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Digital Transformation of the Italian Public Administration: A Case Study

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Abstract:
This case study looks at the Italian Public Administration's digital transformation. With 60 million people, 8,000 municipalities, and 23,000 local administrations, this digital transformation case highlights how a digital renaissance prefaces innovative disruption challenges. The digital transformation case uses Italy as the backdrop and Team Digitale, a team of talented individuals embarked on building public administration efficiencies and rebooting Italy's digital innovation footprint, as the protagonist. Digital transformation is rarely, if ever, a technical solution. Instead, digital transformation is a socio-technical and socio-political solution, especially in large and complex democracies or companies with diverse, contending stakeholders. In the process, the case surfaces best practices and challenges faced when trying to tackle a mega-project across an entire economy. The case offers digital transformation recommendations that one can generalize across any global democracy. This case surfaces best practices and challenges faced when trying to tackle a mega-project across an entire economy.

Keywords: Digital Transformation, Digital Disruption, Change Management, Disruptive Innovation, E-Government, Italy, Europe, Policy, Culture, Technology.
1 Coming of Age

The early spring afternoon sun glistened through the umbrella pines that draped the streets and seven hills of the eternal city. Sean, Geoff, Mark, and Stella quietly walked along Via Del Corso for an espresso at a café a couple of blocks away from their offices on Via dell’Impressa. Past the Piazza Colonna fountain, Palazzo Venezia’s Victorian domes prefaced the Quadriga’s four horses on the Altare della Patria (Altar of the Fatherland) celebrating Italy’s 1861 unification.

The four were consulting for Team Per La Transformazione Digitale, a 2016 organization tasked with an audacious mandate—a 21st century “digital” transformation and “digital reunification” of Italy. After three long but productive years, Team Digitale had just received some spiriting news. The President of the Council of Ministers had renewed its commitment for digitally transforming Italy’s public administration and the 2019-2022 three-year digital agenda had been ratified. It signaled continuity (see Appendix A for summary).

Stella, the lead social feasibility consultant, enthusiastically broke the silence. “Congratulations to Team Digitale on the renewal,” she said, smiling. “It’s a signal that the government believes in the work Team Digitale is doing. It is a digital reunification—connecting every citizen and person across Italy to the government. A mobile-first1 approach with interoperable systems and open standards.”

1.1 The Two Projects

The three quietly smiled and nodded in a gesture of thanks. “Thank you, Stella!” Sean, the technology consultant observing the alignment of Italy’s digital transformation strategy to Italy’s national agenda, said. “It is an evolving landscape. The ecosystem is changing over time. The Italian society is changing; the politics are changing, perhaps even faster than the society, the economy is changing, and of course, technologies are changing at the speed of light.”

He took a deep breath. “We have embarked on digital transformation across 60 million Italians, 8000 municipalities, and 23,000 local governments! We have 25,000 government websites, 160,000 databases, and 11,000 data centers spread across public administration. There are 32,000 IT workers in government IT with 18,000 in central public administration (PAC) and 14,000 in local public administrations (PAL). That does not include another 10,000 IT contract workers spread across local and central governments. With a €5.7 billion IT budget, there is a lot of redundancy and waste. Never mind the complexities of so many distributed resources and agencies!” He closed his eyes to contemplate the magnitude of the digital-transformation initiative.

“But, with such a budget, there are alliances, entrenchments, and earmarks. People may not like to give up control over information if they think that information is power. We must coordinate, communicate effectively, change attitudes and build trust (Demos, 2014). The eyes of the Italian public, Europe, and the world is upon us!”

1.1.1 PagoPA

“I agree, Sean! It’s is overwhelming and complex. But imagine the value we will be adding to Italian citizens,” Geoff added enthusiastically. Geoff, the lead economic consultant interfacing with ecosystem and institutional stakeholders was observing the PagoPA project. PagoPA was a centralized “one-click” digital payments platform for all government payments—from school meals and car registration to taxes.

“Take the PagoPA project. No more taking time off work or family to tackle long queues in post offices and banks to pay bills! No worrying about missing payment receipts and entry errors! No more running around bureaucratic red tape and filling in a million forms! That matters.”

Geoff took immense pride in his project and in Team Digitale. “I love antiquity in monuments and architecture,” he continued. “But I want modern ways of doing things. If we can renovate and upgrade the Colosseum’s public toilet plumbing, why can’t we update the way Italians pay their sewage bills?”. He paused. “To pay a sewage bill, you have to mail an invoice and the household has to receive it. You can miss a bill and get late on a payment if you’re traveling; If you’re not traveling, you have to take time to queue, stamp a form or a payment sheet, then collect a payment receipt. You have to carefully save your paper receipts. The bank or post office has to manually fill out other forms to record the transaction all the

1 Mobile-first prioritizes a smartphone (mobile platform) driven user experience.
way from the point of receipt to the treasury. One error can propagate like wildfire. With PagoPA, when you receive notifications or decide on paying, you simply open the app anywhere and anytime, click to pay and ecco, you’re done in a minute or less. Tens of steps versus a “one-click”. More than 400 payment service providers (PSPs) have joined PagoPA and Italians can simply use their everyday credit cards, debit cards, or Banocmat (similar to a Visa network) to pay! It’s simple and easy! People are getting it!” Geoff gleamed.

“Sono d’accordo (I agree),” Stella chimed in. “There are savings and efficiencies for every Italian. Nobody in the world enjoys waiting for hours in government offices, filling and refilling the same forms in various agencies, and spending hours on end tackling bureaucracy. Did you know that Italian businesses and citizens spend an average of 362 days on bureaucratic wrangling? Not only is Italy the most bureaucratic in the G7, but also 50% more bureaucratic than Canada, the 2nd bureaucratic G7 country (see Appendix B).”

“Digital transformation can change that statistic,” Geoff responded. Think of it! PagoPA can offer savings from efficiencies for Italian citizens, businesses, and the government. Every Italian citizen will be able to save €110 per year on average from fewer government office and agency visits and fees. The PagoPA platform will save the government €1.1 billion each year from automated accounting, payment reconciliation and electronic payment alerts.”

“Then, of course,” Geoff observed, “there are nearly €25 billion in average yearly benefits for companies. With a digitized process interface, companies will have to worry less about pizzo (extortion via protection costs) by the Mafioso (Mafia), insurance fraud, and absenteeism. Companies can pay and receive money by connecting directly with the government without incurring useless, but costly fees and penalties from missed deadlines.”

“In 2016, the PagoPA platform started with handling three percent of all public payments. That grew to five percent of all public payments in 2018. We are forecasting that PagoPA will handle more than 20 percent of all transactions—that’s over €10 billion—by the end of 2019. Taxes, car payments, traffic fines. We are using the Bancomat interbank network, PayPal, and even startups like Satispay to build our infrastructure and ecosystem with more partners. Local administrations in Rome, Milan, and Palermo have adopted PagoPA. That should create a bandwagon effect.” Geoff closed his eyes to run the numbers in his head.

“Today, even when an Italian receives a paper bill, the new paper bill lists multiple payment channels. Just scan the QR code to make a digital payment. We have integrated PagoPA with the postal payments system and built a robust ecosystem of participating banks and payment service providers (PSPs). In addition, we simplified user experience and built trust. Previously, the Agenzia per l’Italia Digitale (AgID) (or Agency for Italian Digitization) promoted PagoPA. But Italians did not trust AgID. AgID was rooted in bureaucracy and regulations, arcane and obtuse. Team Digitale’s simplified user experience and workflow have restored that much needed trust. Our numbers show that.”

“Less bureaucratic wrangling for our residents and companies; less pressure on local governments already stretched thin in resources and costs,” Stella added. “That’s a win-win!”

“We need to increase awareness in the government and the hardworking Italian population that transparent governance and open democracy can elevate the Italian economy. Cash payments are often forgotten, not recorded, or used as graft to secure favors. This is economic leakage. More leakage reduces government finances to run the economy, forcing them to increase taxes on the hardworking public. Digital transformation can reduce corruption, cronyism, and shadow finances. Digital transformation brings much needed transparency.”

By this time, they had reached the café. Sean, Geoff, Mark, and Stella interrupted their chat to place a quick order of doppios and caffe lungos along with some ricotta cannoli and some torta (tarts) with chantilly cream and fragoline.

1.1.2 ANPR

Their coffees arrived momentarily. Mark sipped his coffee and raised his head.

“ANPR is the operating base; a key enabler!” he said. “I still remember 2017; Article 62 of the government’s Digital Administration Code specified the creation of ANPR. Yet, only one municipality had migrated their resident data. Caspita! I thought! That’s worrisome!”
Mark, the lead consultant had been observing the ANPR project. ANPR was the national resident population registry that was a part of the digital transformation operating system. ANPR would create a single, unified Italian resident identity by stitching together information across multiple, often redundant, identities spread across 8000 municipality databases and tens of thousands of forms.

“So, we started off with one municipality that had migrated their resident data in September 2017. But, by March 2019, of the 8,000 municipalities in the country, we have 1,765 transitioning to ANPR. From 1 to 1,765 municipalities in 18 months! That’s...” Mark closed his eyes for a thoughtful second to recall the numbers, “...a 51.65% increase, month to month.” He beamed reservedly.

“Now, we have to get the registry running across the country. We can build services on top of that. The past 18 months has been convincing municipalities that digital transformation is not a temporary hype but a long-term hope. ANPR will merge in information to create one, error-free profile for each resident. An Italian resident can use that profile to access a variety of government services, from getting a tax ID upon birth, applying for permits, to residence changes and passports. That frees up time and effort for the Italian public and local governments...more time with family and friends and doing things that are important—better than spending a chunk of your lifetime in government agencies filling forms, searching for information, and correcting errors.” Mark felt optimistic.

“Lightness, quickness, exactitude, visibility, multiplicity, and incompleteness,” Mark affirmed, reminiscing Italo Calvino, the famous Italian author’s Six Memos for the New Millennium. “We have to be flexible to be light, agile to be quick, transparent yet accurate to be exact, user-experience-based delivery to be visible, scalable and reusable for multiplicity, and continuously innovate by believing that even the best solution is incomplete and can be improved.”

“I concur with Mark”, Stella said. “The Italian government, public administration, and the DAC (digital administration code) need to create an environment that help us stay light and flexible. Our first and previous commissioner for digital transformation, Diego Piacentini, and our current commissioner, Luca Attias, have both mentioned how digital transformation is continuous innovation rather than a destination. Our highest government officials have to be the champions of digital transformation and change.”

“I so appreciate the championship and legislative help,” Mark quipped. “Article 62 of the now requires all municipalities to migrate to ANPR. Municipalities can manage their own systems. We have a simple API for municipalities to connect to the centralized repository. We train local governments to build the skills needed to transition and inform the public to ask their local municipality to join the national registry. ANPR is getting there – digital pull and legal push.”

1.2 Transformation

With the growing success of their projects, the members in Team Digitale felt proud of their accomplishments. They had begun a grand solution. Integrating their projects, Team Digitale had begun beta-testing its “io.italia” app (https://io.italia.it/) (refer to Appendix C for screenshots) that would consolidate ANPR, PagoPA, and other digital services on to a single platform. The io.italia.it “one-stop-government services” app had a select release planned for June, 2019. With a mobile-first approach and the io.italia app, every Italian could securely access most government services on the cloud 24/7. No more registering, paying, and communicating at different government websites, but one single government site for all government services. A one-stop digital shop to find documents and receipts, choose payment options, fill forms, make and receive payments, and communicate with the government.

“Salute!” Sean and Stella raised their glasses. Outside the café, the late afternoon sun casted long shadows. Tourists were accidentally jaywalking while trying to capture selfies while scooters darted from behind cars to beat the traffic.

“We should take pride in Team Digitale’s accomplishments for all the projects!” Sean said. “Team Digitale has been tasked with a digitally disruptive innovation. Our projects will disrupt the status quo. We all realize that we are not just asking Italians and the Italian public administration to adopt a technology but to adopt and embrace this positive change.”

With their extensive previous experiences as entrepreneurs and in top-notch organizations in the private and public sectors, the team members knew that digital transformation is a disruptive innovation—an exercise in process reengineering and change management. They were all seasoned executives, well-versed in finding answers to difficult, often intractable, problems. Sean had been involved with large-scale project deployments in Saudi Arabia and South Korea. Geoff had founded and sold mid-tier customer
relationship management (CRM) software before joining the consulting firm. Mark used to be a part of the government’s technology policy framework group. Stella worked for a Silicon Valley company and was used to liaising between demanding stakeholders over complex public administration projects.

The team realized that, in order to successfully implement its digital-transformation initiatives, Italy needed to:

- Bridge the digital divide: Italy has pronounced digital divides (differences in network and information access and perceptions) in the value of digital transformation. Urban versus rural/regional (e.g., north vs. south) divides, education, and income mark these divisions.
- Offer stakeholders a voice: Digitally transforming a democracy with 60 million people and politically powerful stakeholders requires buy-ins. Citizens and stakeholders must have a voice for successful adoption as a prelude to positively change attitudes and build trust. In order to offer stakeholders a voice, Team Digitale created public forums and bulletin boards to increase inclusion and participation. That was a start.
- Reengineer the underlying way people do things: digital transformation must begin by changing the underlying processes; otherwise, technology is simply lip service. The difficult part in changing (reengineering) the process involves evaluating whether digital transformation should mirror existing processes, incrementally change processes, or radically replace them with more efficient solutions. Team Digitale was incrementally reengineering by maintaining traditional payment lines for PagoPA and traditional enrollment points for ANPR.
- Support and smooth digital transition: socially, people fear change. Team Digitale needed to coordinate and communicate across stakeholders to smoothen the digital transition as effortlessly as possible. Financially, the transition required financial incentives and support. For 2014-2020, the E.U. Cohesion Fund had allocated €32.2 billion to Italy to raise its economy, Internet access, conservation, and reconstruction, 70 percent of which it had allocated to the less-developed southern regions of Campania, Puglia, Basilicata, Calabria and Sicilia. Local governments could also access bank loans for digitization. Beginning in 2019, Cassa Depositi e Prestiti, an investment bank, began to offer loans to local governments to speed up digital transformation. Such financial access and support would ideally smooth transitions as long as Italy used them well.

“Indeed, digital transformation needs change!” Stella remarked in agreement. “Successful digital transformation needs to narrow the digital divide, offer stakeholders a voice, reengineer existing processes, and help smoothen the transition. Without these ingredients, the digital transformation will become a minefield of distrust and resistance.”

“Building more local participation is an imperative,” she continued. “While 42 percent Italians trusted their local government, a meager 19 percent trusted the Italian parliament. Of the 59 percent of Italians that used the Internet, less that 25 percent accessed government websites and less than 10 percent used the Internet to complete government forms online. Although participation grew from previous years, the numbers are dismal. The numbers are lower in southern Italy compared to the north. However, southern Italians trust their local governments more perhaps due to their entrenched and long-standing practices and culture. Local and regional governments’ (Giunta Regionale) engagement can help change local culture!”

“We must keep in mind that the public sector is different from the private sector,” Sean said. “Change management is tougher in the public sector, especially with frequently changing governments and alliances. Still, the Italian government and Italian residents are our customers. We need to instill and educate them that digital transformation will positively impact everyday lives and simplify government. But to do that, people and local governments must be willing to change and reengineer—first their attitudes towards digital transformation and then the process—the way they work. Meanwhile, Team Digitale needed to prudently manage its digital transformation costs and highlight savings and efficiencies for both the public and the public administration.”

Sean contemplatively lifted his head and signaled the café for the bill.

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2 Resistance can be political (Italy is a large democracy with many regions and stakeholders), social (tradition, habit, and culture), economic (costs of execution and change), and technological (capability to migrate).
1.3 Policy to Practice

Stella had been quietly listening to the conversation. As a veteran consultant observing the interplay of politics, society, and technology, Stella knew that converting policy to practice was complex—especially in a democracy with politically powerful regional cultures and governments.

“Italy is large and diverse, and the government hierarchy is messy and complicated,” she said. “Northern and Southern Italy differ so much. The mezzogiorno, eight southern regions including Sicily and Sardinia, suffer from a crumbling and poorer infrastructure. Come on! We are trying to digitally unify a campanilismo culture where people adhere to age-old traditions and only tend to support and trust their own campana (town bell tower) and nothing else.” Her voice quivered a bit with sadness in noting this modality in the country she loves.

“Digital transformation is not a plug and play solution, especially in a diverse and complex democracy,” she continued. “A purely technological solution is not the answer. The answer is a leveraged buy-in. Technology and economics levers. Political and social buy-ins. Using digitization and cost-savings to change social inertia and political doggedness. That’s the recipe for adoption. And adoption is central to digital transformation!”

“Two clients, together, define the success of Italy’s digital transformation. Focus on the two client groups as two distinct customer segments: The PA and the Italian public. However, each client needs a slightly different approach for awareness and adoption,” she said.

“To increase buy-ins, we need to promote and highlight these digital transformation efficiencies,” Sean remarked. “The 2013 University of Milan estimates show that public administration alone can save €35 billion per year: €15 billion from non-value-added processes such as duplication and errors, and another €20 billion in taxes from increased financial transparency in company operations, fewer cash payments, and electronic procurement. In municipalities, ANPR can save 3.5 million hours of tedious work per year of managing address changes alone. That’s nearly 438 hours of savings per municipality every year.”

“But, how do we change a mindset of ‘you don’t understand the Italian bureaucracy! Nothing will work here’ to sharing, collaboration, transparency and openness?” Mark continued. “We need to help local administrations understand that ‘sharing’ data does not mean ‘giving up’ or ‘handing over’! After all, openness is about collaboration. Openness is about transparency.”

“Perhaps an open big data platform can convince them of the benefits of sharing to create a common, collaborative knowledge economy where data sharing is symbiotic, not parasitic,” Mark added. “I suppose helping both the local PA and the citizens get past years of deep-rooted cynicism should be one of the primary objectives.”

Decades of economic, political, and social turmoil had caused Italians to become cynical about and distrust a government that had failed to offer stability and curtail its own spending. Living standards had fallen, while taxes had risen under an economic austerity umbrella. In parts of Italy, graft and corruption in local government commonly occurred.

A long culture of bureaucracy and corruption had made Italian citizens distrustful (refer to Appendix D). Only 19 percent of Italian citizens trusted the Italian parliament, 21 percent trusted banks, 29 percent trusted the country, 30 percent trusted the region, and 33 percent trusted the EU. The church commanded 38 percent trust among Italians, while 42 percent trusted their local government, 54 percent their schools, and 56 percent the Italian president who stood over Italian party politics.

“That cynicism is palpable, Mark!” Stella said. “I was looking at The Economist’s 2019 Internet Inclusive Index (The Economist, 2019). Italy ranks 20th globally and 10th among the 20 countries in the EU. We have extremely relevant content. But how good is relevant content if user access is weighed down by poor network quality? What is even more disconcerting is that Italy ranks 81st in trusting online privacy and 99th in trusting government websites and services. No wonder that, in 2017 and 2018, only 22 percent of Italians accessed public administration services online compared to 53 percent of E.U. residents. We have to create an effective communication strategy to engage the public. We have to dispel their fears and distrust of interacting with the government online? Is its age-old government bureaucracy that has the Italian public so jaded?”

“Indeed, Stella!” Mark replied. “The push was towards using digital transformation for achieving efficiencies. But, as you say, transforming policy into practice is murkier. Not just efficiencies but
effectiveness. How are we to achieve effectiveness? Effectiveness not only needs formal buy-ins but an intrinsic belief that digital transformation will positively change Italy. You can mandate policy but can’t mandate belief or trust!"

“Without trust, even a progressive strategy can fall prey to a regressive culture,” Sean added. “Successful project execution meant getting all of Italy on board—the public administration, the citizens, and the private sector. Public administration is a very different being, especially in a democracy. Italy, along with Europe, is going through so much change and upheaval. We need our country to believe in, not distrust, the government. But how? Belief has to start at the grassroots, by the people and their locally elected officials. How do we get the public to believe that digital transformation is not a function of technocracy, bureaucracy, or plutocracy but of democracy?”

“Getting local public administration support is elemental for digital transformation,” Mark replied. “We need to promote best use cases and best practices from local administrations. Perhaps begin an annual public administration digital transformation award to highlight local public administration accomplishments as hallmarks of best practices that others can look up to and implement locally. Let them take pride in participating in and promoting change.”

The team settled their bill and headed back to the office. Stella’s thought-provoking words resonated with everyone. They looked at her eagerly, waiting for her to continue.

“Then, of course, is the messiness in governance,” Stella said. “Team Digitale can accomplish its projects with aplomb. But who does the advocacy and builds trust required for implementation? Is it the central government or the local government? Should it be Team Digitale, AgID, the president, or the parliament that should coordinate the digitization and build trust and security across Italy?”

The team walked in silence while contemplating solutions—solutions that could help every Italian, unify the country on a digital platform, and elevate Italy out of its economic malaise.

The team neared their offices by Piazza Colonna. To their right, shops in the Galleria Alberto Sordi glittered in the dusk. To their left, Marcus Aurelius’ column stood tall. They looked up. What a beautiful city! What a delightful country! As they dispersed to tie up loose ends for the day, Sean turned towards the others.

“Compliments, once again,” he said. “Hopefully, with ANPR and PagoPA, the battle for design and development is nearly over. The battle for adoption and trust has begun! Let’s think of a modus operandi and regroup tomorrow morning.”

2 The Morphology of the Context

Italy has much heritage and tradition, but it also served as the birthplace of the Renaissance. Since 1906, Italy has had 20 Nobel Prize recipients. With more than €1.7 trillion in gross domestic product (GDP) (2018) and €28,000 GDP per capita, Italy is the third largest economy in the EU and a member of the G7. Italy has 20 regions, 107 provinces, 8,101 comuni (administrative division), and 23,000 local administrations. Italy has 60.5 million inhabitants (2018) with 69 percent living in urban areas including 14 metropolises, of which metropolitan Rome is the largest with nearly 4.5 million people. Further, 74 percent of the population is Catholic. The country offers free education for children from six to 16 years of age and public universal healthcare. Yet, it suffers from a low GDP growth rate (<1% in 2018-2019), high government debt to GDP (132% in 2018), low inflation (1% in 2018) and high unemployment (10.5% in January, 2019) with nearly 33 percent youth unemployment (2018).

After a long history of being a patchwork of independent nation states, the Risorgimento (resurgence) unified Italy as a single nation state in 1861. Since 1946, Italy has been a parliamentary, constitutional, democratic republic with a de jure or largely ceremonial president and a prime minister with de facto power. Italy has a fragmented multi-party system. The council of ministers holds executive power, and the country refers to the prime minister as the president of the council of ministers. The country has active center-right and center-left coalitions with more than 10 percent of the votes, five major parties each with more than four percent of the votes, more than 25 minor parties with at least one percent of the votes, and more than 35 regional parties. The sheer number of political parties and the corresponding shifting coalitions, constant compromises, and deal making has often led to policy fragmentation and stalemates. Since World War II, Italy has had 61 governments (recent government turnovers in Appendix E).
As the 21st century arrived, Italy had to reconcile with a competitive world marked by technology and globalization. Further, it traded in its 142-year-old currency (1861-2002), the Italian Lira, and adopted the Euro. As a part of the Eurozone, Italy would enjoy less currency fluctuations and currency risks, more transparency, and greater access to its markets, which would allow more lucrative trading opportunities.

However, the Euro, by itself, would not bring economic stability and prosperity. Countries would need sound management, to adhere to the Economic and Monetary Union’s (EMU) rules, and to reduce anti-competitive labor and legal practices. The Maastricht Treaty required Eurozone members to control gross government debt (the accumulation of previous government deficits) to GDP ratio to remain under 60 percent. Both rules required Italy to rein in its government spending and increase revenues from productivity and taxes.

2.1 Bureaucracy and a Shadow Economy

A culture of internal divisions, antiquated processes, parochialism, tax evasions, and outdated laws, stymied Italy. It had begun to lose its competitive edge in a world that globalization and technology were redefining.

Italian labor laws from the 1970s made firing underperforming employees constitutionally impossible. Wages had grown but productivity had not. Unemployment was rife. For example, Article 18 of the Italian “workers’ statute” law that governs employee rights states that Italian employers with more than 15 employees could request Italian courts to decide on sackings’ justification. Interestingly, most judgments required companies to reinstate sacked employees. Although lawmakers originally created Article 18 to protect employees from unscrupulous behavior such as rampant sexual harassment and terrible work conditions, its abuse had turned Italy uncompetitive and regressive. Companies could not downsize or automate to cut costs. Productivity remained low given companies’ inability to sack underperformers in a competitive economy. With high absenteeism, low productivity, and assured tenure, Italian youth unemployment reached more than 40 percent in 2014. As a result, employers opted against hiring full-time employees to circumvent Article 18 and instead hired “precario” or short-term employees with low pay and a slim probability of gaining permanent positions.

In Italy, governments had guaranteed pensions for workers retiring as early as 57 as long as they had contributed specific number years in the workforce. However, Italians were living longer and having fewer children, which increased the percentage of older population. Italians did not want to bring more children into a country where youth unemployment, which ranged between 28 (2010) and 42.7 percent (2014), was among the highest in Europe. With fewer youth contributions to a quickly ageing population that lived longer, the pension coffers rapidly depleted. Tax evasion commonly occurred due to a culture of “only fools pay” (Plumer, 2011). The shadow economy, with under-the-table cash exchanges and people driving Ferraris and Porsches without declaring any income, had dearly cost the economy. In 2011, the Washington Post (Plumer, 2011) reported that the Italian government lost €300 billion per year to tax cheats, a sum that could pay off Italy’s €2.2 trillion debt in less than eight years.

Organized crime and corruption made matters worse. In 2016, Piercamillo Davigo, an Italian Supreme Court judge with years of prosecution experience, bemoaned that, “the politicians haven’t stopped stealing, they’ve stopped being ashamed of it” (Webb, 2016). The mafioso (mafia), once captive to southern Italy, had gone national and often acted as contract grantors and protectors in regions where citizens could not trust the government. Mafia often worked closely with government officials to secure contracts using bribes and threats. Virginia Raggi, who belonged to the Five Star Movement party and served as the Rome’s mayor since 2016, rallied against established politicians and public officials who worked with the mafia in order to rig public contracts and pocket millions of euros. The country lacked transparency, and Italians often accepted graft and corruption as a part of life. Italians sometimes trusted the mafia more than the government. Transparency International’s 2017 Global Corruption Barometer found 46 percent of Italians felt that their government was corrupt, and 70 percent rated their government as “bad” in fighting corruption.

3 The Debt Crisis

The 2010 European sovereign debt crisis compounded the malaise. Since 2008, globalization and cheap credit had turned Italy (along with Iceland, Portugal, Greece, Spain, and Ireland) profligate. Italy, Greece, and Ireland each carried government debts more than 120 percent of their GDP.
Financial and market globalization had brought in cheap money and cheaper goods, and governments and people spent beyond their means. Governments started to become larger and more inefficient and fund overly generous pensions while foregoing competitive technology and resource investments in an age of global competition. Productivity was low and tax evasions became rampant.

The debt crisis began in 2008 with the collapse of Iceland's banks and spread like wildfire to Portugal, Italy, Ireland, Greece, and Spain. In 2010, in order to keep governments running, the European Central Bank (ECB) agreed to a €110 billion package for Greece followed by €85 billion for Ireland and €78 billion for Portugal in 2011.

As the old adage goes, with carrots come sticks. The ECB, fearing further bailouts and debt crises, instituted strict conditions. Although Italy did not need a bailout, Italian banks carried much of the loans and were stretched thin. Italy needed to force financial austerity and drastic pension and labor law reforms that increased labor mobility, youth employment, and economic productivity and competitiveness. Following an ECB ultimatum and a promise to buy Italian bonds to fend off an Italian debt crisis, Italy had no choice but to accept austerity and fiscal reforms in 2011. But, after years of indulgence and profligacy, such reforms came at a high social and political cost.

3.1 Austerity ad Portas

In order to eliminate its budget deficit by 2013, Italy had to drastically cut spending and increase taxes to raise more than €45 billion in two years. Silvio Berlusconi, then Prime Minister, whose party had promised to never put their hands in Italian peoples’ pockets, now proposed increasing taxes by five to 10 percent for people who made more than €90,000 per year, clamping down on tax evasions, increasing capital gains taxes by 20 percent, freezing public sector salaries and pensions, changing pension payments from seniority to contributions, and limiting cash transactions. These reforms met fierce resistance.

Libero, a right-wing newspaper, splattered its front page with: “Dammit! Betrayal! They’re raising taxes”. From Milan to Palermo, thousands of students, far-left communist party members, workers, and labor union members protested with an anti-austerity backdrop. Protestors and rioters broke into the Italian senate hall, destroyed statues, and occupied the Colosseum. On November, 2011, Berlusconi resigned in the mayhem, and a pragmatic technocrat, Mario Monti, replaced him.

Monti, promising to forego his own salary, set a broad and deep agenda for the sake of austerity. Monti sought to liberalize Italy’s labor markets. His government set out to reform anti-competitive monopolies and tariffs set by professions such as physicians, pharmacists, lawyers and taxicabs. Monti planned on reforming Article 18 to increase youth employment and labor mobility. Labor unions dispensed resistance to Monti’s reformist agenda, and he resigned in December, 2012. Another technocrat, Enrico Letta, took his place.

Enrico Letta, a low-key center-left political, tried to work with a left-right coalition towards economic improvement. By the third quarter in 2013, Italy’s GDP growth had stopped shrinking and had hit zero-growth. Economic hemorrhaging had subsided, but a recovery was far from palpable. With the forconi (pitchforks) protesting against globalization and Italy’s economic quagmire, Letta was ready to resign after a year. In turn, Matteo Renzi took his place.

4 Il Rottamatore and Digital Disruption

Matteo Renzi, a charismatic technocrat and Florence’s previous mayor, took over as the youngest Italian prime minister on 22 February, 2014. Matteo Renzi, il Rottamatore, stepped into office not with traditional platitudes but with a sledgehammer. No more cajoling or pandering. The 39-year old Renzi planned to radically change Italian politics, governance, business, and society.

Renzi wanted to forego Italy’s dysfunctional political system and speed up the tempo of reform and disruptive innovation as a cure for Italy’s dawdling economy. He wanted to disrupt the status quo and force Italy to reconcile with the future rather than hanging on to the past. “My ambition [for Italy],” Renzi said, “is not to do better than Greece but to do better than Germany.” With his 2015 Jobs Act reform relaxing Article 18 rules to increase labor participation and mobility, Renzi now set his sights on digitally transforming Italy.

Renzi was no newcomer to reform, disruption, and digitization. As Florence’s mayor from 2009-2014, Renzi had slimmed government spending and embraced technology. Renzi rode a bicycle to office,
had halved the number of city councilors, and installed 500 free Wi-Fi access points across the city.

According to a 2016 New Yorker article (Kramer, 2016):

*Italians who admire Matteo Renzi call him “our best hope”. More skeptical Italians say, “Well, maybe our only hope”. The Western press hedges its bets with “brash” but “confident”. And his enemies use the term il rottamatore, the demolition man. Renzi agrees with his enemies. “I’m the scrapper,” he told me. “I’m cleaning up the swamp.” He meant the waste, the deadly bureaucracy, the notoriously padded ranks of Italy’s public administration, the unemployment now at forty per cent among the country’s youth, the outrageously slow pace of the justice system, the culture of cronyism, political perks and payoffs, tax evasion, casual everyday criminality, and open cheating—not to mention the various mafias, from the Cosa Nostra to the Camorra and the ‘Ndrangheta, that still hold much of the economy of the South (and not a little of the North) in thrall. “We love Italy, I think you love Italy, everybody loves Italy,” Renzi had told the Council on Foreign Relations one morning last September, during a trip to New York for the opening of the United Nations session. “This is the risk for my country.” The risk has been that, for Italians, loving Italy is a way of saying, We’re used to the swamp we have, we know our way around in it—why bet on a future that might be worse?*

Renzi believed that technological and digital innovation were ingredients to Italy’s future relevance and competitiveness.

In 2010, prefaced by the 2009 German Digital Agenda, the European Commission forwarded the Europe 2020 agenda based on “smart, sustainable, inclusive growth” by raising employment, research and development, energy efficiency, education, and income. Smart growth needed a knowledge and innovation economy. Digital growth and the EU’s “digital single market” formed its heart. A digital single market would create hundreds of thousands of jobs and over €416 billion to the EU. EU members independently set their national strategies and plans for the “digital European agenda”.

Mario Monti’s government had created a cyber-security council and a computer emergency response team for public administration under the AgID’s control. But no formal digital transformation structures existed. In 2015, Renzi drew up a national strategy in collaboration with various regional governments and local administration for an ultra-wide band plan for Internet access and a digital growth strategy.

In September, 2016, in a radical, innovative shift to its traditional roots, the Italian Government embarked on a series of dynamic and innovative projects to digitally transform and enhance Italy’s competitiveness. In order to future-proof Italy, the Italian Government appointed a commissioner for digital agenda along with an ecosystem of best-of-the-breed technology designers, developers, project managers, and officers under the banner Team Per La Transformazione Digitale or Team Digitale.

The government created Team Digitale, the digital transformation team, to build the country’s “operating system”, a series of fundamental components on top of which it could build simpler and more efficient services for the citizens, the public administration, and businesses through innovative digital products.

Matteo Renzi realized that digital disruption required new, fresh thinking and fresh blood. Government employees often had to serve political alliances. He needed to hire more “entrepreneurial” talent from outside the government—people that would bring private-sector best-practices to the public administration, manage costs and accountability, focus on consumers, and inspire top talent to join Team Digitale in Italy’s digital transformation.

Matteo Renzi chose Diego Piacentini, Amazon’s Senior VP and Jeff Bezos’ top lieutenant, to lead the charge.

Diego Piacentini, a native Italian, joined Apple in 1987. He led Apple’s Italian and Europe, Middle East, and Africa business divisions until 2000 when he left Apple to join Amazon. Piacentini, as the head of Amazon’s International Consumer Division, claimed his fame with a successful market expansion in India. With a rich pedigree of successes behind him, Piacentini took a two-year leave of absence from Amazon in 2016 to join Renzi’s digital-transformation initiative pro bono and build Team Digitale Piacentini became the first commissioner for the digital transformation agenda.

All around the world, public administration bureaucracy, redundancy, and waste commonly occur. Piacentini found the same worrisome traits in the Italian Public Administration—traits that cost Italian taxpayers and the government millions. Piacentini (2016) wrote.
The public administration often asks us to produce documents (or self-certification) that declare what they already know. We also have to go round in ridiculous circles just to get services. The latest ordeal I managed to survive was my passport renewal. While searching through the State Police website, I discovered that now we can get an "electronic passport"! But my enthusiasm quickly diminished when I discovered that I can use the website only to make an appointment to bring my application in and to download a partially compiled application form (missing, naturally, the usual information that the public administration already knows). I also discovered that in order to present my application to the police station, first I have to buy a special stamp from the tobacco shop to pay administrative tax, then to the post office to get a receipt showing I paid for the passport (with the usual service surcharge of 1.50 Euro). How is it possible that I still can’t make online payments or pay directly at the police station (with an ATM or credit card) when I present my application? On top of all this, I also have to bring the usual two passport size photos. [...] Of course, the photos I brought have to be attached to the application before one of them is scanned (along with my signature) so it can then be printed onto the passport!!! Why am I being asked for a printed photo that is just going to be scanned? Wouldn’t it be simpler to have a small webcam to take a picture of me at the presentation of my application? And have a better-quality photo as well (something that is regularly done in other European countries and more besides)?

Piacentini realized that the Italian public administration, like most public administrations in the world, needed digital transformation and simplification to reduce waste and increase efficiencies. Piacentini got to work and inspired and recruited top talent from the private sector to join Team Digitale. He called them digital "missionaries" who acted as "flywheels of innovation" to ferry Italy’s digital transformation mission into the future. He would do so with "ambition and optimism".

Team Digitale, with Piacentini and his "missionaries", launched a series of digital-transformation initiatives. Their mobile-first approach decided on the smartphone as focus device and the cloud as the focus venue. With a once-only principle, Team Digitale would build no redundant systems, which would save it the government millions of dollars. Systems followed best practice agile development methods. All government systems would transparently connect and talk to each other using open-source APIs. Public agencies and local governments and PAs would analyze and freely share data and information. Collaboration would be paramount.

Team Digitale started redesigning and relaunching ANPR (the national digital resident registry), PagoPA (the single payment system), SPID (the digital identity system), and CIE (electronic ID card) to build a common and secure data platform and standards with transparency and interoperability.

Then came a change in politics. In December, 2016, merely three months after Piacentini joined, Matteo Renzi lost a referendum and resigned. Paolo Gentiloni became prime minister. Following the 2018 political elections with no clear winner, the new coalition agreed on Giuseppe Conte, an independent candidate and law professor, as the new prime minister with right-wing Matteo Salvini and anti-establishment Luigi Di Maio as deputies.

Undeterred by the political sea-change, Team Digitale never strayed from its objectives. Staying out of political shadows, Team Digitale deployed its projects on time and under budget.

Beginning with only one registered municipality, ANPR expected 4,000 of Italy’s 8,000 municipalities and 45 million of Italy’s 60 million citizens to register digitally by 2019. PagoPA transactions had grown from 150,000 digital government transactions by 2015 to 3.5 million transactions by April, 2018, with more than 430 payment service providers covering 90 percent of Italy’s banking system. With the SPID project, 4.7 million digital identities had been released since September, 2016, and 94 percent of municipalities had issued 5.5 million electronic ID cards.

Even though the new coalition had railed against Renzi, it renewed its pledge to support Team Digitale. The coalition appointed Luca Attias, the new extraordinary high commissioner, as Piacentini’s successor for implementing Italy’s digital agenda.

Luca Attias, once a public administration insider, was a “disobedient innovator” known to disrupt and streamline bureaucracy. A champion for digitization, Luca Attias (2018) has noted that "today, the civilization of a country is also measured by the degree of digitization achieved".

Luca Attias believed in leveraging existing resources while ushering in a digital culture and digital continuity that political colors do not affect. Attias embarked on making digitization accessible to all parts
of society—the unemployed, the disabled, all employees, and all students—from an early age. He felt that innovative digital change that simplifies people’s lives constitutes the fundamental substrate. “Good digital technology is about transparency, efficiency, inclusion, a fight against corruption,” he has said. “It is better health, better schools, better jobs, and above all, a better future.”

Change was in the air. Team Digitale was helping a digital renaissance take shape. It was time for wide-scale coordination, execution, and adoption.

5 Quo Vadis?

The spring dawn over Rome seeped through its baroque splendors like a resplendent cloak. The sunshine draped 28 centuries of architecture, art, and history. She was once *caput mundi*, the capital of the world, a host to the caesars, the popes, and artists, and architects such as Bernini, Raphael, Bramante, and Michelangelo.

En route to work, Sean, Geoff, Mark, and Stella noticed growing numbers of Ricarica and Tesla EV (electric vehicle) charging stations facing historic facades and architecture. Modernity and antiquity side by side in harmony.

The team needed to figure out solutions to a series of short-term and long-term concerns. Italy had medium levels of overall government digitization (around 58%), slightly below the E.U. average, and Italy’s open data and private sector digitization had almost reached the European average. However, digital skills, technology usage, network quality, and connectivity in Italy remained low. The country’s network connectivity suffered from 4G availability that covered only 65 percent of the country and patchy and often dropping signals. Southern Italian regions such as Sicily, Basilicata, and Molise had average download speeds around 20 Mbps compared to 30 Mbps in regions such as Piemonte and Lombardy in the north. With richer media and content, varying download speeds can dampen user experiences.

Beyond connectivity and government digitization, Team Digitale worried about whether citizens would adopt and could effectively use these e-government services. Italy had the lowest adoption rate of e-government digital services (less than 18%) in the 28 countries in the EU. Only 22 percent of individuals in Italy interacted online with the public administration compared to the 53 percent average across the EU.

While, for one part of the population, phone taps had begun to replace mouse clicks and users demanded simplicity, efficiency, and access, the other part of the population still held on to their own way of life. Team Digitale knew that it all begins with awareness and interest. How should the Italian Government build awareness and interest in a country replete with mistrust towards politics and the government?

Essentially, one has to conduct implement any technology with culture and context in mind. People in Milan or Florence may have different priorities to people in rural communities such as Cortina, Aosta, Rimini, or Lecce. In rural communities, life is slow, and community is perceived as being more important than efficiencies. Efficiencies may not matter to many parts of the population where time has a different meaning and connotation.

Italy has many small towns and provinces where people enjoy their old way of life. They go to a post office or a government agency to sign or deposit a paper because they find community in such places. The post office or the government agency serves as the community’s waterhole. They meet with their friends, talk about their lives and living, exchange pleasantries, and renew their social connections. Efficiency represents a secondary concern in such situations. Such people may view digitization as removing that tradition and destroying their social fabric.

Digital transformation does not constitute a technical solution. Rather, it constitutes a socio-technical and socio-political solution, especially in large and complex democracies with diverse, contending stakeholders.

Digitally transforming public administration involves multiple facets that must simultaneously address (i) technocratic and rational aspects technology, education and labor supply, fiscal control, and (ii) socio-political aspects culture, psychology, and tradition.

Most of all, digital literacy serves as the preface for efforts to build a digital workforce. In order to boost digital literacy, Italy desperately needed to elevate its technology education. It lacked good IT talent. Only 14 out of every 1,000 students graduated with a science, technology, engineering, or medicine (STEM) degree, and vocational education in these areas had low appeal.
Digital transformation needs access to a labor force trained in technology and medicine. If demand for digital services grows but a qualified labor force does not grow with it, labor costs will rise. Italy needs to produce more students that know how to design and build technologies—not just digital natives but digital visionaries, designers, and developers.

The Italian Government realized the issue and had begun to try to address this problem. The 2015 National Plan for Digital Schools (*Piano Nazionale Scuola Digitale*) had begun teaching students digital skills at primary school. The Ministry of Education has started this reform called *La Buona Scuola* to impart digital and computer science skills to prepare them for a digital future and contribute to Italy’s digital performance. But two issues emerged. First, the program remained in its nascence and, thus, had uncertain results. Secondly, Italy urgently needed a digital workforce and time was a luxury. It needed more vocational education to bridge the gap between supply and demand.

One can more easily bridge this gap in theory than in practice. Italy’s education system remains highly unionized and bureaucratic, which makes it resistant to quick changes. The country needed a digital workforce to become competitive in the digital world. But, in order to achieve that objective, it needed quicker solutions.

Then, of course, with a sagging GDP and high unemployment, not everybody in the workforce could afford to return to university. People required an on-demand education over the Internet that they could take in small digestible modules and that moved from covering fundamental aspects about digital literacy to more advanced aspects.

In parallel to educational efforts, digital transformation in Italy’s public administration must reduce channel conflict for successful implementation and adoption. Digital transformation in a democracy has two clients: the citizens and the public administration. Successful implementation must address both stakeholders’ needs without creating a channel conflict. In such a confluence of culture and context, questions remained:

- How should the Italian Government practice digital transformation without threatening the social fabric?
- What concerns surrounding restructuring AgID and digital transformation governance might exist?
- Should change management begin with and focus on the government or the citizens?
- How should Team Digitale engage and include Italians who distrust the government?
- How should Team Digitale engage with local governments that view digital transformation as a threat to their culture?
- What approach could Team Digitale use to highlight and promote best practices by individual local governments?

Moreover, to digitally transform its publication administration, Italy needs to forego internal divisions and age-old processes and alliances to create a unified digital presence. Thus:

- How can Team Digitale, as a part of the government, successfully implement digital transformation in a country with low network access and very low trust in the government?
- How should Team Digitale overcome future 1) political/legal, 2) economic, 3) socio-cultural, and 4) technological challenges? What should Team Digitale do?
- How could Team Digitale bridge across Italy’s diverse regions and powerful local administrations?

In the distance, cypresses surrounding the Seven Hills of Rome swayed to a warm breeze and warm sun, bringing Rome out of hibernation into an interesting summer.
References


Appendix A

**Team Digitale**: A “Digitale” Renaissance in the Italian Public Sector

**Mission**
Make public services for citizens and businesses accessible in an easy manner, via a mobile first approach, with reliable, scalable and fault tolerant architectures, based on clearly defined APIs; support the different central and local government departments in making the best and most data driven decisions, thanks to the adoption of big data and machine learning techniques.

**Vision**
The “operating system” of the country: a series of fundamental blocks upon which services for citizens, the Public Administration, and enterprises are built with modern digital products.

**Projects**
- **Budgeted**: €14.9 million
- **Used (01/2019)**: €9.3 million (63.18%)
- **ANPR**: Single Digital National Registry (expected 4,000 municipalities & 25 million registered by 2019).
- **PagoPA**: Single Digital (and offline) Public Administration Payments Platform (35% active municipalities).
- **SPID**: Single Unique Digital Identity for every Italian (4 million digital IDs released)
- **CIE**: Chip-based Electronic ID Card for every Italian (5.5 million eID Cards issued)
- **Project IO**: Integrated One-Stop shop for Public Administration Services (June 2019 select release).
- **APIs**: for connectivity and interoperability, Cloud Infrastructure, Data Analytics Framework, Open Document Platform.

**Stakeholders**
- **60.5 million Italians**: Government for strategic guidelines and legislations.
- **AgID**: for translating strategic digital objectives into planning and digital regulation (D4C).
- **Department of Public Administration to oversee AgID**.
- **Ministry of Economy and Finance (MEF)** to monitor digital transformation investments.
- **Central, Regional, and Local Public Administrations**.
- **Tax agencies, Social Security Institutions, and Central Purchasing for Bids and Tenders**.

**Ecosystem Partners**
- **430 Payment Service Providers (~90% of Italy’s banking)**.
- **Bancomat Interbank Network**.
- **Department of Automobiles (ACI)**.
- **Revenue Agencies**.
- **Pilot Public Administrations**.

**Political**
- **Parliamentary Government** with Prime Minister as the Head of Council of Ministers.
- **60.5 million People**.
- **20 Regions (6 Northern, 4 Central, 8 Southern)** + Sicily and Sardinia.
- **96 Provinces**.
- **14 major cities**.
- **7,960 Municipalities (commune)**.
- **23,000 Local Governments**.
- **61 Governments since World War II**.
- **Most governments are coalition governments**.
- **610 communi (2009)** controlled by Mafia (mostly Sicilian Mafia and Calabrian Mafia).

**Economic**
- **G7 Member**.
- **3rd Largest EU economy**: 8th largest world economy.
- **GDP**: $2.1 Trillion.
- **GDP per capita**: $34,260.
- **GDP growth**: 0.9%.
- **Services Sector**: 74%.
- **Unemployment**: 10.6%.
- **Youth Unemployment**: 34.7%.
- **S&P Bond Rating**: BBB.
- **Public Debt to GDP**: 132%.
- **Municipal Productivity**: Milan: €594 billion.
- **Rome**: €294 billion.
- **Naples**: €140 billion.
- **Received a 2017 EU bailout for Monte dei Paschi di Siena**: bank at the center of Italy’s banking crisis. Bad loans still remain an issue.
- **Data: 2018**.

**Social**
- **Large divisions between Northern and Southern Italy (Mediterranea)**.
- **Levels of Social Trust (2018)**
  - **Trust in Parliament**: 19%.
  - **Trust in Banks**: 21%.
  - **Trust in the Country**: 29%.
  - **Trust in the Region**: 29%.
  - **Trust in the EU**: 33%.
  - **Trust in the Church**: 38%.
  - **Trust in the Local Govt**: 42%.
  - **Trust in the Schools**: 54%.
- **Youth Unemployment**: 34.7%.
- **Corruption costs**: $60 billion per year – 4% of Italy’s GDP (2017).

**Technological**
- **€5.7 billion IT budget**.
- **Public Trust in Internet**: 59%.
- **Extremely Low Trust in Govt Websites and Apps**: Score of 1.6 out of 100.
- **High Internet penetration but more than 10% gender gap in Internet and Mobile phone access**.
- **25,000 government websites**.
- **160,000 databases**.
- **11,000 data centers**.
- **32,000 IT workers in government IT with 18,000 in central public administration (PAC) and 14,000 in local public administrations (PAL)**.
- **10,000 IT contract workers spread across local and central governments**.
- **Lack of university and STEM graduates**.
Figure A2. Team Digitale Budget Utilization since Team Digitale’s Establishment to 25 January, 2019 (Team Digitale, 2019)
Appendix B

Figure C1. Days Lost to Bureaucracy in the G7 (2015-2017) (OECD, 2018)

Figure C2. Economic and ICT Data for Italy (2005-2016) (OECD, 2018)
Appendix C

Figure C1. io.italia.it: Application Interfaces
Appendix D

Figure D1. Italian Citizens’ Trust in Institutions (2011-2018) (Demos, 2018)
Appendix E

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<tr>
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<td>Paolo Gentiloni</td>
</tr>
<tr>
<td>12/22/19</td>
<td>Giuseppe Conte</td>
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</tbody>
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Figure E1. Italian Prime Ministers’ Days in Office (as at 11 April, 2019)
About the Authors

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