Europe is awash in “digital-government” initiatives. On paper, at least, you would think that European governments are the most digital in the world. The European Commission has no less than two flagship programmes: the eGovernment Action Plan 2016-2020, launched in 2016, to “accelerate the digital transformation of government;” and the European Interoperability Strategy (ISA²), launched in 2017, which provides the European Union’s 28 member states with 47 concrete recommendations on how to “set up interoperable digital public services.” More recently, European governments entered the fray with the Tallinn Declaration. In that 2017 document, 32 members of the Council of the European Union and European Free Trade Association area – represented at ministerial level – signed on to a core set of six eGovernment principles, which they vowed to deliver by 2022.

So what is going on? Why do most European countries – despite these broad and visionary plans – still rank behind Australia, the Republic of Korea and Singapore on digital-government adoption in the United Nation’s benchmark survey?

Many EU programmes miss one crucial component: they fail to take into sufficient account the vast gap between the national and local level of public administration, which is where eGovernment most consistently breaks down. Put simply, Europe’s leading cities are on track to deliver citizens something approaching interoperability – a fancy word for the ability of a computer to exchange and make use of information provided by another computer in another place and perhaps even a completely different jurisdiction. In the public-administration context, this has a very specific meaning; it means that citizen data held in one place might be accessible to that citizen and to public administrations in another place, cutting down on time spent needlessly chasing information the state already possesses and (hopefully) adding
‘You would think European governments are the most digital in the world.’


7 European Commission. eGovernment in Local and Regional Administrations: Guidance, Tools and Funding for Implementation (Brussels: European Commission, 2017).


9 The target was set by the mayor among the goals for all municipality managers. The move was necessary to trigger a change of paradigm not only from an operational point of view, but also from a “mentality of the players around the Municipality of Milan” point of view. Interview with Roberta Cocco, 13 February 2018.

10 Gatti, Carbone and Mezzapesa, op. cit.

11 The 56% average masks enormous differences. Spain, Denmark, Netherlands, Luxembourg and Austria lead the list with 100%, 88%, 87%, 85% and 84%, interoperability scores, respectively, in the European Commission study. Bulgaria (6%) and Ireland (7%) lag. See Gatti, Carbone and Mezzapesa, op. cit.

These aren’t idle problems, either. To be effective, a national strategy must have a strong sub-national, local component – a way of delivering change not just at the federal level but at the local level as well – and for one very simple reason. There can be no national interoperability – at least from the standpoint of the citizens, whom these programmes are designed to serve – unless local governments are on board and have fully embraced and adopted the strategy, too. When people need government services, they most often go directly to their local administration (the commune where they live) to get them. For this reason, some of the most important population data is stored not at the national level; it is held by local administrations – population registries, electronic health records, local business registries and the like. And it is precisely there where the European commitment to ambitious eGovernment – as measured by the European Union’s own statistics on digital government uptake – are most lacking. The European Commission, the EU’s executive arm, reports that member states have only a 56% score in terms of implementation within their country at the regional and sub-national level – a far cry from the 75% compliancy rate at the level of nation-state policy.10 And a damning verdict on the effectiveness of digital government to reach citizens where they need it most.11

Co-VAL

The “Understanding Value Co-Creation in Public Services for Transforming European Public Administrations” project, or Co-VAL, is an 11-partner consortium, co-funded by the European Union. The project aims to find new ways of examining the co-creation of value in public services in order to transform public administrations and processes. Along with a plethora of new tools, cutting-edge research and broadly-cast citizen surveys, it will produce four policy briefs, which will set out the challenge of public administrative reform in Europe and explore the cutting edge of unique “value co-creation” models for delivering better public services and improving citizen-state relations. For more, visit http://www.co-val.eu or follow the consortium on twitter at @CoVAL-eu.
This is why all of the recent reform programmes, including the *Three-Year Plan for ICT in Public Administration*, led by Diego Piacentini, the Italian commissioner for the digital agenda, have a strong sub-national component. The Italian programme sets out key principles and objectives, but, in a departure from usual practice, it calls on local governments to submit their own plans for arriving at the proscribed destination. The result is a document that is both tough and visionary; it is tough in that it advocates withdrawing funding from regions that refuse to share electronic health records with other regions; but it is visionary in that it also sets a high bar for realizing powerful digital government across Italy’s sometimes hidebound local administrations and holds out the promise of unprecedented local-national collaboration for regions clever enough to follow.

Italy is not alone in taking major steps to better stitch together national and local government. In 2016, Germany went so far as to amend the *Grundgesetz*, the nation’s governing constitution, to enable the federal government to set interoperability and security standards for public services provided by Germany’s 16 länder, or federal states. Regions, too have gotten in on the act, with Flanders, one of three official Belgian regions, surging ahead. Largely through ambitious adoption of an already approved federal plan, the Belgian region was able to save some €100 million in reduced administrative cost – based on a €2 million investment.

This interactive policy brief will propose a six-step programme for improving public-service delivery throughout Europe by promoting more systematic collaboration between the national and local level and by implementing digital reform more ambitiously at the municipal level. The policy recommendations begin on page 10.

**Happy Valentine’s Day**

On 15 January 2014, Joan, a Spanish father of two, purchased for the first time two Ryanair tickets to Paris as a Valentine’s day present to his wife. It was an exciting moment for him, but an even more momentous one for the European digital economy: with this purchase, the majority of the European population had carried out e-commerce transactions.

Of course, this account is fictional, but statistics show that in 2014 the percentage of European citizens making online purchases passed the symbolic 50% mark. E-commerce online is the new normal, not the future. Yet this is not the case for interacting with government. According to official studies, most government services can be fully processed online. But fewer than one-third of EU citizens use them that way. And the gap between e-Commerce adoption and the take-up of online public services is large – and widening. It now falls at a cavernous 27%, up from 15% as recently as 2008. See Chart 1 on page 5 for more.

Why do people like Joan routinely use the Internet to purchase flight tickets, but not to change their residence or renew their passports?

It is certainly not a matter of limited investment. According to recent estimates, €2 trillion was spent during the first decade of the 21st century on government...
‘To be effective, a national strategy must have a strong sub-national, local component.’

New Times, New Tools

But the movement has taken on renewed energy as new tools – and renewed political commitment – have started to take hold. These are once-only, government as a platform, interoperable base registries (assisted in some cases by distributed ledger technology) and eID.

Once-Only. First and foremost is the “once-only principle,” a notion pioneered by the Estonians but more recently enshrined in the European Union’s flagship Digital Single Market programme. In a nutshell, “once-only” means just what it says: “users should be able to provide data once-only, and administrations should be able to retrieve and share this data to serve the user, in accordance with data protection rules.” In other words, it shifts the responsibility for getting relevant information from the user to the government, thereby hiding the complexity of government from the users. The power lies in its simplicity: when a legal provision is in place that forbids government from requesting documents already in its possession, public administrations are forced to introduce changes in order to do even their routine business. This, in turn, requires the establishment of a robust system of so-called “base registries” – defined by the European commission as “a trusted and authentic source of information under the control of a public administration or organisation appointed by government,” usually a database or network of interoperable databases. These networks, in turn, are able to trace the information needed, rather than storing it – a crucial distinction. Governments are only able to ask for the information one time. The key is a system where the public administration is able to find the information it needs once-only.

Government as a Platform. Despite the technical complexity – and make no mistake, the transition to once only can be very complex – the system has certain huge advantages, some visible, some not. First and foremost, it saves a lot of people a lot of time – generating €5 billion per year in the EU alone in terms of the estimated reduced administrative burden. But it also opens government up to a host of other
services, effectively turning government services into a “platform,” where many different players – public and private – can collaborate to deliver better outcomes, competing to build better and better services around a common set of standards, rules and principles. Unlike the old monolithic closed systems, which are expensive to maintain and at greater risk of lock-in, government as a platform is a more effective way to enable the creation of “loosely coupled,” layered public services that can meet as yet unanticipated citizen needs and be composed upon demand. In that way, common horizontal services, such as identification, payments and data storage, can be easily centralised without affecting the user experience, and software components can be easily reused by different government services. The UK Government Digital Service firmly placed this concept at the core of its 2012 strategy to radically reorganise online service provision. Today, three billion online transactions pass through the system per year. In the case of Estonia – undoubtedly the first and most enthusiastic EU member states to embrace a once only system – public/private collaboration on core infrastructure have resulted in the Baltic nation’s 1.3 million citizens using their e-IDs and signatures more than one billion times since the programme’s inception in 2003.

One way to see the difference might be to return to the example cited above, where Joan buys an airplane ticket. He might start from a comparative website like Skyscanner or Google Flights, where he might authenticate himself through his social-media login, then move to an airline website to book a ticket. Then, he might eventually pay via his bank’s online payment service. In the end, four services have been accessed, all of them operating (hopefully) seamlessly to give Joan the outcome he wants.

It is not hard to imagine a similar set up for access to government services. Joan could, for example, go online to renew his passport. He would access the passport authority service online, authenticate himself with a European Electronic Identification and Trust Services (eIDAS) compliant identification process (possibly provided by an external, third-party provider), briefly verify the personal data held by the government national registry and finally pay the required fee through another.

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24 EY and Danish Technological Institute, Study on eGovernment and the Reduction of Administrative Burden (Brussels: European Commission, 2014).
26 See the statistical overview of the Estonian e-ID system at https://www.id.ee/?lang=en.

’Somewhere, unless local governments are on board.’

Source: Eurostat
government payment service using a credit card or bank transfer. All of these services could be provided by different players. But to be successful, they would need to be integrated seamlessly from the point of view of the user – thanks to interoperability standards. This means that different public and private partners must see the value of providing services that follow the proposed standards.

**Authoritative and Interoperable Base Registries.** Base registries have been around a while in many countries. These days, they are a topic of much renewed interest at eGovernment conferences despite having scarcely penetrated the public imagination. There’s a good reason for this. A truly interoperable system is one the public never notices. The European Commission is currently undertaking a mapping of national base registry strategies, hoping to count the number of them in operation and better understand the principals at work behind the better functioning of them. The goal is not a casual one. At the end of the day, rather than harmonising standards, EU member states have opted for an “interoperable” approach, meaning national standards should be able to interact with one another rather being set up centrally in the same way. Much of this work is focused around the **National Interoperability Framework Observatory (NIFO)**, which tracks and monitors interoperability among national base-registry systems. To date, there are 32 national interoperability frameworks – which are essentially national government-drafted statements in which the local state of play on interoperability is described. These are submitted to NIFO for an evaluation, which is later published on a common website where all countries can see how they and their peers fared.

Well-managed base registries allow the development of integration tools such as Application Programming Interfaces (APIs). The adoption of API to allow different ICT systems to collaborate has been consistently growing over the last 12 years globally. And governments are increasingly adopting them. There are today 1,300 public government API on programmableweb.com, the leading repository of API, out of a total of 19,000 available there. The Municipality of Milan itself has published 30 APIs that allow private and public entities to directly query database and access services. Moreover, APIs allow users to integrate their internal data management strategy with open data publications. Rather than requiring human upload of specific datasets, APIs allow selective and rule-compliant direct queries and access to the underlying database – allowing for more valuable, comprehensive and real-time data access.

**eID and European Electronic Identification and Trust Services (eIDAS).** An interoperable and secure electronic identity is the lynchpin of any truly successful government digitisation. Given concerns about privacy and cyber security, governments need to be certain the person they are transacting with online really is who they say they are. And the once-only principle can only work when the tax authority and employment register know that the “Joan Pujol” seeking access to the system is the right Joan Pujol.

The e-ID and eIDAS is a new EU regulation that will govern the mutual recognition of electronic signatures and identities. Public administrations, including local and regional governments, that accept digitally signed documents or electronic authentication for services from their own citizens will also have to accept identities.
and signatures of equivalent security level from elsewhere in the EU. The use cases cover everything from an Estonian entrepreneur opening a branch office of his business in Belgium, carrying out all the “paperwork” electronically, to a German student doing a semester in Italy authorizing his university to transfer student records. In larger countries, eIDAS may also help standardise electronic identity offerings within the country.

The deadline for notifying e-ID schemes is 29 September 2018, after which all public administrations (including local) should begin to recognize e-IDs from other countries. Germany was the first country to notify its e-ID scheme, and Italy followed suit late last year, with the first notification of a private sector e-ID scheme. While eIDAS is legally binding only for public administration, the framework is also open to the private sector.32 As eIDAS has harmonized security and interoperability requirements, the regulation should create a virtuous cycle of greater demand and more competitive offerings on the market. Considering that only 1.3 million Estonians generate more than 50 million digital signatures a year, the potential size of the European market is enormous.

The Italian experience: First results

While countries differ in terms of degree of centralisation and the role played by local authorities, the subnational level plays consistently a significant and growing role across the EU. There are almost 90,000 sub-national authorities in the EU, and they are responsible for one-third of government expenditure, 53.7% of public investment, 51% of public employees and 45% of total procurement.33 And the trend is increasing. Local public expenditure in the EU 28 grew 2% as a percentage of total public expenditure over the last two decades.34

Countries that can successfully reform this area stand to reap huge benefits. In Italy, for instance, the civil registry of the population (Anagrafe), perhaps the single most important base registry, has traditionally been managed directly by the municipalities. Under this system, data was distributed among 8,000 databases, managed by at least 40 different software solutions with limited interoperability.35 This led to delays in service delivery, occasional inaccuracies in data and additional costs for any process involving different municipalities – such as a change of residency. In the meantime, the Italian government has enshrined the once-only principle in law (legge 183/2011). This forced the consolidation of all local population registries into a single national register, the Anagrafe Nazionale della Popolazione Residente, or ANPR. Municipalities are progressively migrating their data to the new system – and they are doing it in an interesting way. They are not just migrating old data to a new software solution; many are making sure that their suppliers upgrade their software to be interoperable with ANPR requirements and web services. After a difficult start, in the last year the migration to ANPR has grown exponentially, reaching 1,000 municipalities in February 2018, up from 50 in the same month of 2017. And the benefits are significant: just for the single process of changing residency, municipalities are expected to save €65 million per year thanks to ANPR, not to mention the increased quality of service for citizens.
The “government as a platform” paradigm is also having a positive effect. It has allowed the decoupling of different layers of services to achieve a more efficient usage of the resources. In particular, there is scope for the separation between specific solutions (such as a municipality website or a workflow management software) and horizontal components (commodities such as payments and identification services), which can be easily reused and integrated with the municipality specific services. In Italy, the payment service PagoPA, managed centrally, has seen an almost “viral” uptake after being incorporated in the services of different national and local administration. It registered more than six million transactions by January 2018, up from one million in January 2017. The municipality of Milan – with its 1.4 million inhabitants – has registered more than 600,000 transactions through the system in just one year – and also because of this, it is one of the few municipalities in Europe where more than 50% of its total transactions with citizens are performed online.

A distinguishing feature of these initiative is the constant effort of outreach towards local and regional authorities on one side and the private sector on the other. Put simply, any effort to induce 8,000 municipalities to migrate their data would be far more effective if you can first convince their 40 software providers to update their solution to enable the smooth migration. As part of this effort, and in line with the policies of the major private sector-led platforms, a dedicated developers community has been cultivated, now counting more than a thousand members and providing technical assistance and support tools.36

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Local-national collaboration: The next frontier

Local-national collaboration remains one of the greatest challenges to deliver user-centred digital government services, especially for large countries with thousands of municipalities. It is not an accident that the most successful implementations of digital government come from small and centralized countries such as Denmark or Estonia. The top five performers in the 2017 EU eGovernment benchmark are all countries with fewer than 10 million citizens.37

In contrast, Europe’s large member states often have complicated federal structures and a huge number of (sometimes extremely small) local entities. Italy, for instance, boosts about 8,000 municipalities, 70% of which have fewer than 5,000 inhabitants – while only 2% of the municipalities in the Netherlands and 3% in Denmark are so small. The engagement of smaller authorities is particularly challenging because of their limited financial and human resources, yet even more important in view of their small size, limited services availability and often remote location. In the Italian ANPR initiative described above, despite the strong growth, 7000 of a total 8000 Italian municipalities have yet to start the migration to the national registry.38

Many reasons have been found for this sometimes limited local-national collaboration.39 First, because of the technical nature of the topic, and its fast evolution, there are substantial misalignments in terms of awareness and skills available to different levels of public administration. Decision makers as well as civil servants often remain reluctant to acknowledge the centrality of digitalisation in
‘Success is a question of engaging through the rights incentives – for local authorities, for ICT suppliers and for end users.’

public-administration reform. And when they do, many small local administrations do not have sufficient skills both in technology and project management, and run a higher risk of being unable to provide sufficient levels of services. They are frequently at the mercy of technology providers, although many administrations have recruited high-profile personnel from the private sector to take firmer positions and to break the gridlock. Italy, for one, appointed Mr Piacentini, mentioned above, as the “extraordinary commissioner for the digital agenda,” attributing exceptional powers to him in terms of recruiting external personnel beyond the official procedures, thereby creating a “digital team” composed of people external to government, following the model of the United Kingdom’s highly successful Government Digital Service. The municipality of Milan has created the post of “councillor for digital transformation” and recruited a senior executive from the private sector to fill this position. But against these bright examples, too often there are substantial skills gaps in public administration that reduce the scope for mutual understanding and increase the probability of inaction or zero-sum negotiation. The skills in question are not merely a matter of basic computer literacy, but pertains also to more specialised knowledge, such as the ability to procure ICT systems or make better use of the data government is sitting on top of.

Second is the problem of trust between national and local governments. National governments have a history of over-promising and under-delivering. eGovernment strategies and projects are frequently changed, hindering the credibility of central

Chart 2. National-Local Stakeholder Collaboration

Source: The Lisbon Council
government and the engagement of local authorities, which are reluctant to undertake difficult transformation processes when strategic leadership could change before reaching its fulfilment. In the private sector, ICT suppliers of public administrations can be sceptical to engage in developing solutions if they do not believe they will be widely adopted. For instance, in the Italian case, the software suppliers of the municipalities were long reluctant to invest in making their solutions compliant with national ANPR standards in view of the very limited initial uptake (this changed when a sufficient critical mass was reached in 2017). Similarly, identity suppliers are still careful on the possibility to become providers of the Italian identification system (SPID), because of uncertainty over the uptake and business opportunities and the long and winding track record of eID solutions in Italy.

There is also a political challenge. The perception of autonomy from central government is often an election winner for local politicians. And digital government implies spending choices, which have a direct impact on the economy. The choice to adhere to a national standard, to use centralized national or regional services rather than local, to outsource infrastructural services to private or public providers, all have deep political implications. The “not invented here” syndrome remains very much present at the national as well as the local level.

Even in the most promising political circumstances, there are issues involving territoriality; put simply, local authorities are often hesitant to lose the direct contact with their citizens that participation in a more fully harmonised national system could imply. Financial constraints are important too, particularly in this age of budgetary consolidation. The costs of digital transformation are upfront and clear; the benefits are long term and uncertain. In fact, legacy management is a much more pressing issue, especially in large metropolitan cities.

These problems are not only well known, but also frequently solvable. Ultimately, it is a typical problem faced by multi-sided platforms in the initial phase: how can you be sufficiently attractive for the different parties involved? Success is a question of generating a virtuous cycle through the appropriate system of incentives: for local authorities, for ICT suppliers, and for the final users as well.

### A Six-Step Programme

We believe the European Union – with its 511 million citizens, its 28 member states and 1373 regions – has achieved an enormous amount in a short period of time. But life is not about celebrating our achievements. It’s about defining the challenges of tomorrow, and responding with adequate speed and sufficient ambition. With that in mind, we propose a six-step programme for bringing local government along in delivering better digital government.

1. **Engage local government more systematically in European- and national-level programmes.** The European Commission and national governments should recognize that the engagement of local administrations is a prerequisite for the achievement of EU-level objectives in this area. While the European Union has
‘Once-only shifts the responsibility for getting relevant information from the user to the government, thereby hiding the complexity of government from users.’

extremely limited competence in this area (the European Treaties clearly leave public-sector reform up to the EU member states), the Tallinn Declaration – signed by 32 countries – proposes “enhancing the joint governance structures with local and regional authorities” at the national level.44 And the once-only principle at EU level can only be implemented through the direct engagement of the local level. This is a call for collaboration that should be taken up and closely heeded. Direct benchmarking and exchange of best practice should be stepped up, enhanced and widely disseminated.

2. **Use the European Union budget to encourage local adoption of eGovernment tools.** One competence the EU has is the power of the purse. The structural funds of the current budgetary period through 2020 set aside some €3.4 billion for “digital government.”45 This money is not only important *per se*, but because it creates a governance structure that can encourage – and make dramatically easier – the local transition to once-only and a robust system of base registry interoperability. Ultimately, this is a problem of scaling innovation system-wide, which requires much more than simple experimentation. The next EU budget needs to push for large-scale adoption of the fundamentals. And the Structural Funds should not be used as “funder of last resort” when there is no alternative funding. Instead, the so-called “operational programmes” should be deliberately aligned with European and national interoperability frameworks. Access to funds should be made more widely and automatically available based on the presentation of credible plans – and become conditional on achievement of clear milestones.46

3. **Build ecosystems.** Governments should design and implement strategies to reach out to different stakeholders, combining them in a matrix of complimentary and sometimes competing services and forcing them to work out open standards that allow them to work together. It’s not only a question of reaching out bilaterally to stakeholders. It is a question of triangulating the strategy so that the participation of ICT suppliers encourages the participation of municipalities, and the uptake of the final users encourages ICT suppliers to invest, and so on until you reach a self-sustaining virtuous circle. At the same time, central government should carefully avoid zero-sum approaches that reduce the incentives of key stakeholders such as decreasing the visibility of local authorities in national programmes or restricting the market for ICT suppliers. See Chart 2 on page 9 for a visual representation.

4. **Be consistent on policy and programmes.** New governments are frequently tempted to launch new, fresh strategies. But we should be clear: platform growth takes time, and any change in the fundamental elements of a digital government strategy creates uncertainty and reduces the incentive for the different parties (in this case local government and suppliers) to act. Over the years, governments should maintain a stable strategic framework for digital government, as much as possible aligned with the European one. And EU-level monitoring systems should assess and value this consistency.

5. **Invest in skills and new talent.** Success in the digital arena won’t fall from the sky; it will be the product of thousands, if not millions, of human actions and interactions. Europe can’t advance without the human talent it needs to make

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44 Council of the European Union, op. cit.
46 As an example, the Italian government provided direct automatic funding to all municipalities migrating to ANPR upon achievement of the result through a structural fund instrument.
the transition. This implies two things. Today's civil servants need to be trained and mentored; at a minimum, they must develop a better comfort level with the capabilities of digital technologies, the rising demands of the citizenry and the potential of "co-creation" and "design thinking" to deliver better citizen-state relations. But it can also mean that digital talent is brought into the civil service, as has happened quite sensationally – and to dramatic effect – in several EU member states.

6. Measure, monitor and evaluate. The current monitoring systems are fundamental tools, but insufficient to track the progress, since they are chiefly based on the assessment of the strategies and self-assessment by the member states. Monitoring should be deepened towards the assessment of how local authorities are genuinely progressing in aligning their systems with the European and national interoperability frameworks and focus firmly on uptake rather than supply of services. And they should use real-time data generated automatically from the use of those services as much as possible.47

Last but not least, local governments themselves should embrace and acknowledge the fact that in the new digital framework their role is fundamental. Change will only come when they align their services with the national and European guidelines. The move towards the once-only principle, interoperable base registries and service-oriented architectures is here to stay, and popular demand for government that is effective and easy to use is rising and becoming ever more urgent. In this new system – built more on collaboration and federated decision making – some previously local services will be outsourced and centralised. Local governments should accept a certain loss of control for certain “commodity” functions in order to focus on greater value added and crucial citizen-facing activities. The new digital government frameworks taking shape throughout Europe provide tremendous win-win opportunities. Zero-sum thinking and not-invented-here behaviour should be avoided at all costs.

Ultimately, a combination of factors makes digital government necessary and urgent. The decline in trust towards institutions, the need for budget consolidation, the growth in demand for online services, the political prioritisation of digital innovation, the emergence of a shared and clear strategic framework and the availability of cheaper and modular technological solutions that facilitate collaboration could create the perfect storm – but only if people in and outside government rise to the challenge.