

An Italian digital strategy? A tentative analysis

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1. Abstract

Italy, like all modern democratic countries, is dealing with the impact of digital technologies and the “age of data”. Since 2001 we can observe how the government has taken into consideration the need for norms that manage innovation and digitalization. While digital technologies are often dealt with as an opportunity to reform the administration in Italy, we can observe other trends in cyber-security or algorithms which are also shaping Italian government action in relation to the geopolitical context. This empiric analysis can foster a debate about the “Italian model” and whether we can really determine a unique “Italian strategy” for digital issues. It is also an extremely interesting field to look into in order to determine the evolution of a European member state such as Italy facing international trends determined by digital issues and technologies.

Keywords: Italy, Digital Policies, Innovation, Government, Cyber Security, Geopolitics

2. Introduction

The question of an Italian digital strategy harkens back to fundamental issues. Digital has become a disruptive aspect of the twenty-first century, and issues of governance in the digital age tap into both the future of power in the digital context and issues of governance in the digital sector¹. Italy, like other member states of the European Union, represents a technology market with high levels of digital consumption while production capacity is significantly lower, a fact essentially due to the absence of global platforms/integrators. A recent estimate of the value of the digital market was 38.1 billion euros for the first half of 2023², with a significant growth dynamic.

The description of this reality leads us to a number of reflections from an economic point of view with a focus on the producers of technology, but if we consider the centrality of digital data, that is, both the fundamental aspect in terms of sovereignty and, therefore, the democratic continuity of the protection and governance of data, then the issue takes on a further dimension³. The overarching issue of an "Italian digital strategy" refers not only to issues of economic competitiveness, which already appear as key question but also to the ability to maintain sovereignty in the context of exponential use of personal data and their processing⁴, which flow into private spheres so powerful that they make the foundations of the state of law wobble at various levels⁵. For this reason, there is certainly a "strategic" need to manage the digital sector. In recent 21st-century history, this policy need has been interpreted in various ways. In the European Union, for example, we have observed the growth of the regulatory sector with a remarkable increase in capacity, and thus also in expertise, on the part of the Union⁶. The rationale has been to create legal devices to protect the rights of citizens but also to protect the corporate sector in the face of the disruptive power of digital platforms. Thus, it is a defensive logic that is based on an underlying assumption: in order to continue to gain access to the rich market represented by the European Union, the various global digital players must adapt to a set of regulations with the aim of maintaining the coherence of European social-democracy in the context of digital acceleration.

Digital-related visions were until a few years ago much more parcelled out. The Italian case offers a very interesting example. The first aspect is that of the intersection between digital and politics, that is, both to observe with what kinds of mechanisms and mobilizations, even by resorting to prominent personalities, the governmental structure takes into account the digital in its various meanings. But another reading also

¹ Autrand, André. « Gouverner à l'ère numérique », *L'ENA hors les murs*, vol. 499, no. 3, 2020, pp. 6-7.

² "Digitale: Anitec-Assinform, +2,8% stima crescita in 2023 267", Agenzia Giornalistica Italia, 25/1/2024

³ Marijnjen, Anne. « Démocratie algorithmée », *Revue Projet*, vol. 384, no. 5, 2021, pp. 57-60.

⁴ Benhamou, Bernard. « La gouvernance de l'internet après Snowden », *Politique étrangère*, no. 4, 2014, pp. 15-27.

⁵ Cattaruzza, Amaël. « La donnée, une nouveauté millénaire », *Géopolitique des données numériques. Pouvoir et conflits à l'heure du Big Data*, Cattaruzza Amaël (ed.), Le Cavalier Bleu, 2019, pp. 25-28.

⁶ Navaro Auburtin, Quentin and Weill, Mathieu. « Régulation des plateformes numériques : le moment européen », *Annales des Mines - Réalités industrielles*, vol. 2021, no. 4, 2021, pp. 37-40.

allows us to outline how through the digital we observe the continuation of certain pre-existing social structures, which among other things leads us to a number of questions about the relevance of the nation-state in the current context.

The "political" digital issues that guide our reflection also have an eminently geopolitical dimension, due to the renewed economic or political power plays that characterize the digital age in the global context, but also to the acceleration of European integration⁷. Another strategic aspect for Italy concerns positioning on international digital issues, a dimension that is often not separable from the domestic dimension, even if administrative logic seems to define permeable fences.

The creation of a Ministry of Innovation in the Berlusconi government of 2001 provides a useful starting point to tell the story of the evolution of Italy's digital policy agenda in the past few decades.

⁷ Douzet, Frédéric. « La géopolitique pour comprendre le cyberspace », *Hérodote*, vol. 152-153, no. 1-2, 2014, pp. 3-21.

3. The creation of a ministry for innovation in 2001

In 2001 Lucio Stanca was appointed head of the newly founded Innovation Ministry in the Berlusconi government. The appointment of Lucio Stanca, formerly a top executive at IBM, appears as a strong political innovation and was announced even before the elections by Silvio Berlusconi, giving it a special status, a guarantee of technical expertise that becomes a political banner⁸. Such a business imprint was very important as Silvio Berlusconi presented himself as a businessman, and he entrusted a manager with industry experience to reform government action. Lucio Stanca inaugurated the paradigm of using outside expertise to spur public action, a logic we would find again later with the appointment of Diego Piacentini to the post of extraordinary commissioner for the implementation of the digital agenda in the Renzi and Gentiloni governments.

It should be noted that in 2001 the "Department for Innovation and Technology" was established within the government, the structure that would later be in charge of translating this technological push into the administrative context.

Lucio Stanca presented in 2002 the plan on e-government with the dual intent of digitizing public administration and creating digital ways for citizens to access services⁹. This plan was part of the European initiative of the e-Europe program from the European Commission. The European Commission's commitment. Therefore, created an international context in which different countries were called upon to respond.

At the time, digitization was also perceived at the European level as a means of revitalizing democratic life, between electronic voting and the possibility of directly contacting one's political representatives (e-democracy). In the early 2000s, there was a widespread positive perception of digitization, seen from a reformist perspective, which also explains the rank of minister given to Lucio Stanca.

In addition, the Berlusconi government also developed a plan for digital innovation aimed at SMEs, which further translated this vision of technological adaptation with the pursuit of corporate modernization, an aspect that will afterwards always remain on the Italian political agenda.

Minister Stanca illustrated this vision when he declared how Italy was "doomed to innovation" and described an inescapable link between modernity and technological innovation¹⁰.

⁸ Giovannini Roberto, "Stanca, il mister I del Cavaliere. ELEZIONI AMMINISTRATIVE 2001 "STORIA DI UN ITALIANO", La Stampa, 10/4/2001.

⁹ Roffi, Barbara, "Italia debole nel confronto Ue", Il Sole 24 Ore, 1/05/2002.

¹⁰ Stanca, Lucio, « Siamo condannati all'Innovazione », Il Sole 24 Ore, 2/06/2003.

Improvement and access to PA services, the promise of digital democracy, and technological modernization of corporate behaviour were the three pillars of the Berlusconi government's action in this regard.

Incidentally, the action of Minister Lucio Stanca did not stop at a vision of reformism in digital matters but also filtered through at various Summits where international digital issues were discussed, from the "digital divide" to "governance" rules on the subject, such as the United Nations summit in Geneva in December 2003¹¹. With Lucio Stanca, Italy also inaugurated diplomatic activity aimed at digital, with the interpretation of the need to play a role in both the European Union and United Nations contexts. Innovation thus proved to be a theme with both internal and external utility.

¹¹ Caravita, Giuseppe, "Digital divide, il modello europeo", Il Sole 24 Ore, 18/12/2003.

4. Digitalization, a tool for public administration reform

When the centre-left returned to power in Italy in 2006, the ministry was renamed "Ministry for Reforms and Innovations in Public Administration" which indicates a return to a more classical view, where digital is seen as a tool in the context of public administration reforms, a relatively ancillary position to other issues.

Then when the centre-right once again gained power in 2008 we can see the pairing of the two concepts of "public administration and innovation," the title of the department entrusted to Renato Brunetta.

In 2009, the Department of Innovation and Technology was transformed into the Department for the Digitization of Public Administration and Technological Innovation, an evolution of the structure created in 2001 that confirms the orientation of an instrument aimed at achieving public administration reform.

In the Monti government of 2011, the innovation department disappeared, but the Agency for Digital Italy (AGID) was created in 2012, combining the competencies of the pre-existing DigitPA and the Agency for the Diffusion of Innovation Technologies. Although AGID counts among its missions the promotion of digital innovation in the country, therefore the mandate should be broad, we note that the bulk of the portfolio focuses on issues of digitization of public administration.

In the Renzi government, we note a further policy shift with the appointment in September 2016 of Diego Piacentini as the government's extraordinary commissioner for digital ¹². Diego Piacentini was a top manager at Amazon who had met Matteo Renzi in 2014 during a visit by the head of the Italian government to Silicon Valley. Dating back to this meeting was Renzi's invitation to Piacentini to return to Italy to help build innovation and digital policies in Italy. A dialogue between the two men grew out of this meeting, which later led to Piacentini accepting a position in Italy. The latter took no compensation and defined a two-year period for his assignment, which accentuates the "mission" dimension of his period. Piacentini and his team laid the groundwork for a number of digital applications that have been fundamental to the efficiency of public administration (electronic invoice, Spid, IO app, PagoPA payments system) ¹³, but they also raised a number of questions about policy continuity once this "extraordinary" logic was archived.

This highly significant example allows us to question the strategies for digital in Italy. As we have already pointed out, the action often revolves around the reform of administrations, with the willingness to use digital as a tool to simplify and rationalize relations between citizens and public administration in Italy. This point rests on the right analysis of the attrition that rather complicated administrative procedures

¹² "Suo padre era arrivato a Milano dalla bassa bresciana per fare il muratore e con..." Intervista a Diego Piacentini, La Repubblica, 20/09/2016.

¹³ Luna, Riccardo "Senza ministro la rivoluzione digitale è già finita", La Repubblica, 26/10/2022.

create for Italy, making services often very slow. From Lucio Stanca onward this element is identified as a sore point on which to exercise reformism for the benefit of the entire country, also to reduce the overall economic cost of administrative inefficiency.

5. Support for digitalization of the corporate sector

Another strategic line appeared during the Renzi government: the need to incentivize the digital transformation of the Italian manufacturing sector. This policy was implemented through the Industria 4.0 plan brought by Carlo Calenda when he became Minister of Economic Development in 2016. Industry 4.0 was outlined in 2016 in the form of a tax break for companies with the possibility of extremely favourable amortization of technological investments¹⁴. This plan, which also continued through 2018 under Gentiloni's government, received positive reviews from companies who stressed the progress of the Italian manufacturing sector with this tool¹⁵. After this initial positive judgment, this type of plan was never abandoned, although the versions used by successive governments seem to have lost the incisiveness of the 2017-2018 one.

What is interesting in this case, is the government successfully betting on incentives to private sector efficiency that define an action in which the government shares the implementation with, or even leaves it totally in the hands of, private operators. From this point of view, we can see how an incentive for investments deemed strategic serves as a winning strategy, also because it is not centralized. In an Italian context where we do not have a model comparable to that of the United States where federal public spending, essentially military, drags on the entire technological sector¹⁶, the strategy of defining a mechanism that allows for accelerating the technological transformation of the country's most dynamic productive sector, that of manufacturing industries, proves to be extremely suitable.

With the Conte 1 government in 2019, we see the creation of the new Digital Transformation Department (DTD), a department of the presidency of the Council of Ministers, which inherited the functions of the old department for technological innovation. It is interesting to observe the revival of the digitization issue at the governmental level, a trend that will later be confirmed by the Conte 2 government, which entrusts Paola Pisano with the Department of "Technological Innovation and Digitization." In some ways, the Conte 2 government resumes the political discourse opened with the Berlusconi government in 2001 by indicating innovation and technology as a governmental priority. Paola Pisano had previously been in charge of digital issues as a member of the municipal council of Turin and boasted a resume' as a researcher specialized in innovation management.

The Draghi government in 2021 appointed Vittorio Colao to the Ministry of Technological Innovation and Digital Transition. Colao, former CEO of the Vodafone telecommunications group, also illustrates a profile

¹⁴ Querzé, Rita, "Industria 4.0, sgravi per 13 miliardi «Basta con gli incentivi a bando», Corriere della Sera, 22/09/2016.

¹⁵ Dell'Olio, Luigi, «L'industria ritorni prima nell'agenda»; Il presidente di Federmeccanica: «Piano Calenda, una svolta È giusto puntare a innalzare la qualità della manifattura»; Ingegnere gestionale fondatore e socio dell'azienda Comec; L'INTERVISTA a ALBERTO DAL POZ", La Nuova Venezia e Mestre, 20/02/2018.

¹⁶ Chigolet, Grégory. « L'armée, la guerre et les politiques de défense : fondements et controverses économiques », *Inflexions*, vol. 26, no. 2, 2014, pp. 163-177.

of business expertise that appears to be a key resource for dragging public action. In some ways, Colao is in line with the Stanca and Piacentini tradition of a technological "deus ex machina," that is, people who did not have political careers before their appointment and are propelled into government in the name of their expertise. They exemplify three different kinds of profiles, however. While Lucio Stanca had grown up in 20th-century IBM, thus a reality very much anchored in hardware development, Diego Piacentini had a digital profile coming from his experience in Amazon, whereas Vittorio Colao seems more of a generalist with his expertise in the telecommunications market.

Coming from the telecommunication industry, Colao insisted on the development of digital infrastructure in Italy alongside a traditional push for public administration digital transformation¹⁷. Furthermore, Vittorio Colao strongly advocated the opportunity given by the National Recovery and Resilience Plan (NRRP) to Italy in order to accelerate the development of its digital infrastructures and reduce the digital divide¹⁸.

Yet we should keep in mind that within the Draghi government a high-level academic and scientific manager such as Roberto Cingolani was appointed ministry for "Ecological Transition"¹⁹. Even if his mandate was dealing with ecology and energy, the former director of the Italian Instituto for Technology (IIT Genova) and former CTO of Leonardo group represented another important example of a "technological and scientific" profile chosen by the government. Cingolani was then designated as Leonardo CEO in 2023, the main aerospace and defence Italian company, another important even if indirect asset for Italian government policy in the tech sector.

With the Meloni government in 2022, the post of Undersecretary of the Presidency of the Council for Technological Innovation and Digital Transition has been given to Alessio Butti, a sign of a relative "normalization" of digital, which is therefore downgraded to the rank of undersecretary and entrusted to a politician with a militant profile. We are thus witnessing the end to the exceptionalism that had characterized governmental action on innovation and digital in the various previous governmental configurations when men and women had to embody the possibility of an acceleration of the policy cycle to adapt to the perceived speed required.

The parable of the Italian Ministries of innovation and digital matters thus provides a number of highly relevant examples that are revelatory of the relationship with technology, with two major reformist lines: one directed at modernizing the PA and the other directed at transforming the corporate sector.

But these policies are not the only ones in the field, and the progression of the issue of cyber security must also be illustrated since it represents a key component of a "strategic" vision of the digital government.

¹⁷ Casini, Stefano, "Colao: 5 anni per fare l'Italia digitale, risorse in aumento ma non bisogna perdere questo treno", *Innovation Post*, 14/4/2021.

¹⁸ "##Pnrr, Colao: Potremmo far crescere il Pil del 3,6%", *Asknews*, 29/6/2021.

¹⁹ "Governo, Cingolani, uno scienziato per il superministero", *Quotidiano di Sicilia*, 13/2/2021.

6. The cyber security paradigm as a global strategy for digital

The perceived importance of security comes from various avenues. First of all, we must remember how the banking sector has been always closely focused on the security aspects of financial data, a fundamental element of its economic model. In the Italian case, however, we have not seen public authorities shaping financial systems. Among the various realities, we must remember the original growth of expertise within universities, in particular, the creation dating back to 1989 of the National Interuniversity Consortium for Informatics (CINI) divided into various national laboratories (information technology and society, cybersecurity).

On February 4, 2016, in the Aula Magna of La Sapienza University in Rome, the Research Center of Cyber Intelligence and Information Security (CIS Sapienza) directed by Professor Roberto Baldoni together with the CINI Cyber Security laboratory presented the draft "National Framework for Cyber Security," the result of research conducted at the Italian level in the wake of the American initiative of the same name launched by President Obama in 2014²⁰. This event appears significant on several levels. Italian academic experts not only study the dynamics underway in the United States but do so by proposing a technical/regulatory framework that can enable Italy to keep pace with the ongoing institutional modernization. Several aspects are striking. Firstly, it integrates the dialectic with the United States as a central element: the Italian experts see that not only the understanding of the U.S. dynamic is fundamental, but they also conceive it as a working basis for proposing a national position, which is then elaborated in dialogue with U.S. experts. Incidentally, the participation of Adam Sedgewick, NIST senior information technology policy advisor at this conference in Rome illustrates this in many ways integrated view of U.S. and Italian dynamics. The 2016 event also illustrates the ability of Sapienza/CINI CIS specialists to engage Italian authorities, as demonstrated by the presence of Marco Minniti, undersecretary to the Prime Minister's Office with responsibility for intelligence and the Delegated Authority for National Security. This event is not only an epiphenomenon and illustrates the work done over the previous decades by the various Italian research centres federated in the CINI network but also the growing perception of cyber threats at the international level producing political mobilization. It still represents a decisive moment in getting away from the predominantly academic context to start mobilizing the relevant authorities. We also see a clear manifestation of how, in the cyber security field, academic expertise manages to establish itself at the forefront of the Italian position, a non-trivial aspect.

Also striking is the holistic approach developed with this "framework" involving both public institutions and private companies²¹. This effort was continued the following year within the framework of the ITASEC

²⁰ Dal Co, Mario, "Cybersecurity, arriva il manuale per le aziende", *Corrierecomunicazioni.it*, 5/2/2016.

²¹ Dal Co, Mario, "Cybersecurity, Baldoni: "Pubblico e privato insieme per aumentare la sicurezza", *Corrierecomunicazioni.it*, 24/2/2016.

conference organized in Venice²² and was concretized in February 2017 with the creation by the Italian government of a National Committee for Cybersecurity Research²³. The chairmanship of this committee has been entrusted to Professor Roberto Baldoni, and we immediately note the global scope of the effort undertaken with an expanded vision of the Italian technological ecosystem that needs to be protected. Among other things, this intent to protect the various critical Italian institutions, including the private company sector, corresponds from a security perspective to the ongoing effort to invest in the corporate sector through the Industry 4.0 plan. The subsequent appointment in December 2017 of Roberto Baldoni as deputy director of the DIS (Department of Information for Security, the coordinating body of the Italian intelligence services) with responsibility for cybersecurity²⁴ illustrates the speed with which the issue of cyber security has been integrated as a priority among Italian institutions but also the remarkable path of Roberto Baldoni who in a few months went from academic expert positions in the field to be appointed in the key man in the institutions for security²⁵, to the point that in the Italian press, he has been described as the Italian "Cyber Czar"²⁶.

The growth of Roberto Baldoni within the DIS very quickly led to a growth in the competencies of the structure with new hires and operational capabilities²⁷, at the same time ITASEC and CINI continued to indicate tools for a comprehensive and in some ways integrated management of the national dimensions of cyber security in the context of a "White Paper for Cyber Security" to which Baldoni himself had contributed when he was not in charge of the DIS²⁸. The strategic nature of this document is striking, as it manages to pull together several parameters to propose a vision of the country's evolution in the digital context. It certainly does so under the lens of threat protection and security, but by having such an all-inclusive approach between national and international parameters that, in some ways, it appears as a true digital strategy for Italy. This approach will later be confirmed by the law adopted in 2019 that defines a "National Cybersecurity Perimeter" to be applied to assets considered strategic²⁹.

Adopted by decree-law with the Conte 2 government, after having been developed by the previous executive, this device appears extremely interesting because it defines classic protection tools in the event of cyber-attacks, but it does so with a notable effort in the overall definition of the set of subjects that must be protected. The priority is security, which requires a centralized instrument under the authority of the head of government (the inter-ministerial committee for security) and involves all public but also private actors³⁰. Furthermore, the determination of the "Cyber Security Perimeter" requires a reconnaissance of the structures to be protected at a national level, which also means an unprecedented operation of strategically defining the value of all the structures and companies. In the same decree, the "golden power" system is expanded to 5G, which strengthens the Italian government's control over companies that deal with telecommunications networks. At the time, this move was also dictated by the desire to consider the positions of the US authorities who were particularly cautious regarding Chinese penetration of technological supplies in Europe. In the context of a tense international framework, where the issue of

²² "Cybersecurity: a Cà Foscari gli 'stati generali'", Adnkronos, 15/1/2017.

²³ Salerno, Antonello, "Cybersecurity, nasce il Comitato ricerca. Baldoni: "Ora investire", Corrierecomunicazioni.it, 22/2/2017.

²⁴ "Servizi segreti: nominati tre vicedirettori", ANSA, 22/12/2017.

²⁵ "Baldoni, accademico dell'intelligence", Avvenire, 23/12/2017.

²⁶ Messa, Paolo, "Guerra agli hacker, l'intelligence schiera il "cyber-zar", Il Messaggero, 23/12/2017.

²⁷ "Cyber security, l'intelligence italiana cerca nuove reclute", Askanews, 10/1/2018.

²⁸ Frediani, Carola, "La conferenza nazionale sul cyber italiano: "Serve piano straordinario su cybersicurezza", La Stampa, 8/2/2018.

²⁹ Baldoni, Roberto, « Intelligenza artificiale, serve una governance che ci difenda dagli attacchi informatici», La Stampa, 20/8/2019.

³⁰ Pelosi, Gerardo, "Il Governo e la partita del 5G: consapevoli rischi, rafforzare protezione. A Pompeo diremo che seguiamo Bruxelles", Il Sole 24 Ore, 24/9/2020.

Chinese supplies for 5G in Europe has aroused considerable mobilization from the United States, which did not look favourably at the possible technological deployment by Beijing, the September 21, 2019 law provided a regulatory response that clarified the Italian position³¹, after the questions raised by the signing of the Belt and Road pact, since rescinded³². It should also be noted that this decree is one of the first legislative acts adopted by the Conte 2 government, just after the political crisis that led to the end of the first administration was resolved. Again, we observe that the evolution of national security arrangements is made in a rather dynamic geopolitical context. In that respect, we can glimpse two lines of action that may appear contradictory in the Italian context: Conte 1 government in the context of an economic and geopolitical vision led to the signing of the Belt and Road agreement with China, while the same time that the various evolutions of cybersecurity concepts and tools are made in dialogue with U.S. experts and authorities and reaffirm the traditional anchorage of the Italian security sector in the transatlantic relationship.

The institutional path of this cyber security strategy was further prolonged in the Draghi government with the creation of the National Cybersecurity Agency (CAN) to protect national security in cyberspace. Roberto Baldoni remained its main promoter and was appointed director in August 2021, until his resignation in March 2023³³. The creation of the National Cybersecurity Agency corresponded to the final step of the overall strategic vision championed by Professor Baldoni for several years.

Although cybersecurity is of the greatest relevance in the intelligence context, it has such cross-cutting and strategic implications that it needs to be taken out of the often-rigid enclosure of intelligence to be able to play an active role with the civilian components of society, companies and administrations, including with managers who can safely claim ownership of the decisions made and discuss them like any part of public administration. This also corresponds to the European approach where we observe the growth of the French ANSSI and the German BSI which have similar functions to the ACN. Also, from a European functioning point of view, the correspondence in nature between the Italian agency and its main counterparts represents a stake in the functioning of the system in its international context. Among other things, these agencies also have a role as the single point of contact in the context of the mushrooming policies of the Commission, it is therefore a search for the effectiveness of Italian institutions in the context of the Union.

³¹ Cf. <https://temi.camera.it/leg18/temi/d-l-105-2019-perimetro-di-sicurezza-nazionale-cibernetica.html#:~:text=Il%20decreto%20Dlegge%2021%20settembre,nei%20settori%20di%20rilevanza%20strategica>. Viewed the 20/2/2024.

³² Carli, Andrea, "Pompeo a Di Maio: «Italia sovrana ma la Cina è una minaccia», Il Sole 24 Ore, 2/10/2019.

³³ Fiammeri, Barbara, "Cybersecurity, cosa succede dopo le dimissioni di Baldoni? Oggi Mantovano al Copasir", Il Sole 24 Ore, 8/3/2024.

7. Cyber Diplomacy, algorithms and algorethics

In terms of the international dimension of the Italian cybersecurity strategy, the efforts of the Italian Ministry of Foreign Affairs should also be mentioned.

In 2018, the post of cyber coordinator for MAECI was created, at that time entrusted to Ambassador Francesco Talo³⁴, who had previously been ambassador in Tel Aviv where he had observed the particular dynamism of the Israeli tech sector³⁴. The job had internal duties, those of ensuring the adaptation of the ministry's structure to technological needs. But it also required forging the Italian position on international cyber issues and embodying the voice of "cyber diplomacy". This has been well illustrated by the actions of Ambassador Laura Carpini who later took over from Francesco Talo on these tasks³⁵.

Lastly, it should also be noted that the Meloni government established a commission on Artificial Intelligence and Information in 2024, giving its chairmanship to Father Paolo Benanti³⁶. Father Benanti, a Third Order Regular Franciscan friar and professor at the Gregorian University in Rome, is one of Europe's leading experts on ethics and technology and has been developing work for several years on the need to introduce ethics into algorithms, insisting on the concept of "algorethics"³⁷. He is the only Italian member of the United Nations Committee on Artificial Intelligence. Among other things, he was one of the main promoters of the "Roma Call IAI ethics"³⁸, a Vatican initiative aimed at including the ethical dimension in the production and management of artificial intelligence, which had succeeded in 2020 in mobilizing a number of actors of considerable international importance, also involving Microsoft group. Paolo Benanti's appointment by the Italian government as chair of the Commission on Artificial Intelligence further illustrates the mentioned recourse to outside expertise as was the case for Stanca, Piacentini or Baldoni. However, Paolo Benanti is not only an expert called by the government for his know-how, he also represents the crossroads with other worlds, especially the Vatican, which among other things creates from this point of view a channel between the Italian approach and that of the Holy See, which is particularly sensitive to the safeguarding of the human element in the digital context and very active from a global point of view.

This last case represents a further example of a rather incisive dimension in the context of the Italian digital strategy, which confirms its plural nature.

³⁴ "Cyber diplomacy, la nuova frontiera della Farnesina", *Cybersecurity Italia*, 13/6/2018.

³⁵ "Cybersecurity, Carpini: UE coordinata e resiliente per sistema digitale globale", *Public Policy*, 25/7/2023.

³⁶ Horowitz, Jason, "The Friar Who Became the Vatican's Go-To Guy on A.I.", *New York Times*, 13/2/2024.

³⁷ Benanti, Paolo. « Algor-éthique : intelligence artificielle et réflexion éthique », *Revue d'éthique et de théologie morale*, vol. 307, no. 3, 2020, pp. 93-110.

³⁸ Murgia, Madhumita, "The monk helping the Vatican take on AI", *Financial Times*, 9/4/2022.

8. Conclusion

The search for an "Italian strategy" may appear to be misguided. Observing the recent history of government policies on digital matters allows us to describe both different phases depending on governments, but also a pluralistic logic that corresponds to the various centres of power. Digital represents a fundamental evolution in today's context, and its disruptive nature is invoked by various decision-makers. But the effect of digital ubiquity in the context of individual and collective life encounters the traditional structures of society, particularly those of the public order in a proven democracy such as Italy. Thus, we can defend the thesis that somehow institutions mitigate the effects of digital, partly because they tend to reproduce a parcelled, non-centralized logic that is one of the characteristics of the Italian Republic. Regionalization has made this logic adverse to centralization emerge³⁹. Yet we are going well beyond the classic Italian debate between the unitary approach and the federative approach, as we observe the autonomy of the various ministries and administrations.

Digital is establishing itself in the world as an incredible reservoir of services that are unified in a single physical place, most of the time your smartphone, where you can directly access an exponential number of services. The logic of access to services, which is also expressed in terms of an evolution of the relationship between Man and Machine, reflects a change in the space-time coordinates of social life, in which there's a tendency to move from an application to another, or indeed to use various applications almost simultaneously⁴⁰. Today, there is an important discussion around the "singularity" and the "revolutions" that digital can produce in human society, which can often be read as a call for rapid technological reformism. In the Italian case, we have been able to observe some relevant examples of this logic which tends to seek technological adaptation. This is an extremely interesting dialectic in which we can observe some paradoxes if not contradictions. On the one hand, we have the vision of a technological acceleration that pushes us to formulate adequate responses, which is in part symbolized by the use of figures with leading experience in the private sector such as Lucio Stanca, Diego Piacentini or Vittorio Colao. On the other hand, the various Italian sectors, public and otherwise, obey their formal rules but also forms of informal sociology, and reflect, among other things, the plural character of a society which for historical and political reasons does not apply a concept of centralization, therefore also appearing reluctant to merge into the model of generalized technological use. From this point of view, we can consider that the Italian case acts as a revelation as it exemplifies the clash between a technological-centric logic and a logic that would tend to consider technology as a sectoral addition.

³⁹ Élie, Marie-Pierre. « L'Italie, un État fédéral ? À propos des lois constitutionnelles n° 1 du 22 novembre 1999 et n° 3 du 18 octobre 2001 », *Revue française de droit constitutionnel*, vol. 52, no. 4, 2002, pp. 749-757.

⁴⁰ Le Moëne, Christian. « Penser l'artificialisation du monde ? Retour sur la question des constructivismes et de la transformation numérique », *Communication & Organisation*, vol. 53, no. 1, 2018, pp. 107-132.

From a commercial point of view, Italy, like other Member States of the European Union, does not have digital companies comparable to US global platforms (so-called GAFAM) on its territory. This fact is often used in technological and political discourse as a negative indicator, which would induce a series of structural deficiencies. This describes a European reality, not just an Italian one, one of having a huge digital market despite not producing this technology massively, as happens on the US West Coast. There is therefore a relative distance between the market offer and the production sector. We observed, in the Italian context, how some digitalisation policies of the corporate sector, such as the Industry 4.0 plan launched by Carlo Calenda, can act as a technological and therefore economic accelerator and are well suited to the corporate fabric of the country. This example is extremely interesting from a political analysis point of view because it corresponds to an investment mechanism via a fiscal instrument. It therefore offers an answer in terms of public policy without a vision of investment chosen by the state, which among other things also avoids the costs of choices. While from the point of view of direct investment in new technologies or research and development, we note the relative weakness of the Italian scenario, the adoption of a model in which the corporate sector is helped also indicates the federal aspect of Italian policies.

Yet, this success also allows us to reflect on the difficulties. Over the last twenty years, we have observed the long and difficult process of digitalization of public administration, understood both as an internal reform process and as a relationship with citizen-users. Among other things, much effort has been concentrated on this last point, also because digitalization has often been presented as a potential solution to some deficiencies in the provision of public services. With digitalization, we aspired, and we always aspire, to recover efficiency in the various operations of public administration, which represents an economic but also civil issue for Italy. Even if important results have been achieved, we observe the limits of an exercise where administrations have separate regulations by law which constitute an objective barrier to the unification of services around citizen data. From this point of view, we note a specific "geopolitics" of digital in the Italian public context, where the data refers to some territories with precise borders, which, on the one hand, offer protection against a possible public big brother capable of processing the whole of citizens' data, on the other hand, however, represent a brake on administrative efficiency which is always associated with digital. The current technological offer, for example, that of the cloud as the main data management solution, does not change this paradigm where each entity remains tied to its data. Among other things, there are extreme and rather dysfunctional examples of this fragmentation of data in the public context, such as that of health records managed by each region with sometimes non-interoperable systems.

However, beyond the judgment on the efficiency of the system, which may be relative, it must be underlined that digital must conform to the political structure of the country and that in some ways digitalization encounters limits if there is no adaptation or evolution of the structures that should benefit from it. From this point of view, we can therefore note how digital constitutes an eminently political issue in the Italian context.

The Italian paradigm of cyber threats allows, among other things, to characterize this dimension. As we have described in our text, the Italian parable of protection against cyber threats also illustrates a series of problems relating to Italian political identity.

The story that leads from the CINI network built around the capabilities of the IT research laboratories of Italian universities to the establishment of the national cybersecurity agency represents another important piece of digital policy, following the protection paradigm. From this point of view, the entry into force of the "Cyber National Security Perimeter" in 2019 appears extremely significant⁴¹.

While we have described the alternating phases of innovation policies and their often-fragmented nature, around Italian cyber security we observe a substantial mobilization which in some way gives consistency to the national scale as an appropriate scale at the technological level. In some way, cyber security succeeds where innovation policies have difficulty taking root, that is, in embodying a scale of intersection between technological domains and administrative and political responsibilities. We had a strategic approach towards digital, with a set of definitions, protection and training measures which were then further extended with the creation of the National Agency for Cyber Security. Behind this rather atypical path in some ways, we see the logic of institutional creation which corresponded to a specific conjunction in which the emergence of a new security problem on the one hand, that of cybersecurity⁴², and the need to create functions on the other, lead to filling the void.

These environments are by definition dynamic; therefore, they require perpetual technological and functional updating which must also be matched by political priority. At the level of today's Italian scenario, we are therefore faced with a new phase in which the relatively recent creation of the National Cybersecurity Agency does not exhaust the discussion. It represents a fundamental stage in Italian institutional political growth which has been notable from this point of view in recent decades.

If we sum up this excursus, we see some main threads intertwined. That of innovation, which was born with the political impetus of Lucio Stanca and which proceeds piecemeal, also because it has been linked from the beginning with a very thorny problem, that of the digitalization of public administration, which had to face organizational difficulties. From this point of view, the outline of an "Italian strategy" has been a tortuous journey, with ups and downs.

On the other hand, we observe that a minority and initially more overseen aspect of the Italian digital strategy, that of cybersecurity, emerged as a strong point in the Italian public context, with the adoption and implementation of a very central strategic concept: the "National Security Perimeter". Among other things, this concept offers a modern reinterpretation of the "frontiers" of security which can no longer be conceived exclusively as territorial borders. Also, the interaction with suppliers of digital platforms indicates the importance of this approach, with specific needs for sovereignty and security in terms of cloud contracts, contributing if anything to evolving the offer in the direction of what has been achieved in the European context, later called the "sovereign cloud." More questions remain, however. We note the relative success of an Italian digital security strategy but the protection approach, which is absolutely necessary, cannot exhaust the terms of a "digital strategy." Such a strategy must consider all the factors of society or at least those of political and public action.

Finally, the example of the appointment of Father Paolo Benanti by the Italian government as president of a commission on artificial intelligence allows us to open a further chapter, that of the intersection, if not the convergence, between Italian government policy and that of the Vatican, a question that is anything

⁴¹ "Cybersecurity, perimetro allargato a 5G e società quotate", Cybersecurity Italia, 20/9/2019.

⁴² Cf Arpagian, Nicolas. *La cybersécurité*. Presses Universitaires de France, 2022.

but secondary. It also reflects the plural sociology of Italy and the habit of having a dialectic of collaboration with religious institutions which in other European countries may appear difficult to understand in the name of a rigorous interpretation of the secular concept of State.

These various threads from which we have reconstructed the recent excursus, offer a very promising field of analysis to observe how some Italian characteristics persist even in the context of a digital "strategy," but also to pose some fundamental questions on the level of efficiency between a strategy managed centrally by power, and more federalist impulses that contribute to a level of strategic attention in the international context as well.

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