP-09-2014-0055>

von Walter B., Kremmel D. (2016) Employer Brand Management: Grundlagen, Strategie, Umsetzung. In: von Walter B., Kremmel D. (eds) Employer Brand Management. Springer Gabler, Wiesbaden.

Appendices:

**Modellzusammenfassung<sup>b</sup>**

Modell	R	R-Quadrat	Korrigiertes R-Quadrat	Standardfehler des Schätzers	Durbin-Watson-Statistik
1	,619a	,384	,370	16,594	1,990

a. Einflussvariablen : (Konstante), Leistbares Wohnen, Karrieremöglichkeiten, Wie gerne leben Sie in der Region Kufstein?, Gutes Gehalt möglich, Wie gerne arbeiten Sie in der Region Kufstein?

b. Abhängige Variable: Wie zufrieden sind Sie mit der Region Kufstein im Allgemeinen?

**ANOVA<sup>a</sup>**

Modell		Quadratsumme	df	Mittel der Quadrate	F	Sig.
1	Regression	38385,588	5	7677,118	27,880	,000b
	Nicht standardisierte Residuen	61681,612	224	275,364		
	Gesamt	100067,200	229			

a. Abhängige Variable: Wie zufrieden sind Sie mit der Region Kufstein im Allgemeinen?

b. Einflussvariablen : (Konstante), Leistbares Wohnen, Karrieremöglichkeiten, Wie gerne leben Sie in der Region Kufstein?, Gutes Gehalt möglich, Wie gerne arbeiten Sie in der Region Kufstein?

**Koeffizienten<sup>a</sup>**

Modell		Nicht standardisierte Regressionskoeffizient B	Koeffizienten Std.-Fehler	Standardisierte Koeffizienten Beta	T	Sig.
1	(Konstante)	11,421	5,988		1,907	,058
	Wie gerne arbeiten Sie in der Region XY	,372	,082	,327	4,515	,000
	Wie gerne leben Sie in der Region XY	,347	,074	,329	4,687	,000
	Karrieremöglichkeiten	-1,676	,822	-,142	-2,038	,043
	Gutes Gehalt möglich	2,194	,822	,183	2,669	,008
	Leistbares Wohnen	-,055	,581	-,005	-,094	,925

a. Abhängige Variable: Wie zufrieden sind Sie mit der Region Kufstein im Allgemeinen?

## Problems in Services Marketing

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Services Marketing dominates today's economy as a result of the considerable growth of the service sector over the last decades. Growing number of services, especially e-commerce, has intensified competition among companies, which have to employ new strategies and tactics to respond to new needs and expectations (Bruhn and Hadwich 2011). Services have come to be perceived as an important source of differentiation and a way of gaining competitive advantage in the market (Zeithaml et al. 1985, Parasuraman et al. 1985, Grove et al. 1997, Zhang et al. 2019, Dobski 2019). Even Amazon, Ebay and Alibaba are turning to service aspects of their operations to build brand preference and increase market share. As a consequence of the emergence of service economy, profound knowledge and skills in marketing and managing services have become crucial for a business success (Petz and Mütze-Niewöhner 2020).

A common problem reads: Consumers who do not visit stores return merchandise because they are unhappy with how the fabric feels and/or the merchandise does not fit comfortably. This results in customer dissatisfaction and costly returns.

The paper uses a mixed methods approach. First, we apply a PLS structural equation modelling approach (Hair et al. 2020) when addressing the problem on a data sample of 200 postgraduate students, and second, we use 10 qualitative interviews with online business managers from the DACH region to better understand service marketing issues and challenges in the contemporary online business.

The study provides practical implications to managers who needs to manage services and product descriptions in an online business setting. Much of the previous research has focused on ratings as final outcomes of e-commerce evaluations, we draw attention to organizations' behaviors in managing consumers evaluations. A practical implication of our findings is that managers wish to influence how customers perceive their business. Therefore, managers should analyze consumers' reactions to understand their preferences, and attempt to shape the preferences and expectations of future customers.

### References

Bruhn, Manfred & Hadwich, Karsten. (2011). Dienstleistungsproduktivität – Einführung in die theoretischen und praktischen Problemstellungen (Band 1). 10.1007/978-3-8349-6664-3\_1.

Dobski, Paweł. (2019). The Role of Quality in Customer Relationship Management. 10.12657/9788379862764-5.

Grove, Stephen & Pickett, GM & Royne, Marla. (1997). Addressing the Advertising of Services: A Call to Action. *Journal of Advertising*. 26. 1-6. 10.1080/00913367.1997.10673531.

Hair, Joseph & Hult, G. Tomas M. & Ringle, Christian & Sarstedt, Marko. (2014). A Primer on Partial Least Squares Structural Equation Modeling (PLS-SEM).

Parasuraman, A Parsu & Zeithaml, Valarie & Berry, Leonard. (1985). A Conceptual Model of Service Quality and Its Implications for Future Research. *Journal of Marketing*. 49. 41-50. 10.1177/002224298504900403.

Parasuraman, A Parsu & Zeithaml, Valarie & Malhotra, Arvind. (2005). E-SQUAL: A multiple-item scale for measuring consumer perceptions for service quality. *Journal of Retailing*. 7. 12-40.

Petz, Andreas & Mütze-Niewöhner, Susanne. (2020). Produktivität von wissensintensiven, interaktiven Dienstleistungen. *Zeitschrift für Arbeitswissenschaft*. 1-10. 10.1007/s41449-020-00189-9.

Zeithaml, Valarie & Parasuraman, A Parsu & Berry, Leonard. (1985). Problems and Strategies in Services Marketing. *Journal of Marketing*. 49. 33-46. 10.1177/002224298504900203.

Zhang, Qing & Qiu, Liyuan & Wu, Huaiwen & Wang, Jinshan & Luo, Hengliang. (2019). Deep Learning Based Dynamic Pricing Model for Hotel Revenue Management. 370-375. 10.1109/ICDMW.2019.00061.

## **Artificial Intelligence (AI) in knowledge services and self-service (insourcing)**

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Knowledge services are obvious subjects for introduction of AI and AI systems may be supposed to be provided as self-service systems thus customer enterprises and public institution can insource the knowledge services (such as accountancy, legal services, management advice, environmental and climate strategy services etc.). This can disrupt the whole knowledge service sector and destroy old service theories. New technology and digitalisation of knowledge services has not been much emphasized in service research. Robotisation of services has been emphasized in some research (e.g. Wirtz et al. 2018, Breidbach et al. 2018). ). AI in knowledge services has been emphasized by Huang and Rust (2018). Wirtz et al. (2018) have a theoretical discussion of physical and virtual service robots respectively influencing customer satisfaction and the service encounter in which interaction with IT systems replaces interaction with employees. They argue that robots and AI systems, at least not actually, have emotional/social intelligence, which may reduce user-satisfaction. Caic, Odekerken-Schröder and Mahr (2018) has investigated how service robots co-creates and co-destructs user values in elderly care. However, very few publications focus specifically on AI. One exception is Huang and Rust (2018), who see the development in four stages characterized by diverse types of jobs and job qualification demands: mechanical, analytical, intuitive and empathic. Empathic jobs are replacing the other types when AI is introduced. They call this tendency “feeling economy” (Huang, Rust and Maksimovic 2019). Bolander (2019 p. 20) claims that “Machines and humans will probably never be good at exactly the same things”. Kaartemo and Helkkula (2018) in a comprehensive literature review argue that there is a need to empirically investigate how AI creates new service relations that enable value creation for and with users.

A new understanding of the service relation between service provider and business customers should be developed, based on knowledge service firms may not provide consultancy, but AI systems which customers use as self-service systems. This requires new competencies (e.g. software competencies) in the service firms and in customer firms (competencies in accountancy, law, use of the AI systems etc.) and new business models. Theory elements in such a new understanding will be presented.

Further, outlines for how this process can be studies empirically in private firms and public institutions will be presented.

This is a conceptual paper. The paper presents a plan for investigation the described issues in two empirical projects (one studying the private and one the public sector).

Focus on AI and self-service in knowledge services, the advantageous possibilities and the competence and management challenges AI leads to. A theoretical perspective on AI in knowledge services and insourcing of knowledge services will be presented.

## **Sectoral consumption of KIBS services consumed across EU countries.**

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Recent empirical studies have confirmed the importance of KIBS for national economies (Shearmur & Doloreux, 2019). Cross-country comparisons are made complicated by differences in the size of user sectors. A dominant user in one country may be a rather small industry in another, for example. But we cannot assume that individual sectors are liable to use KIBS to the same extent in different countries. There is a gap in the literature when it comes to analyzing and accounting for patterns of KIBS-intensity across different industries and countries. This study examines how far countries are similar, and where they differ. This will hopefully help us identify important cross-sectoral interdependencies which are observed in EU countries.

Bearing in mind the importance of supply chains, we capture cross-sectoral and intra-sectoral difference in KIBS use across EU countries through IOTs (input-output tables), which allow us to identify 6 different types of KIBS sector. In particular calculating KIBS-intensity for EU countries and industries from the national SUTs (supply-use tables). We use various methods to determine patterns that differentiate industries and countries. In addition to examining the size and share of KIBS industries in national economies and their sectoral economic structure, we will relate these results to broader indicators dealing with national economies (e.g. level of economic prosperity, the quality of institutions, etc.)

Individual KIBS sectors emerge as major consumers of their own outputs – we term this the Ouroboros effect. Often, other KIBS sectors are also major users, and have high KIBS-intensity (when we relate the expenditure on KIBS to their overall economic activity). We also find that across all countries, the pattern of KIBS-intensity varies from sector to sector in ways that are often explicable by the nature of each of the different sorts of KIBS sector. However, there are many cross-national differences whose explanation is less obvious than simply relating these to differences in the scale of the KIBS-using industries.

## **References**

Shearmur, R., & Doloreux, D. (2019). KIBS as both innovators and knowledge intermediaries in the innovation process: Intermediation as a contingent role. *Papers in Regional Science*, 98(1), 191-209.

## Sourcing great talent in the tourism industry

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The generation Z's opinion towards employment is heavily discussed in the services and management literature (Goh & Lee, 2018; McCarthy et al., 2017; Stewart, Oliver, Cravens, & Oishi, 2017). To attract young talent in the services industry, especially in the tourism industry, firms rely on new recruitment and attraction approaches like experiencing the new workplace as a guest, as an active member of an one-day show kitchen event to show off skills and talent, or even by gamification (Georgiou & Nikolaou, 2020; Keller & Meaney, 2017; Calmbach et al. 2016; Chambers et al. 1998). However, a robust sourcing strategy is crucial when planning for future business success, especially infrastructure functions and webpage usability design can reduce costs and improve service delivery through better demand management (Agarwal et al. 2014, Debane et al. 2014, Manyika et al. 2012). Our study shows that young graduates from vocational schools want to be found by relevant companies instead of trying to find the job themselves. Our findings are in line with a study by Gee (2019) who found that job seekers prefer to apply for jobs on career platforms, if the numbers of applicants for the highly competitive positions are visible. Hurrell et al. (2017) showed in their study that applicants appreciate to access information themselves, but have negative feelings towards employers monitoring their social networking sites. Contributing to this stream of research in the services industry our data presents a strong sign to highlight a paradigm shift in the digital services when recruiting new talent. We found that young talent demands all the opportunities from digital infrastructure. Furthermore, our findings show that it is moderately straightforward to companies especially in the services and in the tourism industries when developing detailed profiles of the kind of people they are after by analyzing the background, skills and advertised experience of their future high performers. As our data shows, fresh talents watch out for easy but highly effective services when entering their first steps in individual carrier path ways to the tourism industry. New talent prefers to be found by leading and relevant firms. Due to the fact that enterprises offer and heavily advertise jobs to potential employees on digital platforms (Makarius & Srinivasan, 2017), accordingly to our data young talent is different. Molinillo et al. (2018) explained that theory focusses on the attitudes of customers but not of future talent or employees. Our research contributes to this research gap and is highly requested since an efficient digital recruitment routine could increase a company's performance (Tumasjan, Kunze, Bruch, & Welpe, 2020).

In our study (n = 350, survey period March-April 2020) we asked students about their digital services expectations and their application behavior. We tested our hypotheses by analyzing expectations and application behavior on the Tyrolean market. Therefore, we sent out a quantitative survey to 1,600 students. In more details we compared answers regarding two job platforms, the new "hoteljob.tirol" (firms are looking after relevant talent) against the Austrian number one platform branded as "karriere.at" (traditional platform, where talent usually looks after relevant jobs). The given answers on the subject of data sharing (personal data, CV etc.) show clearly that the respondents are very happy to place their trust on the new "hoteljob.tirol" platform. Around two thirds of the respondents would "very gladly and immediately" send their

data to "hoteljob.tirol" and find themselves for a job. We applied Anova and regression modeling analysis to our data. The difference between the group mean values and variance analysis of the consent to the statement "Would you upload your CV and your contact details to the website "Name of the platform" so that companies could get your attention?" between "karriere.at" ( $\bar{x} = 59.769$ ), as a strong brand on the Austrian job market, and the platform "hoteljob.tirol" ( $\bar{x} = 66.487$ ) is significant ( $p = 0.006$ ). In total, this gives the new platform "hoteljob.tirol" an average of 11.12% confidence ahead of the largest provider in Austria.

In this paper, we identify the distinct influence of job application behavior of young students on the Tyrolean job market in the services and tourism industries. In doing so, we suggest that organizations conform in three ways: (a) by adopting entire sets of attributes of the new job application behavior of the Gen Z, (b) by focusing on a limited number of attributes critical to digital infrastructure, and (c) by focusing on a reciprocal hiring strategy when looking after new and young talent. By analyzing major young talent expectations on the job market our findings show how an organization could be more efficient in finding and hiring relevant applicants in less time.

## References

Agarwal, Himanshu, Leandro Santos, and Irina Starikova (2014). Managing the demand for IT infrastructure. URL: <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/managing-the-demand-for-it-infrastructure>, (retrieved May 20, 2020).

Calmbach, Marc, Silke Borgstedt, Inga Borchard, Peter Martin, Thomas Berthold, Bodo Flaig (2016). *Wie ticken Jugendliche?* Springer Verlag.

Chambers, Elizabeth G., Mark Foulon, Helen Handfield-Jones, Steven M. Hankin, and Edward G. Michaels (1998). The War For Talent. *McKinsey Quarterly* 3(3):44-57.

Debane, Francine, Katy Defossez, and Mark McMillan (2014). Developing talent for large IT projects. McKinsey Digital. URL: <https://www.mckinsey.com/business-functions/mckinsey-digital/our-insights/developing-talent-for-large-it-projects> (retrieved May 20, 2020).

Gee, L. K. (2019). The More You Know: Information Effects on Job Application Rates in a Large Field Experiment. *Management Science*, 65(5), 2077–2094. <https://doi.org/10.1287/mnsc.2017.2994>

Georgiou, K., & Nikolaou, I. (2020). Are applicants in favor of traditional or gamified assessment methods? Exploring applicant reactions towards a gamified selection method. *Computers in Human Behavior*, 109, 106356. <https://doi.org/10.1016/j.chb.2020.106356>

Goh, E., & Lee, C. (2018). A workforce to be reckoned with: The emerging pivotal Generation Z hospitality workforce. *International Journal of Hospitality Management*, 73, 20–28. <https://doi.org/10.1016/j.ijhm.2018.01.016>

Hurrell, S. A., Scholarios, D., & Richards, J. (2017). 'The kids are alert': Generation Y responses to employer use and monitoring of social networking sites. *New Technology, Work and Employment*, 32(1), 64–83. <https://doi.org/10.1111/ntwe.12085>

Keller, S.; Meaney, M. (2017). Attracting and retaining the right talent. URL: <https://www.mckinsey.com/business-functions/organization/our-insights/attracting-and-retaining-the-right-talent>.

Makarius, E. E., & Srinivasan, M. (2017). Addressing skills mismatch: Utilizing talent supply chain management to enhance collaboration between companies and talent suppliers. *Business Horizons*, 60(4), 495–505. <https://doi.org/10.1016/j.bushor.2017.03.007>

Manyika, James, Susan Lund, Byron Auguste, and Sreenivas Ramaswamy (2012). Help wanted: The future of work in advanced economies. McKinsey Global Institute, URL: <https://www.mckinsey.com/featured-insights/employment-and-growth/future-of-work-in-advanced-economies> (retrieved May 20, 2020).

McCarthy, J. M., Bauer, T. N., Truxillo, D. M., Anderson, N. R., Costa, A. C., & Ahmed, S. M. (2017). Applicant Perspectives During Selection: A Review Addressing "So What?," "What's New?," and "Where to Next?". *Journal of Management*, 43(6), 1693–1725. <https://doi.org/10.1177/0149206316681846>

McKinsey (2015). A Labor market that works: Connecting Talent with Opportunity in the Digital Age. URL: [https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Employment%20and%20Growth/Connecting%20talent%20with%20opportunity%20in%20the%20digital%20age/MGI\\_Online\\_talent\\_A\\_labor\\_market\\_that\\_works\\_Full\\_report\\_June\\_2015.ashx](https://www.mckinsey.com/~/media/McKinsey/Featured%20Insights/Employment%20and%20Growth/Connecting%20talent%20with%20opportunity%20in%20the%20digital%20age/MGI_Online_talent_A_labor_market_that_works_Full_report_June_2015.ashx) (retrieved last May 20, 2020).

Molinillo, S., Liébana-Cabanillas, F., Anaya-Sánchez, R., & Buhalis, D. (2018). Dmo online platforms: Image and intention to visit. *Tourism Management*, 65, 116–130. <https://doi.org/10.1016/j.tourman.2017.09.021>

Stewart, J. S., Oliver, E. G., Cravens, K. S., & Oishi, S. (2017). Managing millennials: Embracing generational differences. *Business Horizons*, 60(1), 45–54. <https://doi.org/10.1016/j.bushor.2016.08.011>

Tumasjan, A., Kunze, F., Bruch, H., & Welpe, I. M. (2020). Linking employer branding orientation and firm performance: Testing a dual mediation route of recruitment efficiency and positive affective climate. *Human Resource Management*, 59(1), 83–99. <https://doi.org/10.1002/hrm.21980>

## Explanation of pressure against digital transformation in legal services

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The legal services markets are undoubtedly in the middle of a shifting phase: new technologies (Muzio, Spence and Carter 2015), the computerization of many professional jobs (Frey & Osborne, 2013), as well as the technological developments in automation and artificial intelligence (AI) disrupt the foundations of how legal work is practised and delivered and these challenges seem to be international.

The aim of the study is to broaden the understanding of how lawyers and managers of law firms understand and strategically cope with such a change and what are (if they are) their reasons for the pressure against technology

Drawing on explorative informal interviews (n=40) with professionals in Polish legal services sector, this study highlights how technological and market pressures combine to challenge the business models of legal services firms.

Poland is an interesting market for legal services and particularly suitable for the focus of the study. Technology has shaped Polish legal services sector by enabling the new modes of service delivery and demanding new competencies, while the national bar association significantly limits marketing and promotional activities.

The study should add to current knowledge in many ways:

- 1) It should contribute to an understanding of how managers of law firms understand and strategically cope with shifting changes in the legal services market.
- 2) It should extend the debate on technological disruption and factors of pressure against technology in professional services
- 3) Despite many authors have predicted that information technology will gain pace in the legal industry in a revolutionary way (Lacity and Willcocks 2012; Susskind 2013), this study presumes that change involving lawyers is a difficult, prolonged process. It seems, that lawyers are still somehow conservative, risk-averse, persistent and resistant to change. Therefore, it's a continuous, but slow march toward adaptation to the 'new normal'.

## **The Reason why Public Services Lag Behind the Private Sector in Terms of Sustainable Development (SD): An Exploratory Research Conducted in the Swiss Service Economy**

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It appears that people have gained real influence over the SD behavior of private sector companies. There is a real awareness, and it's new. Therefore, in the future, companies will have to demonstrate good SD behavior and not just communicate about it. This is confirmed by recent literature (e.g. Moravcikova, 2017). The objective of this research is twofold, why public services are lagging behind the private sector in terms of sustainable development and how they could be transformed to bridge this gap.

This research is based on a qualitative survey. In autumn 2019, we conducted 65 semi-structured interviews in the service sector in French-speaking Switzerland. The selected profiles corresponded to people working in the different service sectors (banking, insurance, health, education, etc.) and with different professional statuses (employees, executives, etc.). Around 1/3 of the respondents are active in the public sector (compared to 2/3 in the private sector). All the transcripts of the interviews were then analysed using Nvivo software in order to synthesise the results. The research hypotheses are now generated and compared with the scientific literature.

The main questions asked during the interview are as follows:

- In your opinion, what should be the main priorities for SD?
- How do you see things evolving in terms of SD ? If you could see into a crystal ball, what would you see at 5-10-20 years?
- Do you think that SD is more the business of politics, business or citizens?
- Do you think SD is more a local or global initiative?
- Do you think that the digitization of our economy (internet access, mobile) is good for SD and the climate?

In our view, the key lesson learned from this survey concerns the risks that private and public sector organizations face if they fail to integrate SD clearly and convincingly into their management policies. Not only do they run the risk of having their services boycotted by consumers/public opinion, but they also run the risk of having their services boycotted by consumers/public opinion ("SD can be a real means of pressure against businesses. Soon we will only buy and consume sustainable services committed to SD", Women 35-44, public sector), but also to be sidelined as potential employers.

We will explore new research paths to ensure that public services are sufficiently proactive in SD and do not lag behind the private sector.

## **Employee Health and Business Performance: A comprehensive approach with questionnaire survey to companies and economic lab experiments**

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Employee's health has been currently drawing attention to business administration as an important issue. This is because, for example, not a small number of employees have a mental health problem like depression, which in the worst cases, causes long-term absence from work. As already pointed out as absenteeism and/or presenteeism, it has become a social issue that potentially makes a huge amount of loss in business. In a similar sense, SDGs advocate "Good health and well-being" (Goal 3) and "Decent work and economic growth" (Goal 8), which have a great commonality with our research motivation.

To this end, especially in Japan, a concept of "Kenko-Keiei", which is the direct translation from a Japanese word, is promoted by METI (Ministry of Economy, Trade, and Industry) in Japan, and has been gradually starting to be penetrated by companies. Kenko-keiei means one of management strategies which improves employee health from a management perspective. Although that is a superior concept, however, it is not clear how well such a management strategy works from a theoretical point of view. A fundamental mechanism behind Kenko-keiei is intrinsically important to be clarified.

This study adopts two approaches, questionnaires survey and economic lab experiments, comprehensively aiming at clarifying the relation between employee's health and business performance. The questionnaire is sent to more than 100 companies and asks about the current employee's health status as well as activities for employee's health improvement. Using the survey data, we analyse how employee's health effects on business performance such as productivity.

Economic experiments focus on the effects of health improvement activities in financial market performance. For that, we conduct asset market experiments including the company's decision of health improvement activity. By those two approaches, we demonstrate the total mechanism of Kenko-keiei from a company's level to a financial market level.

Questionnaire results uncover what factors or activities could significantly increase business performance. Also, we discuss the possibility of inventing an indicator that could measure an employee's health level for each company comparison. With such an indicator, ultimately, we aim to foster company's voluntary activities on employee's health. In the meantime, lab experiments elucidate that accurate information of company's health improvement activity enables to increase stock price. It implicitly means a potential possibility that financial markets could help Kenko-keiei activities by appropriate information dissemination.

## Small museums digitalisation: evidence from Italy

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Among service industry, the cultural sector is the one that is living the most rapid growth; indeed, it provides 29.5 million jobs globally and it is responsible of 2,250 billion dollars of global revenues (EY, 2014; Ngo et al., 2019).

Moreover, the cultural sector is undergoing a profound transformation due to the introduction and application of new technologies, such as social media and mobile apps. This is particularly true for museums (Erriechiello et al., 2019; Pop & Borza, 2016; Serravalle et al., 2019), in which the adoption of these new technologies allows to increase their accessibility, engagement and attraction (Alunno, 2017; Hilton et al., 2019; Izzo, 2017; Lazzeretti & Sartori, 2016; Sacco et al., 2018; Solima, 2019; Sumer, 2018; Vaz et al., 2018).

However, to the best of the authors' knowledge, scholars interested in the adoption of technologies in museums have always focused their attention on large museums, ignoring the importance of the small ones, despite their widespread presence and importance, especially in some countries, such as Italy (Cellini et al., 2019; ISTAT, 2019a, 2019b).

Thus, this paper aims to fill this gap by investigating: *i*) if and how small museums adopt new technologies; *ii*) the existence of differences in the adoption of these technologies due to some specific museums characteristics (e.g., private/public ownership, museum typology); and *iii*) the existence of specific factors that favour or obstacle the technology adoption.

In order to reach its aim, in this paper a survey data collection method (Babbie, 1990; Fowler, 2013; Groves et al., 2009) is adopted. In particular, the questionnaire used for the investigation has been sent to the directors/curators of all the Italian small museums. Respondents have to provide information related four main aspects: *i*) museums general information; *ii*) current adoption of technologies; *iii*) technology enabling factors; and *iv*) technology inhibiting factors.

Data are going to be analysed in both quantitative and qualitative terms. In particular, the quantitative investigation are going to be done through the application of ANOVA and Chi-squared tests; whilst, the qualitative analysis will adopt a mixed thematic analysis.

Basically, we aim to reach three main results thanks to this investigation:

1. Identifying the most implemented technologies by Italian small museums;
2. Verifying if and how museums characteristics influence the adoption of these technologies; and
3. Classifying the factors that facilitate (or hinder) their technology adoption.

In doing so, the paper will provide both theoretical and practical contributions as well as interesting suggestions for future research on these topics.

## References

Alunno V. (2017), Le tecnologie multimediali per la fruizione museale e l'esperienza dei visitatori. Prima indagine sui Musei Civici di Palazzo Buonaccorsi a Macerata/Multimedia technologies for the museum fruition and visitor experience. First survey on Civic Museums of Buonaccorsi Palace in Macerata, «Il Capitale Culturale. Studies on the value of cultural heritage», 15, pp. 265-295.

Babbie, E. (1990). Survey research methods. Belmont, CA: Wadsworth.

Cellini, R., Cuccia, T., Lisi, D. (2019). Spatial dependence in museum services: An analysis of the Italian case, MPRA Paper, University Library of Munich, Germany.

Errichiello, L., Micera, R., Atzeni, M., Del Chiappa, G. (2019). Exploring the implications of wearable virtual reality technology for museum visitors' experience: A cluster analysis, International Journal of Tourism Research, 21(5), 590-605. <https://doi.org/10.1002/jtr.2283>

EY (2014). Creating growth. Measuring cultural and creative markets in the EU. Available online at: [https://www.ey.com/Publication/vwLUAssets/EY-Creating-Growth-Measuring-Cultural-and-Creative-Markets-in-the-EU/\\$FILE/EY-Creating-Growth-Measuring-Cultural-and-Creative-Markets-in-the-EU.pdf](https://www.ey.com/Publication/vwLUAssets/EY-Creating-Growth-Measuring-Cultural-and-Creative-Markets-in-the-EU/$FILE/EY-Creating-Growth-Measuring-Cultural-and-Creative-Markets-in-the-EU.pdf)

Fowler Jr, F. J. (2013). Survey research methods. Sage publications.

Groves, R. M., Fowler Jr, F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2011). Survey methodology (Vol. 561). John Wiley & Sons.

Hilton D., Levine A., Zanetis J. (2019), Don't lose the connection: Virtual visits for older adults, «Journal of Museum Education», 44, n. 3, pp. 253-263.

ISTAT (2019a), L'Italia dei musei, availbale online at: [https://www.istat.it/it/files/2019/12/L'Italia-deimusei\\_2018.pdf](https://www.istat.it/it/files/2019/12/L'Italia-deimusei_2018.pdf), accessed on May 15th, 2020.

ISTAT (2019b), I musei, le aree archeologiche e i monumenti in italia, available online at: [https://www.istat.it/it/files/2019/01/Report-Musei\\_2017\\_con\\_loghi.pdf](https://www.istat.it/it/files/2019/01/Report-Musei_2017_con_loghi.pdf), accessed on May 15th, 2020.

Izzo F. (2017), Musei e tecnologie: Valorizzare il passato per costruire il futuro, Padova: Cedam.

Lazzeretti L., Sartori A. (2016), Digitisation of cultural heritage and business model innovation: the case of the Uffizi gallery in Florence, «Il Capitale Culturale. Studies on the value of cultural heritage», 14, pp. 945-970.

Ngo, T., Tran, T., Tran, M., Nguyen, Q., & Hoang, V. (2019). A study on relationship between cultural industry and economic growth in Vietnam. Management Science Letters, 9(6), 787-794.

Pop, I.L.; Borza, A. (2016) Technological innovations in museums as a source of competitive advantage. In Proceedings of the 2nd International Scientific Conference SAMRO 2016: News, Challenges and Trends in Management of Knowledge-Based Organizations, Palatinis, Romania, 14-16 October 2016, 398-405.

Sacco P.L., Ferilli G., Tavano Blessi G. (2018), From culture 1.0 to culture 3.0: Three socio-technical regimes of social and economic value creation through culture, and their impact on european cohesion policies, «Sustainability», 10, n. 11, pp. 3923.

Serravalle, F., Ferraris, A., Vrontis, D., Thrassou, A., & Christofi, M. (2019). Augmented reality in the tourism industry: A multi-stakeholder analysis of museums. Tourism Management Perspectives, 32, 100549. <https://doi.org/10.1016/j.tmp.2019.07.002>.

Solima L. (2019), Ri-connettere per Ri-mediare. Alcune riflessioni a partire dal mondo dei musei, Milan: FrancoAngeli.

Sumer B. (2018), Impact of industry 4.0 on occupations and employment in Turkey, «European Scientific Journal», 14, n. 10, pp. 1-17.

Vaz R.I.F., Fernandes P.O., Veiga A.C.R. (2018), Interactive technologies in museums: How digital installations and media are enhancing the visitors' experience, In Rodrigues, J.M.F., Ramos, C.M.Q., Cardoso, P.J.S., Henriques, C., Handbook of Research on Technological Developments for Cultural Heritage and eTourism Applications, Pennsylvania: IGI Global, pp. 30-53.

## Exploring the co-creation of services in informal micro-businesses at the Base of the Pyramid

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Around the world, two-thirds of the population live with less than US\$ 9 a day (Arnold & Valentin, 2013), constituting the so-called base of the pyramid (BoP). This reality has attracted the attention of both, academics and practitioners, to explore and address BoP related issues from different approaches. However, among existing contributions it is crucial to emphasize that BoP citizens are not just actively needing, demanding and consuming services, but also and more interestingly, they are true innovators creating and providing service solutions.

Understanding how services are delivered, co-created, and experienced by consumers in such complex setting is a key area for service research (Fisk et al., 2016; Gebauer & Reynoso, 2013; Reynoso et al., 2015). In this context, informal micro-businesses play a key role in the provision of services addressing the need for survival and face poverty limitations. Given the nature, characteristics and dynamics of informal service micro-businesses, the co-creation of services relies on the interactions of three main actors of the organization: owners, employees and customers (Reynoso & Cabrera, 2019).

Such interactions create different strategic issues, namely, external, internal, delivery and core issues. External issues result from the interaction between the customer and the owner, focusing on how BoP services are created and positioned to target their market segments. Internal issues arise when the service concept is translated into operational strategies and is the result of the interaction, mainly, between the employee and the owner. Delivery issues emerge from the interaction among customers, owners and employees occurring when operating strategies are executed. Finally, the interaction among actors derives on core issues, which are continuously shaping and innovating the service concept of the BoP organization and having a profound impact on the wellbeing of individuals and communities.

This paper aims to better understand the co-creation of services at the BoP by exploring the business dynamics and the strategic issues resulting from the interactions among owners, employees and customers of informal service micro businesses.

This paper derives from the study presented in Reynoso & Cabrera (2019) reporting the findings of an empirical research conducted in 327 informal service micro-businesses in Mexico.

A conceptual model explaining the strategic issues emerging from the business dynamics among the owner, the employee and the customer of informal micro-businesses during the co-creation of services at the BoP.

## References

Arnold, D. G., & Valentin, A. (2013), "Corporate social responsibility at the base of the pyramid", *Journal of Business Research*, Vol. 66 No. 10, pp. 1904-1914.

Fisk, R., Anderson, L., Bowen, D., Gruber, T., Ostrom, A., Patrício, L., Reynoso, J. and Sebastiani, R. (2016), "Billions of impoverished people deserve to be better served: A call to action for the service research community", *Journal of Service Management*, Vol. 27 No. 1, pp. 43-55.

Gebauer, H. & Reynoso, J. (2013), "An agenda for service research at the base of the pyramid", *Journal of Service Management*, Vol. 24 No. 5, pp. 482-502.

Reynoso, J., & Cabrera, K. (2019), "Managing informal service organizations at the base of the pyramid (BoP)", *Journal of Services Marketing*, Vol. 33 No. 1, pp. 112-124.

Reynoso, J., Valdés, A., & Cabrera, K. (2015), "Breaking new ground: base-of-pyramid service research", *The Service Industries Journal*, Vol. 35 No. 13, pp. 695-709.

## Market Services Innovations Networks (MSINs): Enriching the Network Lineage in Innovation Studies

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Most of the literature on innovation networks is focused on technological innovation developed by manufacturing actors collaborating with each other and/or with public actors (universities, public research organizations). These traditional innovation networks (TINs) are private-private collaborations (e.g. technological alliances, joint ventures between competitors...) or public-private collaborations which the canonical form is the triple helix (Etzkovitz and Leydesdorff, 2000). Their analysis is therefore characterized by a double industrialist and technologist bias.

In economies where services represent the bulk of wealth and jobs, it may be paradoxical to observe that market services only play a limited role in innovation networks. This paradox is all the more striking as far as the services theory has constantly been emphasizing interaction, co-production and collaboration (constitutive elements of networks) as intrinsic technical characteristics of service activities, which distinguish them from goods. This insufficient consideration of innovation networks in services is also out of step with the undeniable rise, in the literature, of the question of innovation in services.

The purpose of this communication is to help reduce the industrialist and technologist biases that characterize the notion of innovation network in the literature. It aims to report on the existence and the rise of innovation networks focused on market services and service innovation, networks that we propose to call Market Services Innovation Networks (MSINs).

To identify MSINs and answer these questions, we rely on a systematic review of the literature devoted to multi-agent collaborative innovation in the field of market services. Our identification and mapping work uses the PRISMA method (Preferred Reporting Items for Systematic Reviews and Meta Analyzes] (cf. Mohrer et al., 2009) and mobilizes several research strategies making it possible to understand directly or indirectly the concept of network. Our survey is based Scopus and Web of Science databases and the main journals specialized in services, over the period 1990-2019.

Beyond the identification of MSINs, we expect this work to shed light on our knowledge of the following points: the structure/topology of MSINs (main players, service sectors concerned), the types of innovation that are targeted by the network, the mode of formation of MSINs (drivers, barriers), their mode of functioning, the evaluation of their performance.

### References

Etzkovitz, H., and L. Leydesdorff. 2000. "The dynamics of innovation from national systems and 'Mode 2' to a triple helix of university-industry-government relations". *Research Policy*, 29 (2): 109-123.  
Mohrer, J., Liberati, A., Tetzlaff, J. and D.G. Altman. 2009. "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA statement", *Annals of Internal Medicine*, 151 (4): 264-269.

## Characteristics of cities and social entrepreneurship

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Entrepreneurship nurtures a virtuous circle with cities: on one hand, it fosters cities' employment (Audretsch et al., 2015), while on the other hand large urban areas generate externalities and opportunities for entrepreneurial activities (Bosma and Sternberg, 2014). It is thus not surprising that complex economic activities tend to concentrate themselves in large cities (Balland et al., 2020). Drivers of this virtuous circle are knowledge and resource spillovers, which can arise from either specialization or diversity – that is within-sector or cross-sectors externalities (Glaeser et al., 1992).

Our objective in this paper is to assess if these externalities also favor social entrepreneurship, which we define as the set-up of a company whose primary objective is to address social needs.

We merge an exhaustive dataset of social companies in France with socio-economic variables covering more than 34,000 cities across the country.

This study will be useful for either confirming or putting into perspective the strand of literature that postulates fundamental differences between social and other forms of entrepreneurship (Moulaert and Mac Callum, 2019; Mulgan, 2006). Furthermore, significant externalities as explanatory variable for the emergence of social companies would suggest that, counter-intuitively, these firms are more likely to be created in favored economic areas instead than in the poorest places.

### References

Audretsch D.B., Belitski M., Desai S. (2015), "Entrepreneurship and Economic Development in Cities", *Annals of Regional Science*, vol. 55, pp. 33-60.

Balland P.A., Jara-Figueroa C., Petralia S.G., Steijn M.P.A., Rigby D.L., Hidalgo C.A. (2020), "Complex Economic Activities Concentrate in Large Cities", *Nature Human Behaviour*.  
<https://doi.org/10.1038/s41562-019-0803-3>

Bosma N., Sternberg R. (2014), "Entrepreneurship as an Urban Event? Empirical Evidence from European Cities", *Regional Studies*, vol. 48, pp. 1016-1033.

Glaeser E.L., Kallal H.D., Scheinkman J.A., Shleifer A. (1992), "Growth in Cities", *Journal of Political Economy*, vol. 100, pp. 1126-1152.

Moulaert F., D. MacCallum (2019), *Advanced Introduction to Social Innovation*, Edward Elgar.

Mulgan G. (2006), "The process of social innovation", *Innovations: technology, governance, globalization*, vol. 1, pp. 145-162.

# Track 10: Practitioners Policy actions and cases for public sector transformation (PRACTICE)

## Student-driven innovation- a driver for professional learning?

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In a time of marketing models permeating the education system, there is growing attention to innovation in Higher education (HE) in order to meet the rapid changes in society as well as the massification of students. The uncertainty of the future puts pressure on HE to be innovative and work-ready and therefore, a focus on the impact of work-based learning, practice, and student engagement.

Students must be able to recognise the importance of new competencies and knowledge in order to manage society's technological, economic, and social changes successfully in an uncontrollable and unpredictable society. However, the role of students and their experiences in such processes has received little attention.

The increased focus on innovation in HE includes an interest in students serving as co-creators in improving existing services. In HE, there is a growing focus on what knowledge, talents, and skills students need to live and work fully and how to enable students to discover and construct knowledge for themselves, including a growing awareness of the impact of work-based learning and student engagement.

This proposal is grounded in a call for more research on the concepts of student-driven innovations and students as co-designers and co-producers in their learning processes as well as the growing demand for HE to be innovative and work-ready.

Through individual and group interviews and observations, this phenomenological study investigates two student-driven innovations in architectural education, which provide the background for discussion on the potential of professional development through innovative work-based learning. The study applies an abductive approach to the empirical material, alternating between theory and empirical information when delving into the investigation.

Preliminary findings show that involving students in co-designing and creating their practices supports the development of professional knowledge and skills. The students also show an appreciation for the ability to explore and experiment with their professional role in close relation to reality that seems to diminish their anxiety for the profession.

Further, can it be questioned if HE is stuck in an instructional paradigm due to the demand for measurements and evaluation of students, which can slow down innovative thinking. The assumption above reinforces the value for students to co-create WBL in authentic settings, beyond disciplinary structures influenced by control measures, which allows them to learn more independently and experience more of their professional identity.

## **NEXUS24 «Trousers» or the double innovation funnel model at Universitat Politècnica de Catalunya**

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Sustainability efforts in universities have generally focused on curriculum, research, operations or outreach. As many other universities, it has also been the case at Universitat Politècnica de Catalunya-BarcelonaTech (UPC) (Ferrer-Balas, 2004; Ferrer-Balas et al., 2008, 2010). In 2011, the economic crisis brought drastic budget reductions which contributed to dismantle some interdisciplinary institutional structures and initiatives, which revealed not resilient enough. These economic cuts were, though, at the root of an energy efficiency Plan carried out successfully between years 2011 and 2014. Without any available budget, the main success factors were (i) urgency and focus on a specific issue (energy), (ii) transparency and access to data and (iii) collaborative work among administrative staff. After this successful experience, efforts were put to build a new operative system to manage the university on a collaborative mode, by creating an internal program called Nexus24, which has the purpose of “making collaborative work normal by 2024” thus overcoming organizational fragmentation and enhancing collaborative communities across UPC.

A crisis generally stimulates two types of opposed responses: on one hand, fear related to competition, fragmentation, control through strong hierarchy, etc.; on the other, optimism connected with new opportunities based on collaboration, flexibility, openness, and sharing of power and resources, etc. The Nexus24 program aims to be an example of the “second type” of responses to crisis suggested above (collaborative, not competitive) and aims to change the working culture at the university in ten years. The main originality of this approach is that instead of searching sustainability as an explicit goal, we expect to obtain it as a consequence, by enabling deep changes in the “way we work” and modifying the working relationships in the organization. This program is conceptually rooted on concepts taken from several frameworks like communities of practice (Wenger, McDermott, & Snyder, 2002), dual organizations (Jhon P. Kotter, 2014; John.P Kotter, 2012), living-systems (Capra, 2002), collaborative networking (Figueroa, 2016), design thinking (Brown, 2009), teal organizational models (Laloux, 2014) and , the U theory (O. C. Scharmer, 2016), among other.

This paper presents two main ideas: (1) the double funnel model which has proven fruitful to explain and manage the collaborative system; And (2) some of the results of the five first years of development of this program, which aims to create a collaborative culture among the management staff of UPC. Through this research, it is possible to have a first representation and analysis of the pattern and main parameters of the complexity of the social network created after these years of experience. The results shown are coherent with the actions of the program during the 9 semesters that have been studied and support the idea that it is possible to promote and manage the collaboration capacity of an organization.

Nexus24 was established in 2014 with the purpose of “making collaborative work normal by 2024” thus overcoming organizational fragmentation and enhancing collaborative

communities across UPC. The idea was raised from the bottom-up and embraced and fostered from the UPC's management side. It has been running for 10 semesters (from January 2015 to present) and promoters expect to extend it until 2024 to achieve this cultural change towards a collaborative and resilient organization. A key cornerstone of the program has been a recurrent call for projects (*Crida Nexus24*) which aimed at promoting collaborative proposals from the UPC staff on any topic which could improve the university. Internally, the Nexus24 work is not organized throughout a classic organigram: instead, people self-organize around a project.

An objective of Nexus24 is to integrate the collaborative practice in the university work culture and demonstrate the value of collaborative work to the community and the management. From this point of view is a learning by doing environment and its structure changes and develops around this concept. A typical year in Nexus24 develops in the following way:

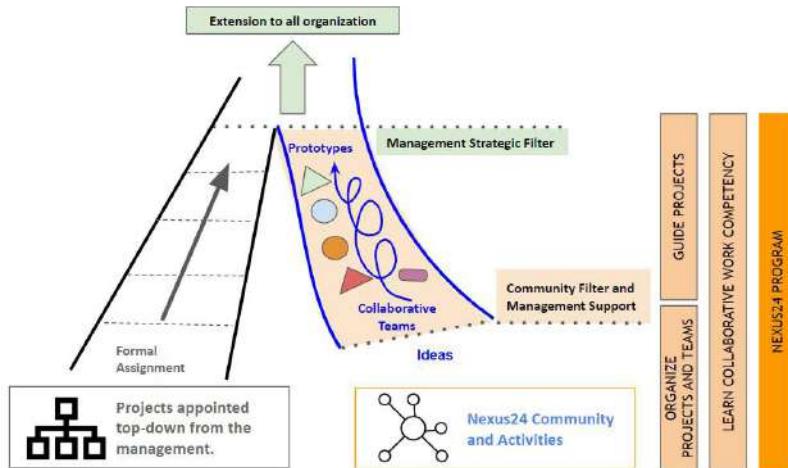
- **Exploring and educational phase** (September to December). When the: harvesting of ideas, organizing and training the teams on how to manage collaborative projects take place.
- **Executing phase** (January to June). When teams work on their project through collaborative tool and practices, with the help of a facilitator who helps the project development and continually teaches and guides the team on working in a collaborative way.

This structure is in use from the beginning of the program (2014). Its stability helps the development of the projects and the management of the teams. In total, 42 projects have been presented, and 24 of them have been selected from the community and executed.

After the first 5 years of the program it is possible to classify and distinguish three kinds of processes that bring value to the program:

- **Organizational (*Articular*)**: all activities – be these of few hours or one day – which support interaction between people that in the hierarchical structure of the university never had the opportunity to meet. Such as the activities or platform to develop ideas for projects.
- **Learning (*Aprender*)**: all activities, of 2 hours or more, where collaborative competencies or practices are taught, but not in the format of project with medium or long term. This includes indirect learning like user experience journeys.
- **Guidance (*Acompañar*)**: it refers to all the activities related to the execution of collaborative projects which last between 4 and 6 months.

The three processes are in the double funnel innovation model of the Nexus 24 program (Figure 1). It is a double funnel because the traditional innovation funnel of the university – where projects are appointed top-down from the management with a well-established planning from the beginning to the end – is flanked by the collaborative funnel. In this funnel the whole community has a key role in selecting and prioritizing projects, the project management is iterative and the team working on it is personally motivated. Teams are composed by the same people who propose the project and people who express the willingness to participate. Both funnels finally compete for the same resources of the organization on the basis of the project result and not on how they were initially appointed.



**Figure 1.** The double funnel innovation model of the Nexus 24 program. The collaborative funnel is highlight in orange. On the right, processes that bring value to the program related to the innovation model.

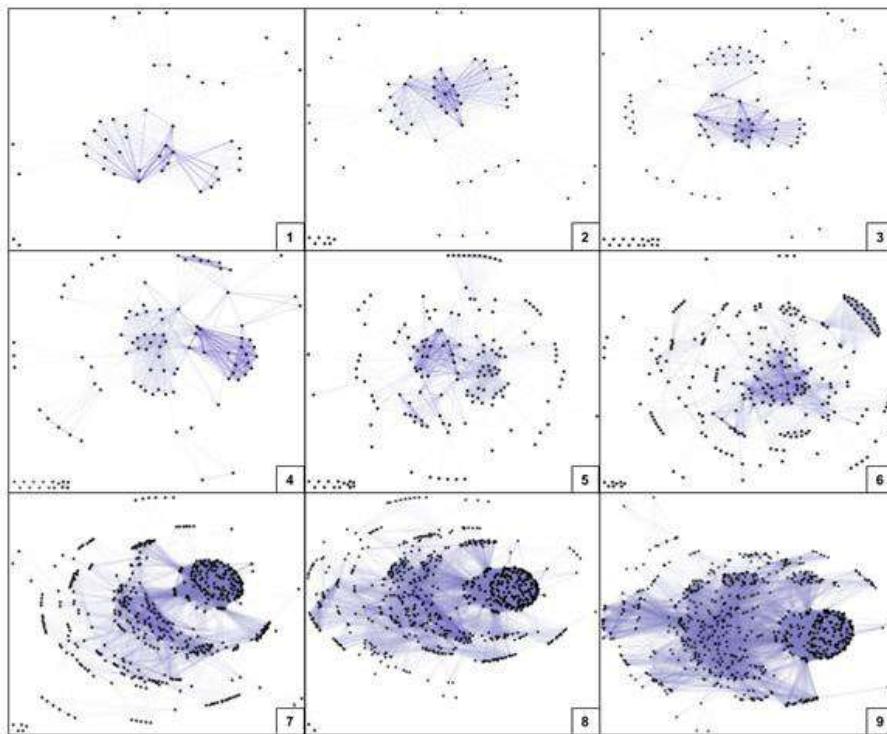
From 2015 on, several instruments have been prototyped, including ICT platforms and tools, to foster collaboration. Some of them have been more successful than others. In any case, through these tools UPC community has been collaborating – and (also) learning how to do it – during these five years. Each person in the community can, for instance, prepare and promote a proposal between 3 or more people to improve the organization, participate in a training session on agile methodology, get involved in an existing project, or just join working sessions to generate confidence between the people who work on the same unit and that are disconnected because of the hierarchy silos.

To study the evolution of the interaction network, we add new data at each semester, including at each time step the new projects and participants to the previous one. We have generated 9 graphs, one for each semester. In the description of the network we consider the number nodes, links and connected components. A component is “a subset of vertices of a network such that there exists at least one path from each member of that subset to each other member” (Newman, 2010).

In the Nexus24 collaborative communities, interaction is the base of collaboration. These interactions – although are induced by the program – are spontaneous and follow different rules as function of the participants. We use complex network analysis to visualize and study the evolution of the patterns of interactions during the first 9 semesters of the program (Figure 2).

Note that the quality of the collaboration is not represented in that graph. It must be said that simultaneously to the work presented here, there is an ongoing research process to evaluate the quality of the interactions, considered a fundamental factor in the success of any socially network-based enterprise.

We observe in Figure 2 how the participation grows semester by semester, both in number of vertices (participants) and edges (collaborations): the first semester network has 43 vertices and 336 edges, while the last semester we have 776 vertices and 41.345 edges.



**Figure 2. Networks of collaboration of Nexus24 by semester from 1st semester of 2015 (1) to the 9th semester corresponding to the first semester of 2019 (9). Nodes are people who have participated in a collaborative activity of the program. In the bottom right angle of each graph we can see the small connected component.**

Since 2015, UPC has been implementing Nexus24, an innovative program on collaborative communities and networks to strengthen the collaboration capacity of its staff, which is based on a “learning by doing” approach. Thus, coordinators of the program expected to increase the interactions among the participants in this network.

This paper presents the own innovation model that is followed and some results of a research that aims at finding methodologies to observe the growth of the social capital in an organization, linked to a specific institutional program on collaborative communities. After 5 years of experience, we have been able to develop a method that helps visualizing and analyzing the evolution of the network.

As a closing remark and in order to understand the value of this work, authors want to situate it in a broader context. Disciplinary fragmentation has brought enormous amounts of very deep knowledge, but today the challenge of sustainability is probably not of quantity of knowledge. Otto Scharmer, professor at MIT and author of the Theory U recently claimed that “the difficulties in implementing the Paris Agreement and the SDGs worldwide are not caused by a knowledge gap. The problem is lack of political will and a knowing-doing gap: a disconnect between our collective

consciousness and our collective action.” (O. Scharmer, 2019). It is therefore time to break silos and practice trans-disciplinarity beyond the rhetoric, recognize from the mutually the value of different types of knowledge and foster collaborative communities. As individuals, we are not generally trained for that, and still evolve in systems that optimize outputs guided by other principles.

While this first 5 years of experience at UPC have been centered on the administrative staff, the Nexus24 program can be amplified to the UPC academic community, with the broader purpose supporting the change from a very disciplinary approach to a progressively more inter and transdisciplinary perspective.

## References

Brown, Ti. (2009). *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation*. Harper Business.

Capra, F. (2002). *The Hidden Connections*. (HarperCollins, Ed.). London.

Csardi, G., & Nepusz, T. (2006). The igraph software package for complex network research. *InterJournal*, (Complex Systems), 1695. Retrieved from <http://igraph.org>

Ferrer-Balas, D. (2004). Global environmental planning at the Technical University of Catalonia Global environmental planning at the Technical University of Catalonia. *International Journal of Sustainability in Higher Education*, 5 No 1, 48–62. <https://doi.org/10.1108/14676370410512580>

Ferrer-Balas, D., Adachi, J., Banas, S., Davidson, C. I., Hoshikoshi, A., Mishra, A., ... Ostwald, M. (2008). An international comparative analysis of sustainability transformation across seven universities. *International Journal of Sustainability in Higher Education*, 9(3), 295–316.

Ferrer-Balas, D., Lozano, R., Huisingsh, D., Buckland, H., Ysern, P., & Zilahy, G. (2010). Going beyond the rhetoric: system-wide changes in universities for sustainable societies. *Journal of Cleaner Production*, 18, 607–610.

Figueroa, C. (2016). *Libro tejeRedes - Trabajo en Red y Sistemas de Articulación Colaborativos* (I Edition). Madrid - Santiago de Chile.

Kotter, Jhon P. (2014). *Accelerate. Bulding strategic agility for a faster-moving world*. Harvard Business Review Press, Boston, Massachussets.

Kotter, John.P. (2012). Accelerate ! *Harvard Business Review*, (November), 1–17.

Laloux, F. (2014). *Reinventing organizations. A guide to creating organizations inspired by the next stage of human consciousness*. (First Edit). NELSON PARKER, 54 Serbia Street, Brussels 1190, Belgium. Retrieved from [www.reinventingorganizations.com](http://www.reinventingorganizations.com)

Newman, M. E. J. (2010). *Networks: An Introduction*. Oxford University Press.

Pflaeging, N. (2014). *Organize for complexity*. BetaCodex Publishing, New York. <https://doi.org/10.1177/1039856215593397>

RStudio Team. (2015). RStudio: Integrated Development for R. Boston, MA: RStudio, Inc. Retrieved from <http://www.rstudio.com/>

Scharmer, O. (2019). Vertical Literacy: Reimagining the 21st-Century University. Retrieved from <https://medium.com/presencing-institute-blog/vertical-literacy-12-principles-for-reinventing-the-21st-century-university-39c2948192ee>

Scharmer, O. C. (2016). *Theory U: Leading from the Future as it emerges* (Second Edi). Berret-Koehler Publishers, Inc.

Scharmer, O., & Kaufer, K. (2014). Leading from the Emerging Future. Retrieved from [http://go.galegroup.com/ps/i.do?id=GALE%7CA355778097&v=2.1&u=viva\\_vpi&it=r&p=AONE&sw=w](http://go.galegroup.com/ps/i.do?id=GALE%7CA355778097&v=2.1&u=viva_vpi&it=r&p=AONE&sw=w)

Smith, M., Ceni, A., Milic-Frayling, N. Shneiderman, B., Mendes Rodrigues, E. Leskovec, J., & Dunne, C. (2010). NodeXL: a free and open network overview, discovery and exploration add-in for Excel 2007/2010/2013/2016. Retrieved from <http://nodexl.codeplex.com/>

Universitat Politècnica de Catalunya BarcelonaTech. (2019). Dades estadístiques i de gestió. Retrieved from <https://gpaq.upc.edu/llades/default.asp>

Wenger, E., McDermott, R., & Snyder, W. (2002). *Cultivating communities of practice: a guide to managing knowledge*. *Harvard Business School Press*.

## **Laboratory 717 - A platform to promote participation and democratic innovation in Andalusia**

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The “Laboratory 717 - Laboratory of participation and democratic innovation in Andalusia” (<http://laboratorio717.org>) is an open, collaborative platform to provide resources and create a network of people involved in citizen participation in the region. The platform allows users to create and consult participatory processes, methodologies, agents, spaces, news, events and training resources. This initiative seeks to implement the regional government of Andalusia’s Citizen Participation law (Nº 7/2017, December 27). Andalusia is Spain’s most populous region with an estimated 8.5 million inhabitants.

The project arose as an initiative of the University of Granada’s Medialab. It enjoys the financial and political support of the Department of Equality, Social policies and Work/life balance policies of the regional government (Junta de Andalucía). Currently it is supported by both the University of Granada and the Junta de Andalucía. This project is a significant example of inter-institutional collaboration to develop an innovation laboratory in the field of participation.

Following its public launch in September 2019, the project initiated a series of dissemination activities and face-to-face workshops in different parts of the region. It is now in the process of consolidating its situation have signed agreements to safeguard its sustainability.

## **The Effect of Sustainability in Older Talent's Career Development (in the case of Lithuanian Public Service Providers)**

Birutė Vilčiauskaitė

*Kaunas University of Technology*

One of the most important sources of competitive advantage in today's conditions of constant change and labor shortage is having sufficient number skilled employees – talents. Population is aging. The studies of career development opportunities for older workers and especially older talents are lacking. Moreover, in order to develop their further career, the element of sustainability becomes important in older talent career development. In order to discuss later life career and how it is being affected by the component of sustainability, it is important first to have a short overview of the main career theories, the concept of sustainability, as well as the impact of modern career theories on older talent's career development. These trends will better reveal the importance of sustainability in later life career development.

Objectives:

1. Conceptualize talent, older talent, and sustainability.
2. Disclose the phenomena of sustainability in the main career theories by analyzing two cases (public services providers in Lithuania).

This paper employs a qualitative research structured around a case study approach. The main argument is that qualitative research allows to explain and understand phenomena, as well as to understand and analyze the perceptions and opinions of the interviewees by capturing both cognitive and emotional aspects. In order to have a broader view of sustainability phenomena, two single case studies were used. The research instrument – interview guide was based on key themes identified from the literature. Interviews were conducted with top managers (CEOs) and HR managers as well as employees (older talents). In all cases, the participants themselves chose the mode of the interview (personal or over the telephone) and the location.

The paper will shed light on the best practice among public services providers and set out starkly the implications of reforms in the future. It will contribute to the existing research by summarizing the contributions of various academics and by adding sufficient input to understanding the phenomena of sustainability in later life career, as well as will assess what preliminary lessons can be learnt from the experience of particular cases, and explore possible ways that managers could use to better ensure the aspect of sustainability in various public service providers. Sustainability is only achievable through a new understanding between the state, top management and individuals which creates the conditions for the maintenance of adequate living and working standards before retirement.

## **Urban Risks and Challenges – Assessments of Transformation Paths and the Contribution of Social Innovations for a Resilient, Sustainable City**

Wiltrud Terlau

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Resilient and sustainable development ultimately takes place locally at the level of cities and municipalities and must be implemented there. If the strong global urbanisation trend is also taken into account, it is precisely the cities and municipalities that have to face the major social risks and challenges, such as food, housing, energy and mobility, as well as the overriding risks, such as climate change, and, most recently, the COVID-19 pandemic.

Hereby assessments are an important tool to monitor and lead the transformation paths towards resilient and sustainable cities (UN Sustainable Development Goal, SDG 11). They allow also a transferability to other urban regions. Additionally beside technological development, especially social innovations (initiatives, grassroots innovations) can promote this transformation process. Top-down and bottom-up approaches be combined that also involve the urban society (citizens, companies, organisations). Various best-practices and case studies are presented.

Evaluation of literature and case studies / best-practices.

Cities and municipalities are facing major social challenges that require innovative and complex solutions. Assessment systems can play an important role towards a resilient and sustainable city. And not only technological innovations are essential. Social innovations can also decisively support this transformation process. Top-down and bottom-up approaches be combined that also involve the urban society (citizens, companies, organisations). In addition to the traditional cooperation within and between local authorities and organisations as well as in regional, national and international alliances, the participation of citizens, companies and other stakeholders will be of particular importance.

## The merger of municipalities the most priority innovation in the administrations of Spain

Maximo Fraile Escrich

*Club de Innovadores Publicos de España*

The merger of municipalities has been an innovation followed in many European countries to improve efficiency in the provision of public services to citizens and in the expenditure of always scarce economic resources through an economy of scale

The objectives are to show the inefficiency of maintaining independent municipal entities of only tens, hundreds, and even a few thousand inhabitants, compared to entities with more than 20,000 inhabitants.

It will consist of comparing the data on personnel expenses per inhabitant in municipalities of different sizes obtained from the website that publishes the budgets of the Spanish municipalities and the services provided in both cases.

We hope to show that by the mere fact of existing as an independent entity, each of the more than 8000 municipalities by the mere fact of existing, must comply with a whole catalog of legality functions (budget, inventory of goods, register) that little They are provide nothing as a service to citizens and for whom you need to have a few hours of secretary in which little economy of scale is produced, making them totally inefficient, as other European countries have already shown and the fact that all kinds of productive sectors have applied economies of scale for better management and services.

Personnel expenses of the 40 municipalities that spend the least of the 130 that declared data for the 174 municipalities of La Rioja:

Municipality	Inhabitants grouping	expenses / hab	total expenses
From 90 to 130 municipalities that spend the least on personnel	2342	247,00 €	<b>578.752 €</b>

Its staff is limited to a few secretary hours a week to comply with the bureaucratic obligations that, due to the fact of existing as an independent entity, every city council must fulfill.

Let's focus on Cervera for its almost exclusive peculiarity of having districts:  
Personal expenses.

Cervera del Río Alhama (Rioja, La)	2.298	269,89 €	<b>620.200 €</b>
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Squad early 2020:  
1 Secretary- controller

1 Treasurer- Accountant  
2 administrative  
1 job promotion agent  
1 person multiple services  
4 people: electricity, plumbing, masonry and gardening  
3 multi-service operators  
1 cleaning worker  
2 responsible and technical in early childhood education  
2 in library  
2 sports coach and youth  
1 adult school teacher  
Total 21 people

## **From an Open Government to an Open State: Cross-Sector Collaboration and Innovation to Improve Government Services at the Municipal Level in Costa Rica?**

Rodrigo Iriani

*Trust for the Americas. Organization of American States*

In 2014, Costa Rica established the National Open Government Policy and almost immediately, in 2015, they signed an agreement for an Open State. The Trust for the Americas, together with the Costa Rican government, focused its efforts on providing the necessary mechanisms to local governments to achieve this goal.

The project's objectives consisted in the promotion of Open Data policies at the municipal level and the use of best practices to guarantee public access to information, providing real opportunities for municipal government officials and civil society leaders to collaborate with subnational governments, and enforce the creation of social initiatives to improve government services.

Working with local governments with the potential to strengthen the government's accountability and citizen participation, selected based on the assessment of national reports and the political will of mayors in these cantons.

The methodology designed encouraged a mindset transformation and the sustainability of the incipient process of local Open Government. These actions included:

- Training, awareness and capacity building in Open Government and Open Data.
- Co-creation of public policies.
- Citizen Innovation Centers: Citizen Participation and alliances with the community.
- Provide seed funding for 12 innovative local initiatives.

Based on these results, in 2020 is created the “Open Munis Route” project, which focuses on boosting local entrepreneurship with public value and the application of civic technology for five selected cantones (municipalities).

For the 2019 project, 87.5% of the population surveyed recognize an increase of information available to the public, 60% growth of data concerning the visibility of the municipality's daily work from 2017 to 2019. The municipality diversified its communication methodology using social media and web sites. 91% of the interviewees mentioned the change at the organizational level since the participation of the project.

Furthermore, the components of local coalitions and citizen innovations centers created a dynamic with transformative potential to foster local problem-solutions, with the possibility of replication throughout the country.

In 2021, it is expected that at least one project of social entrepreneurship surpasses the incubation stage and at least one pilot project about civic technology will be launched in every canton.

## Learning from South America's New Innovator—Paraguay

Isabelle Foster

*Fulbright Research Scholar to Paraguay (National Innovation Strategy, Presidential Delivery Unit)*

A small team of policymakers in Paraguay—a landlocked nation at the heart of South America—is reshaping their country with innovation. This presentation is a case study of Paraguay's *National Innovation Strategy* and how the team within the Presidential Delivery Unit is using innovation and co-creation to address national challenges.

In August 2019, President Mario Benítez passed National Decree 2314, calling for a yearlong “National Innovation Strategy.” This strategy was the first nation-wide effort specifically for innovation and has two general mandates. The first was to identify five major national challenges to be addressed through special initiatives, and the second was to design a new innovation unit for the national government. To achieve both objectives, the team integrated extensive community input into the development process.

To make the strategy ‘bottoms-up,’ the innovation team spoke with citizens across the country to understand their biggest challenges. Numerous workshops—both in major cities and in the interior—were held with local leaders to involve citizens in the decision-making process and to get a grassroots perspective on daily challenges. This input, along with the issues arising from the COVID-19 pandemic, was aggregated to identify the five major challenges.

Paraguay's strategy focuses on a broad definition of innovation—including public sector, private sector, and social innovation—to solve societal problems from a holistic perspective.

An interdisciplinary ‘Driving Team’ has been a key component of the strategy and is ultimately responsible for voting on the final governance structure for the new innovation unit and for selecting the challenges. This team is comprised of seven ministers and eighteen individuals, who were selected through an open-application process. These individuals represent the civil society, private sector, and academic & scientific community, marking the first time all of these sectors have come together to discuss national-level challenges. This focus on co-creation is important step for Paraguay, facilitating a transition to more a collaborative and community lead policy-making system. The new Innovation Unit intends to foster partnerships between these stakeholders and coordinate the deployment of national resources to facilitate projects and increase impact. During the pandemic, the team also developed a national platform—Wendá—to map citizen innovations and initiatives during this time of crisis.

This presentation provides an overview of the National Innovation Strategy and will highlight how the team has been able to get the government and nation to embrace participatory innovation, community engagement, and fundamental co-creation each step of the way.

(Word Count: 399)

## Public Sector Reform in Brazil: changing human capital policies

Alex Cavalcante Alves

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*Public Administration Professor at Brasília Institute of Public Law (IDP)*

*National Coordinator of Brazilian Movement for Efficient Public Administration (MGPE)*

Since 2016, Brazil is facing several changes on how the human capital matter is treated, specially in the Public Sector. With the new Federal Government composition that started in 2019, its leitmotiv is to provide better public services with less costs, reducing the workforce by stopping admissions of statutory employees at the public service.

This paper describes three fundamental pillars to face this challenge: improving 3rd party workforce, run a digital transformation and perform a results-oriented culture, showing how a Brazilian Public Agency is successfully implementing it at the same time that deals with frequent normative changes of the Public Sector Reform, which implies in a volatile framework.

To reach the results, the paper is based in a literature review about Public Sector Reform in Brazil, comprehending bibliographic and legislative research for the historical review chapters, and empirical research for the Agency case study chapter.

The summary is composed by: 1. Introduction; 2. The need of transforming Public Sector; 3. Public Sector Reform in Brazil: from 1990s to the current days; 4. Public Sector Reform in Brazil: the human capital perspective; 5. Human capital perspective from the Reform: Brazilian Electricity Regulatory Agency policies for personnel; 6. Closing remarks; 7. Bibliographic references.

The paper shows the advances achieved in the organizational structure and personnel structure of the Brazilian Federal Public Service, from the 1990's Public Sector Reform till the present days, with focus on the institutional framework and human resources development, which can be extended to other developing countries.

The expected results are in the way that is possible to implement the new Public Sector Reform main values about personnel (3<sup>rd</sup> party workforce uplift, digital transformation and results-oriented culture), with measurable quality improvement to the “customers” of the public services, what, under cultural aspects, gives a strong sign for more efficient management in favor of public services users.

## How private foundations are leading public sector innovation in Brazil

Eloy Oliveira

*CEO at Republica.org*

Brazilians pay a lot of taxes. On average, 42% of Brazilians income is used for paying taxes.<sup>1</sup> That money goes to fund Brazilian Government. 28% of Brazilian GDP goes to Government's payroll (including active and retired civil servants)<sup>2</sup>. Brazil has over 12 million civil servants, from which 1.2 million are allocated in the Federal Government, notwithstanding, people are still not happy with the results achieved. According to a 2017 research, Brazilians are the 2nd people less satisfied with the quality of public service in the world.<sup>3</sup>

Governments are under severe fiscal crisis in Brazil, due to salary rises and plummeting commodity prices (that is especially true in state governments). In such scenario, innovating is key for survival; nonetheless, the Brazilian public sector has seen little innovation in the past decade. At least this was the truth until a recent wave of innovation started reaching the Government in Brazil, but this innovation is coming from the outside. It is actually coming from Foundations and NGOs.

How are these foundations actually leading public sector innovation in Brazil? Here are some examples: In 2018, a consortium of over 20 NGOs and Foundations created what has become the most important award for people working with Governments in Brazil: the Brazilian Public Spirit Award ("Prêmio Espírito Público")<sup>4</sup>. No other award in the country gathers such a large consortium, even including international partners like The Guardian (UK news outlet). And no other award has called so much press attention in so little time. The Public Spirit Award aims to address the trust and transparency issues by awarding the best public servants in the country and increasing trust across the public sector. The goal is to showcase some of the best public servants in the country, using national media channels to inform citizens and change their perception about the public sector.

Another interesting innovation involves professional selection process to key government positions all over Brazil. It all started when 4 Foundations (República.org, Lemann Foundation, BRAVA Foundation and Humanize Institute) decided to join forces to form what is called "The Alliance", in order to fund programs focused on Public Sector HR improvement. In 2019 The Alliance funded selection programs for 8 different Brazilian State Governments. They first established agreements with State Governments in order to start mapping out what were the most important technical positions within the governments; after that they hired high level selection companies that worked on selecting the best possible people for the positions mapped. Later on, Governors would receive a pool of the best résumés where they could pick up some people. The whole idea here was to assure the best possible ones would be on the most important positions. Some other good examples of public service innovation led by Foundations in Brazil are surveys (work environment assessment, government benchmarks, among others); organization of hackathons to build tools that would solve public issues (including seed money and mentorship for winning start-ups); organization of events to knowledge exchange between federal, state and local governments practitioners.

This is a case study based on recent innovations within Brazilian public service.

I expect to foster conversation and share lessons learned on how private foundations might foster innovation at the public sector.

## Data Analytics for Citizens and Member States

Francesco Mureddu<sup>1</sup>, David Osimo<sup>1</sup>, Vassilios Peristeras<sup>2</sup>

<sup>1</sup> Lisbon Council

<sup>2</sup> European Commission

The aim of paper is to present and discuss data strategies, policies and governance: specifically, initiatives in the public sector both at the strategic level, such as data strategies, data governances and data management plans; and at organisational level, aimed to create units or departments, and to elaborate new processes and roles. Specifically, the paper builds on the results of the European Commission study **Data Analytics for Member States and Citizens**, which provides policy Directorate Generals of the European Commission and Member States public administrations with a knowledge base and guidance on the adoption of public sector data strategies, policy modelling and simulation tools and methodologies, and data technologies fostering a data-centric public administration.

The study covers three domains in relation to data analytics in government:

- **Data strategies, policies and governance:** initiatives in the public sector both at the strategic level, such as data strategies, data governance, data management plans; and at organisational level, aimed to create units or departments, and to elaborate new processes and roles.
- **Policy modelling and simulation:** initiatives to improve policy analysis through new data sources, robust and reliable models to perform “what-if” scenarios, predictive analytics and hypothesis testing, and tools allowing policy makers to carry out scenario analysis through intuitive interfaces.
- **Data technologies:** new architectures, frameworks, tools and technologies to be used by public administrations to gather, store, manage, process, get insights and share data. This domain includes the study of how data are governed as well as data collaboratives, and in particular stresses the joint analysis of governance and technologies.

The project will carry out 15 case studies, 5 per task. The article will be based on summarizing the results of the project, in particular on the cross-analysis of the case studies by task.

## Designing the future governmental Business Service Portal of Austria with Entrepreneurs

Gerhard Embacher-Köhle<sup>1</sup>, Bernhard Lukas<sup>2</sup>

<sup>1</sup> Jutta Grabenhofer

<sup>2</sup> Austrian Federal Computing Centre

The presentation gives a demonstrative insight into the participation of citizens for the advancement of a comprehensive governmental digital service.

The Business Service Portal is the central platform of digital governmental services for Austrian Businesses. It is a one-stop-shop for all information and all digital transactions that need to be carried out when entrepreneurs interact with the Austrian government.

In the presented project users (entrepreneurs) were invited to help redesigning the portal in order to extend its services and increase its usability. The presentation shows how user centered design was put into action by using qualitative interviews, online surveys, user workshops and expert panels. The co-creation activities to develop the future Business Service Portal demonstrate the usage of creative methods within the Public Sector. The session will include an analysis of success factors and challenges in this particular participation process as well as a discussion of lessons learned for other use cases.

## Co-creating public value through an integrated healthcare system in Gipuzkoa

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<sup>1</sup> University of the Basque Country

<sup>2</sup> Provincial Government of Gipuzkoa

In 2016, the Provincial Government of Gipuzkoa (DFG) launched a challenging initiative, entitled Etorkizuna Eraikiz (Building the Future in Basque) in order to develop in the territory a more collaborative and open mode of governance based on deliberation and experimentation. The initiative aims at building the future of the territory, and as a consequence the policy making process is shared, through a jointly process of deliberation with private, public and social agents but also with the citizenry and through the design and implementation of experimental projects which if they are successful they will become in public policies. Having into account that ageing of the population represents a key challenge for western societies, providing quality services for this aged population, in which social and health services are integrated, represents, a key challenge. In this context, the Provincial Government of Gipuzkoa supported the Etxean project (at home in Basque) as a pilot aimed at setting up a system of integrated health care at home through the co-creation of a new portfolio of socio-health services.

The paper focuses on analysing the Etxean project and to what extent the collaborative way of co-design, co-production and co-evaluation of the project has resulted in better and more adequate services for elderly people, and thus, supporting the creation of public value.

Through the analysis of the Etxean Project as a case study, the main contribution of this paper is to unveil how public and private agents have been coordinated around the elderly and the Health System in Gipuzkoa, and what actions have been addressed.

Some of the preliminary results obtained from the experience lead us to conclude that firstly, some progress has been made regarding the implementation of a Model of Integrated Home Care Attention based on a collaborative and transversal portfolio of services; secondly, this model has an economic impact by promoting the creation of the health sector industry in the territory and finally, the model has contributed to the economic sustainability of the Basque Public Health System.

The paper presents the barriers and levers for the implementation of this new approach by both analyzing this local case study as well as showing some preliminary results of this challenging project. Thus, with this paper we aim at providing a valuable insight into the role that the collaborative approach plays regarding innovation in the public sector and public services delivery.

## Framing Value Based Healthcare in Practice

Mark Spurrell

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For healthcare, there is increasing emphasis on how value is generated within individual cases. However, frameworks for capturing and structuring value generation for participants (patients, carers, or professionals) are not available for complex, case level practice. The Complex Case and Recovery Management Framework (The CCaRM), as introduced in this conceptual paper, aims to address that gap.

The CCaRM was developed to work within case management systems. In principle, individual cases can be recognised as service entities, drawing on unique stakeholder networks. Case management progresses from case review to case review, which are structured, collaborative events. Shaped by some core themes, what matters within complex healthcare is discovered and shaped together by all participants, particularly in those reviews. Thus, whilst stakeholders create value for themselves, they may also perform a collaborative valuation of whether progress is being made or not. Such co-valuations may adopt different styles, and may be as much qualitative appreciation as categorical judgement of progress. Through successive co-valuations a picture of collaborative, case-based value can emerge. In this context, the objective is to introduce The CCaRM as a framework for implementing such value based practice.

The CCaRM has been a collaborative development between service developers, patients, carers, clinicians and managers. It involves exploring with participants how value is being made within a framework of value sub-themes. These sub-themes emerged from the interplay between literature and case level value practice mapping within a Specialist Learning Disability Service. For each of these subthemes, value is realised by a shared reflection and judgement on where progress is being made, where it is not, and what fresh ideas might be available. Following a series of iterations and amendments in use, a pilot evaluation was conducted. The expectation was that The CCaRM would make sense, it would progress a shared understanding of the care project, and lead to fresh idea generation. Importantly, it would be seen as practical and sustainable.

The CCaRM is a practical, collaborative case level service platform, with a clear focus on individualised value generation. It has made an important contribution to the local service, and it can be adapted to other care settings. This is a novel contribution to value based healthcare practice. It addresses a critical gap in support for patients and practitioners. The CCaRM approach has potential for case level driven service transformation, and offers a useful foundation for further research.

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<sup>1</sup> <https://especiais.g1.globo.com/economia/2015/quanto-pagamos-de-impostos/>

<sup>2</sup> <https://oglobo.globo.com/economia/arminio-brasil-gasta-28-do-pib-com-salarios-de-servidores-ativos-aposentadorias-23447002?versao=amp>

<sup>3</sup> <https://www.ipsos.com/pt-br/global-trends-brasil-e-o-segundo-pais-mais-insatisfeito-com-servico-publico>

<sup>4</sup> [www.premioespiritopublico.org.br](http://www.premioespiritopublico.org.br)

## Design thinking, local public policy and the “new normal”

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What is – if there is any – the “new normal” for participatory innovation and policy design after the Covid-19 crisis? Despite being still or partly in the midst of the pandemic, humankind already started to realize the breadth and extent of its socio-economic impacts. Loosely speaking, we can point at a number of “winners”, such as:

- Health, safety & well-being related concerns
- Virtual/digital interaction amongst people
- Informed opinion & learning of facts
- Medium & large sized organisations comparatively more able to survive the lockdown effects
- Law & order, apparently more correlated to successful containment than the opposite approach and a number of “losers”, such as:
- Careless/selfish behaviour (nobody is safe, we can only make it together)
- Physical proximity & safe mobility of people
- Fake news & disinformation
- Small & micro undertakings (including family businesses)
- Deregulation & free market

About one year ago, the Designscapes consortium delivered a Green Paper on Design enabled Innovation in Cities, building upon the plethora of local impacts that the project has had so far through various channels: the cascade funding budget of €1.5 million (see below<sup>1</sup>), the pilot activities at four partner sites from BG, EL, IT, PT and particularly the successful candidature of the City of Valencia as World Design Capital 2022, which was also based on the Designscapes concept as crystallized in an Open Access book published with Springer in 2018.

The key arguments used in the Pre-Covid19 phase to recommend a more strategic use of design thinking and co-creation with end users within public and private sector organisations are now being revised with a special eye on the Post-Covid19 “new normal” – whatever this will mean.

- For Established Business (esp. large/medium sized) the key benefit of co-design would probably shift away from increasing the scalability chances of innovative products/services towards making the human as important as the technology and business dimensions.
- For Young Startups (esp. small/micro companies) design enabled innovation should be reconsidered from supporting a third way between philanthropy and social enterprising to being a survival strategy in an uncertain world and esp. local marketplaces.

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<sup>1</sup> The Designscapes cascade funding mechanism, across three consecutive rounds of a call for pilot projects, has distributed €1.5 million to 101 EU public or private sector applicants (including natural persons) for the realisation of feasibility studies, the development of prototypes and the proof of scalability of Design enabled Innovation in cities.

- For Cities and local government, participation of citizens in public policy would transform itself from a nice complement to inclusive strategies to an essential element of urban renovation and “rethinking” approaches.
- For States and Regions the role of Design enabled Innovation would probably change from helping to bridge the “valley of death” in a parsimonious way to avoiding mistakes and undesired effects in budget spending.
- And final for Supranational entities, including the European Commission, design thinking and inclusiveness should be reframed from a conceptual guideline to sustainable and socially responsible action to a sort of insurance policy against the risk of “new Leviathan States” proliferation.

## Humanising the system – Using the knowledge of lived experience to co-create public services

Hayley Trowbridge<sup>1</sup>, Michael Willoughby<sup>2</sup>

<sup>1</sup> *People's Voice Media*

<sup>2</sup> *Universitat Politècnica de València*

This paper debunks certain assumptions around personalisation and explores the dehumanisation of public services, proposing that storytelling provides a mechanism through which institutions can reconnect with citizens. Nowadays, what we know experientially to be true can be overruled by what can be measured or systematically represented. Therefore, this paper's objectives are to:

- Make the case for the value of experiential knowledge in public service creation, design, implementation and evaluation.
- Present a methodology through which lived experiences can be used as catalysts for change.
- Explore the ethical considerations when working with the knowledge of lived experience in co-creation processes.
- Underpinning – and fundamental to – this rationale, is the exploration of the power dynamics in the co-creation of public services.

Community Reporting is a movement committed to supporting people to transform their worlds from the ground up using stories of lived experience. Originating in 2002, Community Reporting has been developed across Europe as a mixed methodological approach for enhancing citizen participation in research, policy-making, service development, and decision-making processes. In-line with work such as Glasby (2011) and Durose et al (2013), Community Reporting purports the validity of lived experience and knowledge-based practice in these fields.

It has three distinct components – story gathering, story curation and story mobilisation – that are based around the Cynefin decision-making framework for complex environments (Snowden and Boone, 2007). Its story gathering processes utilise existing storytelling, qualitative research practices and media production techniques combined to create a unique peer-to-peer communication apparatus. The stories gathered are curated by processes informed by established methodologies within discourse analysis (Brown and Yule, 1983) and grounded theory (Glaser and Strauss, 1967, Tummers and Karsten, 2012), as well as notions of collective intelligence (Lévy, 1997). Through story mobilisation, this practice supports dialogue between various stakeholders on the learnings from the stories. The facilitation of this dialogue uses aspects of Open Space Technologies, Brown's (2012) vulnerability research and story dialogue techniques (adapted from Labonte and Feather, 1996). Overall, this method supports the addressing of 'wicked' problems, making its application well-suited to co-creation processes.

The paper uses case studies of this approach as applied in the CoSIE project to support citizen engagement in the design, development and evaluation of co-creation in public services. Drawing specifically on examples from the Netherlands, UK and Spain, this paper posits that revisiting our humanity via storytelling is instrumental in reconnecting public services to the people they serve.

## Futureproof governance is about co-creation

Karim Cherroud<sup>1</sup>, Fran Bambust<sup>1</sup>

<sup>1</sup> *Urban Connector*

In tackling the societal problems of today and tomorrow, knowledge and expertise are not enough. Futureproof governance is vital in guiding society through change. This consists of connecting knowledge and insights by co-creation within the public service as with citizens, and supporting it with motivational communication, engaging means and an open perspective within a clear vision and structured roadmap.

The objective of this paper is to compose a list of criteria, to be met by public services, to make co-creation a successful tool for governance and societal change.

A draft of the list of criteria will be composed on the basis of psychosocial and behavioural insights (Tversky & Kahneman; Nuttin & Nuttin; Cialdini; Bambust), research on ‘boundary spanners’ (de Jong; Richardson & Tait) and literature on design thinking and co-creation (Cherroud).

The composed draft will then be checked with successful co-creation projects of local governments (Leuven (B), Bologna (ITA), Brugge (B) and Kortrijk (B)). This research consists of in depth interviews with policy makers.

A list of criteria and guidelines for local governments in how to use co-creation for long term policy and good practices.

## **The Suministro Inmediato de Información (SII) in the electronic management of the Spanish Value Added Tax (VAT): analysis and international comparison**

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Our main objectives are:

- ✓ To study the impact and repercussions in terms of VAT management costs and ratio of non-compliance derived from the recently implemented method for taxation of VAT known as SII in Spain.
- ✓ Make a comparison with other electronic methods for VAT taxation implemented in other countries of the European Union.
- ✓ Projecting the future of electronic VAT management towards a "real-time" VAT management with the generalization of electronic invoicing, the higher degree of computerisation in the companies and the widespread use of the SII. In other words, to guarantee the control of the VAT revenue and the efficient management of VAT.

The used methodology consists of:

- ✓ Descriptive and quantitative analysis of the Spanish SII, identifying its advantages and disadvantages for Spanish companies and the Spanish tax administration.
- ✓ Comparing the advantages and disadvantages with other methods for VAT taxation implemented in other countries of the European Union by using VAT revenue statistics and data reflecting VAT management costs.

We expect that:

- ✓ A more computerised VAT management by using the new technologies and the high-quality processing of fiscal information will result in lower management costs of VAT for both companies and the Spanish tax administration, as well as for the tax administrations for the rest of the countries of the European Union.
- ✓ The constant supply of fiscal information to the Spanish tax administration, combined with the shortening of VAT declarations periods and the widespread use of electronic invoicing will help to control the VAT ratio of non-compliance.

We conclude that, broadly speaking, the new Spanish SII for taxation of VAT constitutes a good first step towards a faster and more efficient taxation of VAT. Therefore, the introduction of technology into VAT management is an effective weapon in the fight against non-compliance taxation.



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