

A STRATEGY ON THE INTEROPERABILITY ISSUE WITHIN THE P.A. FROM THE ITALIAN CONSTITUTIONAL PERSPECTIVE

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Abstract

The essay aims at analyzing different EU and national interventions in the digital platform interoperability sphere. One of the juridical barriers which concretely hinder the use of Information and Communication Technologies by public administrations is the lack of uniform standards which can make several digital platforms interoperable in key sectors. The essay reconstructs EU interventions, with particular regard to EU Regulation 2018/1724, establishing a single digital gateway to allow single market users to access information, procedures as well as assistance services. According to the EU regulation member States must ensure online access to information and procedures concerning internal market established at national level, while the EU Commission must guarantee access to information and procedures established by the EU level. The essay also analyzes the Italian legal framework starting from the exclusive state legislative competence in the matter of “informative statistical and digital coordination of state, regional and local administration data” and its definition by the Constitutional Court, continuing with the new “digital competence” that the Delrio Law attributes to the Metropolitan Cities.

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1. Foreword

The article hereto aims at analyzing one of the juridical barriers which concretely hinder the use of *Information and Communication Technologies* by national public authorities in the provision of services to citizens and companies: the lack of uniform *Standards* which can make several digital platforms interoperable in key sectors, like transportation, commercial businesses and healthcare. The lack of interoperable formats and models¹ prevents public operators to exchange data on people who avail themselves of public services. As an example we can mention the single municipal manufacturing businesses help desks (SUAP) which often use software, incompatible with one another, and this impedes the exchange of fundamental data for the development of manufacturing capacities in the Italian territory.

The question to which we will try to give an answer through this article is which subject may establish uniform standards and open and interoperable models for public state, local and supranational authorities: the European Union in the exercise of its competence in the “internal market” sector, or the State or regional legislator pursuant to art. 117 Const., or the Metropolitan Cities, limited to the services that are present in their territory by virtue of the “promotion and coordination of metropolitan computerization and digitalization systems” (pursuant to art. 1, sub paragraph 44, subsection f, Law n. 56, April 7, 2014)?

In order to respond to the question it is essential, beforehand, to identify the potentials offered by digital

¹ Between the interoperable models of communications see xml, json, gml, sql.

technologies as an “instrument” at the service of social requests, from individuals and companies, also as a support for the processing of public, innovative and *smart* policies (cfr. paragr. 2).

Any discussion on the employment of ICTs cannot, nevertheless, exclude an adequate analysis of the risks² related to their utilization in terms of discrimination in the use of *online* services due to the *digital divide*, namely the creation of new forms of social marginalization, besides the issues related to privacy protection and the correct management of personal data of the people concerned.

Once the potentials and risks stemming from ICTs have been identified, the article will try to answer the fundamental question on this “digital competence” allocation, pointing out what has been done by the different levels of union, national, regional and local governments and offers an innovative solution aimed at the integration between national and European Union sources.

2. The opportunities offered by ICTs and the risks related to their use.

Since the nineteen seventies of last century the digital communication’s “Networks’ network”, loosely known as

² Talks about new digital technologies as a “new sovereign power” that requires the constitutional law to develop new instruments of action to fix the boundary of this power A. Simoncini, *Sovranità e potere nell’era digitale* (Capitolo II), in T. E. Frosini, O. Pollicino, E. Apa, M. Bassini (eds.), *Diritti e libertà in Internet* (2017). About the new problems that constitutional law is called to face in the digital age see A. Simoncini, *The Constitutional Dimension of Internet. Some research paths*, 16 EUI Working Paper Law (2016); O. Pollicino, G. Romeo (eds.), *The Internet and Constitutional Law. The protection of fundamental rights and constitutional adjudication in Europe* (2016) and G. Sartor, *Human rights and Information technologies*, in R. Brownsword, E. Scotford, K. Yeung (eds.), *The Oxford Handbook on the Law and Regulation of Technology* (2016); H. Dreyfus, *What computers can’t do* (1992); ID., *Mind over machine: the power of human intuition and expertise in the Era of the computer* (1986); Y. N. Harari, *Sapiens* (2015); B. Merritt, *The digital revolution* (2016); M. Bassini, O. Pollicino (eds.), *Verso un Internet Bill of rights* (2015); G. De Minico, *Antiche libertà e nuova frontiera digitale*, (2016); M. Margolis, G. M. Riano, *The prospect of Internet Democracy* (2009). With particular regard to the use of ICT by local public bodies see E. Carloni, *Le prospettive dell’e-Government nella Repubblica delle autonomie*, 4 *Giornale di diritto amministrativo* 453 et seq. (2008).

Internet, has seen a great expansion and has been employed for different purposes and with different and ever-changing modalities.

Let's just think about the diffusion of the Internet of Things (IoT), common use instruments connected to the internet and, therefore, capable of producing data (i.e. quantitative representations of reality) and make them circulate online, such as mobile phones, but also GPS navigation systems, public wi-fi networks, automobiles and credit cards.

Everyday IoT and artificial intelligence technologies development lead to the collection and transfer of an enormous amount of data, the so-called big data³, the analysis of which requires an extremely complex effort. *Data mining* systems allow, in fact, consolidating and extracting information (i.e. correlation among data) from this large amount of data, usable to make decisions by public authorities and private individuals.

Through the use of IoT and data mining systems, digital technology can, therefore, impact the quality of public services rendered to the citizen, operating in three fundamental phases: a) the identification of users' demands; b) the definition of diverse solutions based on social, political, territorial and economic contexts variables; c) the monitoring of results and the yield of applied solutions in order to guarantee services in line with users' interests. ICTs may also be used to define "marginalized" areas, from the "digital divide" perspective, in which efforts to build a widespread infrastructure network for both broadband and ultra-broadband can be concentrated.

While digital technologies represent a formidable instrument for the implementation of quality services offered to the citizen and to companies, we cannot underestimate the several risks related to their development in the absence of a solid juridical framework, due to what Bauman called "the ambivalence of modernity"⁴, which characterizes technological evolution,

³ On the Big data field see V. Mayer-Shonberger, K. Cukier, *Big data. A revolution that will transform how we live, work and think* (2013). On the use of Big data by national public administrations see M. Falcone, "Big data" e pubbliche amministrazioni: nuove prospettive per la funzione conoscitiva pubblica, 3 *Rivista trimestrale di diritto pubblico* 601 et seq. (2017).

⁴ Notion developed by Z. Bauman, *Modernity and Ambivalence* (1991).

namely that continuous swinging among new opportunities for the exercising of freedoms and the risks of limitations of the latter.

Indeed, the digitalization process is not neutral, first of all because public authorities can “control” citizens, their moves and their preferences in the use of services or individual political choices through the management and analysis of a large amount of *big data*. Nevertheless major issues may derive from the use of *predicting policies* techniques which allow foreseeing, with a high level of accuracy, the occurrence of future events through big data analysis in the specific sector. It is known that in the United States such techniques have been employed to predict the occurrence of future crimes, also detailing time, days, neighborhoods and, above all, potential criminals’ physical or behavioral characteristics⁵.

To that we must add the risk of a concentration of power among few economic operators with technical and financial means to produce applications (*software*), devices (*hardware*) at their disposal, or to manage web infrastructure and the consequential danger of creating new “marginalities” tied to the *digital divide*⁶.

EU regulation 2016/679 is bound to considerably impact big data management, expecting several limitations to be set upon public and private entities which operate in the online sector in order to safeguard personal data of those subjects affected by the management process.

Let us think, for example, about the possible creation of integrated computerized platforms for the collection and the analysis of sensitive data, capable of providing *data intelligence* services for public operators: such initiative should necessarily comply with the new European regulation related to sensitive data “profiling”, in line with an “*accountability*” and preventive risk analysis rationale⁷.

⁵ Focuses on the use of these predictive techniques in the criminal sphere and on the constitutional problems stemming from it A. G. Ferguson, *Predictive policing and reasonable suspicion*, 62 Emory Law Journal 259 (2012); A. Bonfanti, “*Big data*” e polizia predittiva: riflessioni in tema di protezione del diritto alla “*privacy*” e dei dati personali, 3 Rivista di diritto dei media 13 (2018).

⁶ On the idea of setting up internet access as a fundamental right see T. E. Frosini, *Libertè Egalitè Internet* (2016). See also M. Bassini, O. Pollicino (eds.), *Verso un Internet Bill of Rights* (2015).

⁷ See art. 22, Reg. UE 2016/679.

Instead, in order to avoid the creation of a monopoly run by few economic operators for the qualitative and quantitative development of the services provided, there exist, among the possible solutions, the creation of flexible IT infrastructure, built on *standards* and open models and interoperable software that may be utilized by public and private operators to communicate among each other and exchange data to provide innovative services that are closer to citizens and companies, for a subsidiarity, adequacy and differentiation scope.

It is in this framework that the fundamental and real obstacle, object of the inquiry hereto, sets itself: the lack of interoperability among IT systems currently employed by public administrations at national and union level. The interoperability construed as the ability of two or more systems, networks, means or applications to exchange information among each other is, in fact, essential for a correct and timely transfer of data needed for the supplying of services to the citizen.

The analysis of regulations and practices is, therefore, of the essence in order to understand whether there exists a level of government able to set *standards* and technical solutions so as to guarantee the interoperability of union and national public administration's digital platforms.

3. EU intervention in the digital platform interoperability sphere

Within the realm of EU law, the issue of IT systems interoperability has been and it is still today at the center of an E-Government strategy in which realm EU Regulation 2018/1724 has recently been applied, establishing a single digital gateway to allow single market users to access information, procedures as well as assistance and resolution services.

The legal foundation of EU interventions in the public administration's digitalization context is, in fact, represented by a series of provisions in the Treaty on the Functioning of the European Union: art. 4, paragraph 2, letter a, TFUE, which establishes EU's concurring competence in the "internal market" sector; art. 26 TFUE which allows the EU to adopt measures aimed at establishing and guaranteeing internal market operability in which people, goods, capitals and services may freely circulate;

art. 114 TFUE which assigns the EU the task to harmonize member States regulations in such subject matter.

It is in the internal market context and, therefore, that of free circulation of people, services and capitals, that the “single digital market” lodges itself, as defined for the first time by the EU Commission’s Communication as “Strategy for the single digital market in Europe” - adopted on May 6, 2015 - as a market in which free circulation of goods, people, services and capitals is guaranteed and where, regardless of their citizenship or nationality or place of residence, people and companies shall not encounter obstacles to access and carry out online activities under fair competition conditions and being able to count on a high level of consumer and personal data protection⁸.

EU regulation 2018/1724 is the natural continuation of such strategy as well as of the subsequent Commission’s communication from April 19, 2016 titled “The EU Action Plan for E-Government 2016/2020 – Accelerating digital transformation in public administration”, in which the single digital gateway is indicated as being among the priorities in 2017.

3.1. E-Government Action Plan 2016-2020

The Action Plan establishes the fundamental principles which must inspire public administrations’ activities in single member States: a) *Digital by Default*: Public administrations should privilege the supplying of digital services while maintaining other channels for those who do not have technical abilities by choice or by necessity; b) *Once only principle*: citizens and companies should be put in the condition of providing the same information to public administrations once only, hence, public authorities must reutilize said information internally in compliance with data protection laws, so as to prevent any additional burden on the user; c) *Openness and transparency*: Public administrations should share information and data among each other and allow citizens and companies to check, correct their data and monitor the administrative processes that affect them; d) *Cross-border by default*: Public administrations should provide transnational digital public

⁸ This communication was followed by the Commission communication of 28 October 2015 titled “Improving the single market: greater opportunities for citizens and businesses”.

services, hence facilitating mobility within the single market; e) *Interoperability by default*: public services should be designed to function continuously throughout the single market, guaranteeing free circulation of data and digital services in the European Union.

In order to foster the implementation of said principles, the Action Plan also establishes real actions like the adoption of “*key digital enablers*” in digital public services, meaning agreed-upon standards and techniques to increase IT systems interoperability. As an example we may mention e-procurement platforms which allow registered and qualified users to search for vendors and buyers of goods and services in the single market⁹. The Action Plan also includes the creation of a mandatory interconnection among business registries in different member States through the *European e-Justice Portal* and fosters the development of EURES (European Job Mobility portal)¹⁰.

The Plan also incentivizes member States to create e-Health services for transnational exchange of online medical prescriptions and encourages the exchange of high-quality geospatial data (for example land registry maps, addresses, buildings, parks, protected sites, natural-risk zones et al.) to develop urban and territorial planning, as well as traffic management.

In July 2017, in order to carry out the Plan, the Commission has also instituted the EESSI system (*Electronic Exchange of Social Security Information*): a digital platform through which various member States’ welfare authorities can exchange electronic transnational social security documents. National welfare authorities will use electronic documents, translated in their languages, ensuring the correctness and completeness of the exchanged data. Such instrument shall allow for a fast, efficient and coordinated calculation of social security benefits of those who have lived and worked in many European Union countries.

⁹ For example, in the public sector these platforms can be used to win a public procurement contract. Among the public e-procurement operators we remind Consip SpA, an in-house company of the Italian Ministry of the Economy which makes available a specific platform and telematic negotiation tools. We also recall the eIDAS services, trust services of creation, verification, validation of digital signatures or seals or interoperable time validations, governed by the eIDAS Regulation (electronic IDentification Authentication and Signature) - EU Regulation 2014/910 on digital identity.

¹⁰ EURES offers services for job seekers and employers, also allowing the exchange of CV’s.

3.2. Updates introduced by Regulation 2018/1724 and open issues.

To carry out the strategy provided by the Action Plan, the EU Regulation 2018/1724 has stepped in establishing, as anticipated, the single digital gateway: an instrument which must offer citizens and companies a single access point on line with information, procedures, assistance and problem resolution services for the exercise of their rights in the internal market, reducing therefore conformity costs and administrative burdens on companies. Among the pursued objectives there are the simplification and the direct offer of *online* services to facilitate the interaction between citizens and companies on one hand, and competent public authorities on the other.

Citizens and companies should be able to easily access complete and reliable information on their rights as per EU law and on national regulations and procedures they must abide by in case of transfer, residence, study or performance of business activities in another member State.

Pursuant to art. 2 reg. 2018/1724 the single gateway grants access to: a) information on the rights, obligations and national and EU regulations which apply to those who avail themselves of their rights under EU law in the internal market and in the sectors outlined in schedule I; b) information concerning online and offline procedures established by EU law or at national level, in internal market context in the sectors outlined in schedule I; c) information on assistance or problem resolution services, indicated in schedule III, which citizens or companies may resort to for issues related to rights, obligations, regulations or the aforementioned procedures.

Member States must ensure online access through their webpages to information related to rights, obligations, procedures and assistance services established at national level, while the EU Commission must guarantee access to information on rights, obligations, procedures and assistance services established by the EU, pursuant to art. 4 reg. 2018/1724.

As established by recital 25 and art. 1, subparagraph 3, reg. 2018/1724, the regulation does not impact the core of national and union single market procedures and has the sole objective of guaranteeing their accessibility entirely online, without prejudice to national authorities' competence in matter of, for example,

verification of the exactness and validity of the information or proof presented.

Pursuant to art. 18, subparagraph 2, reg. 2018/1724 the single digital gateway must include a common, integrated user interface on the “Your Europe” portal, which shall be managed by the EU Commission. The common user interface must provide links to national and union websites which grant access to information, procedures and assistance and problem-solving services in the single market context and should be available in all of the Union’s official languages.

Schedule I of the regulation outlines the internal market sectors affected by the new single digital gateway regulation: from information on required documents to travel from one member State to another, to information related to work and retirement, from professional qualifications recognition to education systems and research activities, from healthcare to information on parental responsibilities, from consumer rights to consumer product safety, from consumer rights related to personal data protection to information on the starting, running and closing of businesses in member States, from information on taxes to that on waste recycling and management, from information on access to business financing to regulations and procedures on how to participate in tender procedures and obligations related to health and safety in the workplace.

The member States themselves are responsible for the online accessibility to procedures established by them and outlined in schedule II, unless reasons of imperative public interest related to security, health or fight against fraud prevent the execution of the entire online procedure (as per art. 6, subparagraph 3).

Schedule II, indeed, points out the procedures which, pursuant to art. 6 reg., shall be made accessible entirely online. Among these procedures there are the requests for proof of birth or residence registration, requests for diplomas or study certificates recognitions, tax return submissions, vehicle registrations, social security pension applications, commercial businesses notifications and licenses, submissions of corporate tax returns, employee social security contributions.

Art. 9 reg. 2018/1724 establishes rather broad and generic quality requirements for the information that must be provided.

Such information must be simple to utilize by the users, exact and complete for the purpose of exercising their rights in the internal market context, it must contain reference to applicable legal acts and outline the authority in charge or, at any rate, the subject in charge of the contents of the information, as well as client service or problem resolution contact information (i.e., telephone number or email address) and the date of the latest update of the data provided. The information must also be “well structured” and “written in a simple and clear language, appropriate to users’ demands”¹¹.

Before initiating the procedures concerning the internal market, a complete and clear explanation of the several required phases must be provided by the authority in charge of their execution, along with the accepted authentication and signature means, the format of possibly required proof, the appeal methods, the modalities of online payment, the deadlines and, finally, the applicable regulations in case of silence from the authority in charge¹².

In light of the regulation provided in reg. 2018/1724 the issue of IT systems interoperability proves to be particularly irrefutable with regards to online access to internal market procedures for transnational users: art. 13 reg., in fact, provides that online national procedures accessible by non-transnational users must be executable *online* also by transnational users “through the same technical method or an alternative technical method”.

Art. 13, subparagraph 2, imposes the minimum requirements which shall have to be fulfilled by member States in the context of said procedures. The users must be allowed to access instructions to complete the online procedure in a language that is “broadly understood by the largest possible number of transnational users”, to submit the information required by the procedure also if the format of such information is different from the same type of information in the State concerned, to identify themselves, to electronically sign documents, to provide proof required by the procedure and to receive the outcome of the latter

¹¹ See art. 9, parag. 1, g) and i), Reg. UE 2018/1724.

¹² See art. 10 reg. cit. at 12, 10. With regard to information relating to assistance and problem-solving services concerning the exercise of rights in the internal market required by Annex III see art. 11 reg. cit. at 12, 10.

in electronic format if this is possible for users of the State concerned, as well as making online payments through transnational services for paid procedures.

Among the problems of applicability stemming from the provision there is, firstly, the identification of the “structure” of the information necessary for the execution of the procedure and, secondly, the provision of one or more formats for the transnational exchange of information and required documentation.

Moreover, the regulation does not identify the possible alternative technical modalities to guarantee online access and execution of national procedures to transnational users.

Therefore, the issue of “competence allocation” to define information structure, technical formats and possible alternative solutions to guarantee online execution of national procedures to transnational users remains open.

Another provision which engages member States in a rather complex compliance effort is art. 14 reg. 2018/1724, based on which the Commission operates with the States to create a “technical system” for the automated transnational exchange of proof among competent authorities of several member States in the procedures that must be accessible online. The technical system allows, upon explicit request made by the user, for the handling of requests for proof, requests for the exchange and access to it, its automated transmission among authorities in charge in different member States, guarantees confidentiality and integrity of the proof and a high level of security in the transmission and handling of it. The technical system must also guarantee an “adequate” level of interoperability through other relevant systems, in compliance with art. 14, subparagraph 3, letter g.

The provision does not indicate, though, the modalities to ensure communication among IT systems in the several member States and their establishment seems to fall within EU Commission’s competence for the definition of technical and operational specifications, to be exercised through executive acts which will be adopted by June 12, 2021 (cfr. art. 14, subparagraph 9).

The technical system operates only upon request from the users who may still submit proof by means other than online ones.

That does not lift the States from the obligation to integrate the technical system (cfr. art. 14, subparagraph 6) in order to allow the automated exchange of proof with other member State's requesting authorities. Indeed, for the online procedure, the *una tantum* principle rules, based on which the authority in charge of the procedure, upon explicit and unequivocal request made by the user, must request the proof directly to the other member States' issuing authority by way of the technical system.

In parallel, applicability issues regarding IT platforms interoperability stem from subparagraph 2 of art. 14 reg. 2018/1724, whereby it is imposed upon the authorities in charge issuing electronic format proof, within their own member State, the obligation to put such proof at the disposal of requesting authorities of another member State in an electronic format "which allows the automated exchange".

The member States' authorities in charge and the Commission must also guarantee the users, pursuant to art. 20 reg. 2018/1724, access to assistance and problem resolution services indicated in schedule III through a "common instrument for finding assistance services" accessible through the single gateway. The Commission is called to create and manage said common system, as well as defining the structure and the format of the information related to said services which must be accessible through the common instrument.

The regulation, though, does not provide the modalities and the term by which the Commission will have to act in such regard, an aspect that could prejudice the operability and functioning of the common instrument.

A fundamental connecting role between the EU Commission and member States is conferred to national Coordinators which, pursuant to art. 28 reg., are called to invigilate the correct and uniform enforcement of the regulation by the national authorities concerned.

Propulsive and stimulus duties are instead assigned to the "gateway coordination group", formed by a national Coordinator for each member State and chaired by a EU Commission's representative. The group is called to favor *best practices* exchange and update among member States, to assist the Commission in the monitoring of the quality of information and procedures offered

by the single gateway, to express opinions to improve the quality of the services themselves.

As per the costs stemming from the compliance with the regulation's rules, perplexity is aroused by the provision found in art. 32, subparagraph 2, reg. 2018/1724, which charges member States' budgets with expenses related to portals compliance, platforms, assistance services and procedures implemented at national level, unless otherwise provided in the EU regulation.

Ultimately, the regulation leaves a series of fundamental questions open: the definition of the structure of information that is object of transnational exchange, the identification of interoperable *formats* among member States' IT systems and the determination of the subject in charge of defining them permanently, to which is added the fundamental issue of compliance costs, which are fully charged to member States for nationally established portals and services.

As per the entry into force of the regulation, it is necessary to point out that the creation of the single digital gateway, of its interface and the rules on accessibility of information related to the internal market shall bind member States and, therefore, national public authorities, starting from December 12, 2020, while the term for member States' "municipal authorities" has been postponed to December 12, 2022.

Therefore, the Italian State has one year to align national public authorities' portals to quality requirements and make the information related to the sectors and the procedures in Schedules I and II of the regulation accessible.

The strictest and most complex obligations imposed upon the States with regards to *online* access to the procedures in Schedule II (art. 6, reg 2018/1724), also in favor of transnational users (art. 13), and automated exchange of proof relevant to such procedures shall instead be binding starting from December 12, 2023: hence, the online access and execution of such procedures and transnational exchange of electronic format proof shall be guaranteed by all member States and, therefore, by public authorities in charge, state and local, within the next four years.

Finally, the issue related to the identification of "municipal authorities" which may benefit from the most favorable term (i.e., December 2022) for regulation provisions compliance remains open: in particular, it is about understanding whether Regions,

metropolitan Cities and Provinces may fall within the context of such definition.

4. Legal framework of State interventions.

With regards to the distribution of State-level competence in reference to technological and IT systems interoperability development, art. 117, subparagraph 2, letter r, Const. places “informative statistical and digital coordination of state, regional and local administration data” in the context of exclusive state legislative competence. The importance of such matter has progressively been defined by Constitutional Court according to an interpretation which includes the same notion of IT systems interoperability: in judgment n. 17/2004 said coordination is defined as a “merely technical profile to ensure language, procedures and homogenous standards commonality, in order to allow communicability among public administration’s IT systems”.

The real problem which defines such material context is not, therefore, its definition but rather its extension: in fact, the State legislator, when establishing IT systems coordination standards may also regulate those profiles which fall within “regional and local administrative organization” of regional competence. In judgment n. 31/2005 the Constitutional Court has stated that such State coordination may “determine a strong impact on the real exercise of roles with regards to administrative organization of regions and local governments”, but it is “necessary to ensure a more decisive involvement of said governments in the implementation phase [...] through a reciprocal “intesa”” [In the Italian legal system “intesa” is a word that signifies an “enforceable agreement” between two or more subjects/entities]¹³.

Based on the subsequent constitutional jurisprudence, though, the “intesa” is only necessary where State competence impacts the subject matter of “regional and local administrative organization”, while in other material contexts an intervention by the Regions of mere consultative nature is sufficient¹⁴.

¹³ See Const. Court 26 January 2005, n. 31, 2.6.

¹⁴ See Const. Court 13 January 2010, n. 15 and 14 Maj 2008, n. 133.

In the exercise of such State legislative competence the digital administrative code (CAD) has been adopted, through d.lgs. n. 82/2005¹⁵, which in art. 14 reiterates how the State is competent to define “the technical rules that are necessary to guarantee IT systems safety and interoperability, as well as informative flows for data circulation and exchange and access to the services that are provided online by the administrations themselves”.

State, Regions and local governments foster understandings and agreements to identify technical rules and to carry out the objectives of the National and European Digital Agenda through a coordinated and shared process of administrative digitalization and employ the necessary methods for such purpose at Unified Conference level¹⁶.

In this scenario AgID, the Agency for Digital Italy¹⁷, intervenes and, pursuant to art. 14 *bis* CAD, has the task to ensure digital coordination of public state, regional and local administrations and to reach AgID’s goals in line with the European Digital Agenda’s provisions. Among AgID’s fundamental functions there is the adoption of guidelines containing rules, standards and technical instructions, including those on method, vigilance and control over execution and respect of CAD’s regulations in the context of digital Agenda, public administration digitalization, IT Security, *interoperability* and cooperation among national public and European Union’s IT systems.

¹⁵ D. lgs. 7 March 2005, n. 82, subsequently modified and integrated first with D. lgs. 22 August 2016, n. 179 and then with D. lgs. 13 December 2017, n. 217. For a comment on the CAD see at least E. Carloni, *Codice dell’amministrazione digitale. Commento al d.lgs. n. 82 del 2005* (2005); C. D’Orta, *Il sistema di governo delle ICT. Funzioni e organizzazione*, 1 Giustizia Amministrativa (2005); G. Duni, *Amministrazione digitale (voce)*, 1 Enciclopedia del Diritto 36 (2007); F. Cardarelli, *Amministrazione digitale, trasparenza e principio di legalità*, 2 Dir. dell’informazione e dell’informatica 227 et seq. (2015).

¹⁶ Under this framework art. 14, paragraph 3 *bis*, CAD, now repealed, provided for the establishment within the Unified Conference of a permanent Commission for technological innovation in Regions and local authorities with purely advisory functions.

¹⁷ On AgID and its functions, see E. Carloni, *Il decreto “crescita”*, 11 Giornale diritto amministrativo 1040 et seq. (2012) which defines the AgID as “subject to the heart of a renewed governance of public computerization”.

To accelerate the public administrations digitalization's path at national level a specific supervision group was set up for the implementation of the digital Agenda¹⁸: the group was mainly formed by a net governmental preponderance with a limited participation of regional and local governments. The supervision group was, in fact, presided by the Prime Minister or by one of his delegates and composed by the Minister of Economic Development, the Minister of Public Administration and Simplification, the Minister for Territorial Cohesion, the Minister of Education University and Research, the Minister of Health, the Minister of Economy and Finance, the Minister of Agricultural Food and Forestry Policies, one regional President and one Mayor appointed by the Unified Conference. Such system, though, lived a short life due to the excessive fragmentation of competence and the absolute centrality ascribed to the Executive in the group composition.

In the scope to simplify digital agenda's governance, the provisions related to the supervision group have been repealed through d.lgs n. 179/2016 which bestowed on the Prime Minister the power to appoint, for a period of maximum three years, a special Commissioner for the implementation of the digital agenda and established another body, "the permanent Conference for technological innovation", with consultative responsibilities toward the Prime Minister in matters of technological innovation development and implementation in State administrations.

Within the Conference, the regional and local governments' participation is not provided. The body is chaired by a Prime Minister's representative appointed by the Prime Minister himself and is formed by the President of the National Center for IT in Public Administration (CNIPA), CNIPA's members and the Chief of the Department of Innovation and Technologies.

Territorial governments' participation in the formation of AgID's boards is also minimal: in the Steering Committee there are, in fact, only two territorial governments' representatives, appointed by the Unified Conference, while the remaining structure is solely composed by Ministries' representatives¹⁹.

¹⁸ The group was established by the art. 47, d.l. n. 5/2012.

¹⁹ The Steering Comitee, according to art. 21, parag. 4, d.l. n. 83/2012 is formed by a representative of the Prime Minister, a representative of the Ministry of Economic Development, a representative of the Ministry of Education,

The current AgID's governance system proves to be problematic due to the net preponderance of the Executive and, in particular, of the Office of the Prime Minister, as well as the limited means of connection between the State and local governments and the absolute scarcity of participation of the newly formed Metropolitan City.

Notwithstanding the above, AgID has fundamental duties like drafting of the three-year plan for IT in public administration, with which the objectives and the main interventions for public administration systems' development and management are set.

The plan is elaborated by AgID and approved by the Prime Minister or by the Minister in charge by September 30 each year.

In the exercise of such competence the 2019-2021 three-year plan for IT in public administration has been adopted: a document of strategic scope and intended for all public administration which shuttles the country's digital transformation and defines the operative parameters for public information technology development.

The plan aims at fostering coherence and certainty of "national interest databases"²⁰, defined by art. 60 CAD as "the totality of information digitally collected and managed by public administration, homogenous by type and contents, the knowledge of which is important to carry out administrations' institutional tasks and for statistical purposes" and for analysis using *big data* methodologies.

Therefore, this is about databases rich of authentic information produced by public administrations, necessary for the supplying of public services. Said databases must be integrated with one another in order to facilitate the reciprocal exchange of information and avoid requesting the citizen or the company the same data (*once only* principle) and must become enabling platforms for the citizen. In order to facilitate the exchange process

University and Research, a representative of the Minister for Public Administration and Simplification, a representative of the Ministry of Economy and Finance and two representatives appointed by the Unified Conference.

²⁰ Art. 60, par. 3 *bis* CAD identifies the following databases of national interest: a) national repertoire of spatial data; b) national register of the resident population; c) national database of public contracts; d) criminal records; e) business register; f) automated archives on immigration and asylum matters; f-*bis*) National register of clients (ANA); f-*ter*) register of agricultural companies.

among public administrations the plan also requires a harmonization and standardization of recurring codes and nomenclature in “controlled vocabularies” to be used in the implementation of public databases, in the definition of “shared data models (ontologies)”, especially when information related to different domains (i.e. people, organizations, services and places) is managed.

To carry out such objectives, several digital enabling platforms at national level, like “PagoPA”, have been set up, allowing citizens and companies to pay public administrations electronically, guaranteeing payment safety and reliability and “SPID”, the Digital Identity Public Service which guarantees citizens and companies a single, safe and protected access to all public administration’s digital services through a single digital identity.

Furthermore, a simplification agreement between government and regions at Unified Conference level was also signed on 25 July 2019, putting four fundamental objectives at the center of the discussion: the creation of the Corporate Cyber Folder, through the future SUAP interoperability by way of adopting *common* standards; the creation of a corporate informational portal where all information related to “company lifecycles” may be found; simplification of company checks to make them transparent and more effective and the standardization and digitalization of forms concerning companies.

5. Best practices at local level.

In the framework of public services digitalization at local level we cannot fail to mention a fundamental role that the Delrio Law attributes to the new Metropolitan City²¹: the “promotion and

²¹ The debate on the legal framework of Metropolitan Cities is vast, see at least L. Vandelli, *Le autonomie nella prospettiva delle riforme*, 1 Ist. Fed. 10 et seq. (2014); ID., *La legge Delrio all’esame della Corte: ma non meritava una motivazione più accurata?*, 2 Quad. cost. (2015); ID. (eds.), *Città metropolitane, province, unioni e fusioni di comuni. La legge Delrio, 7 aprile 2014, n. 56 commentata comma per comma* (2014); E. Carloni, *Differenziazione e centralismo nel nuovo ordinamento delle autonomie locali: note a margine della sentenza n. 50/2015*, 1 Dir. Pubbl. 145 (2015); C. Pinelli, *Gli enti di area vasta nella riforma del governo locale di livello intermedio*, 3 Ist. Fed. 569 (2015); G. Gardini, *Crisi e nuove forme di governo territoriale*, *ivi*; A. Sterpa (eds.), *Il nuovo governo dell’area vasta* (2014); A. Simoncini, G. Mobilio,

coordination of computerization and digitalization systems in the metropolitan territory”, as per art. 1, subparagraph 44, letter *f*, Law April 7, 2014, n. 56.

It is, therefore, the same legislator who explicitly asks the new entity to adopt public *smart* policies able to coordinate the various computer platforms already in use in the metropolitan territory through the ongoing support from ICTs.

It is not by chance that the 2030 Metropolitan City of Florence Strategic Plan²² has put digitalization policies at the center of the new metropolitan development strategies, based on the “Interconnection-competitiveness” binomial. Pivotal importance is given to the development of info-mobility systems able to provide real time information on transportation modalities and wait time in the metropolitan area, as well as the creation of a multi-way mobility.

Correspondingly, the Metropolitan City of Milan Strategic Plan pursues the development of suitable communication networks and digital infrastructure to support digitalization of public authorities and sees in the availability of “digital

L'identità delle Città metropolitane attraverso i loro Statuti: sintomi di una sindrome “bipolare”?, 4 *Le Regioni* 669 (2016); F. Pizzetti, *La riforma degli enti territoriali. Città metropolitane, nuove Province e unioni di Comuni* (2015); G. Vesperini, *Il disegno del nuovo governo locale: le città metropolitane e le province*, 8-9 *Giorn. Dir. amm* 786 (2014); A. Lucarelli, *La Città metropolitana. Ripensare la forma di Stato e il ruolo di Regioni ed enti locali: il modello a piramide rovesciata*, 13 *Federalismi* (2014). On the fundamental choices that characterized the Statutes of the new metropolitan body, see different essays in A. Lucarelli, F. Fabrizio, D. Mone (eds.), *Gli Statuti delle Città metropolitane* (2015). Critical remarks against the sentence of the Constitutional Court n. 50/2015 which confirmed the overall structure of the Delrio Law, see A. Spadaro, *La sentenza cost. n. 50/2015. Una novità rilevante: talvolta la democrazia è un optional*, 2 *AIC* 18 et seq. (2015); S. Bartole, *Legislature statale e Corte costituzionale alla ricerca della città metropolitana*, 2 *Giur. cost.* 460 et seq. (2015); G. C. De Martin, M. Di Folco, *L'emarginazione del principio autonomistico e lo svuotamento delle garanzie costituzionali per le istituzioni provinciali in una sentenza “politica”*, *ivi*, 466 et seq.; G. Serges, *L'istituzione delle Città metropolitane, le clausole legislative di auto-qualificazione e l'elettività “indiretta” degli organi istituzionali (a margine della sent. n. 50 del 2015)*, *ivi*, 478 et seq.

²² See Metropolitan Renaissance, Metropolitan City of Florence, 2030 Strategic Plan, p. 23, 41 and 47.

infrastructural assets and services a strategic factor for the economic development from a Smart City perspective”²³.

The adoption of ICTs by Metropolitan Cities may also curtail prejudice stemming from “ontological” dyscrasia which has characterized their very creation: the dyscrasia between the new city’s administrative boundaries, identical to those of homonymous Provinces, and the so-called “functional metropolitan area”, which includes the socio-economic mechanisms of a specific territorial context.

As an example, the territorial boundaries of the Metropolitan City of Florence do not include strategic entities like Prato, Pistoia or Pisa, with which the economic interactions are, instead, constant. Analogous considerations also apply to the Metropolitan City of Milan which doesn’t encompass, for example, the Monza district.

The development of integrated digital technologies and, therefore, a steady *network* among metropolitan entities and operators of a certain “strategic metropolitan area” may curtail prejudice deriving from the aforementioned dyscrasia by way of exchanging statistical, economic and commercial data relevant for the supply of public services.

There is another aspect which should not be underestimated: large part of metropolitan Statutes opted for a

²³ See the three-year Strategic Plan of the Metropolitan City of Milan 2016-2018, adopted with resolution no. 27 of 12 May 2016, p. 112. The Strategic Plan of the Metropolitan City of Genoa looks at digitalization as functional to the administrative simplification, the efficiency of services, the strengthening of participation and the overcoming of digital divide, see p. 60 and 66. The Strategic Plan of the Metropolitan City of Turin 2018-2020 sets among the fundamental objectives the overcoming of digital divide and the creation of a large space for sharing and integrating data between municipalities and all public and private actors (Private Cloud), as a facilitator tool for supra-municipal and strategic projects, see p. 60 and 61. The Metropolitan Strategic Plan of the City of Venice provides for the adoption of a “Metropolitan Digitization Plan” which will identify the interventions for the digital transformation of the metropolitan territory, see p. 125, 146 and 147. Finally, the Metropolitan Strategic Plan of Bologna 2.0 includes among the fundamental objectives the definition of a digital metropolitan Agenda, see p. 21, and the overcoming of digital divide, see p. 59.

second grade government type, in which the fundamental bodies of the new entity are not directly appointed by the electorate²⁴.

We therefore pass from a political representation entity (i.e., the Province) to a territorial representation one with an instrumental and coordinating role for the pursuit of objectives which the municipalities alone would not be able to attain from a subsidiarity and loyal cooperation perspective. We must think about the functions given to the Metropolitan City with regards to strategic plan, service integration, infrastructure and metropolitan networks: the development of ICT may very well give value to this “instrumental” and “functional” dimension of the new entity, thought of as “facilitator” of municipal and intermunicipal functions through a coordination and support activity.

From the standpoint of facilitating service fruition in the Metropolitan City of Florence and in the “functional metropolitan area”, the University of Florence, in collaboration with the new Metropolitan City, has created an *open* digital platform called KM4city, designed to make the Metropolitan City of Florence a “sentient smart city”²⁵.

KM4city is a free, multilingual and multiuse platform which allows gathering and integrating data from several metropolitan area operators, both *open data* and personal data, static and in real time. It concerns multi-domain integrated data related to mobility and transportation, culture, events, parking, tourism, health, safety, free Wi-Fi, civil protection notifications, Internet of Things’ sensors. Such platform allows the integration of data related to these sectors, check offered services, provide new services and monitor metropolitan development also through sensors (i.e., traffic sensors) or *social media*. The main issues which have been handled and resolved with KM4city are tied to acquisition and management of massive amounts of

²⁴ With the exception of the Statutes of the Metropolitan Cities of Milan, Rome Capital and Naples.

²⁵ In doctrine focuses on the legal framework of the “sentient cities”, also looking at the European smart cities model, E. Carloni, *Città intelligenti e agenda urbana: le città del futuro, il futuro delle città*, 2 *Munus* 235 (2016); M. Caporale, *L’attuazione delle “smart cities”. Competenze e coordinamento tra livelli di governo*, 4 *Ist. Fed.* 949 (2015); A. Pensi, *L’inquadramento giuridico delle “città intelligenti”*, 9 *Giust. Amm.* (2015); E. Carloni, M. Vaquero Pineiro, *Le città intelligenti e l’Europa. Tendenze di fondo e nuove strategie di sviluppo urbano*, 4 *Ist. Fed.* 865 (2015).

heterogeneous data, characterized by different sources, protocols and formats. The shortage of interoperability and the different quality of data have been handled by KM4city through data mining instruments which allow collecting data and correcting problems within acceptable parameters.

No matter the format or protocol to which the data is tied or its source, KM4city extracts and aggregates information and knowledge to be used to support public strategies and improve the quality of services for users through fully automated data collection and handling processes.

Such platform allows, for example, evaluating the quality of provided services in the metropolitan area of Florence, provides instruments for the analysis of the collected data, for decision-making support and user behavior analysis.

KM4city also offers integrated analysis instruments of infrastructure resilience which allow to produce and validate models and steer the decision maker in case of emergency or in case of critical infrastructure, creating various data: open data, in real time, surveys, evaluation of stakeholders, operators' and citizens' data and users' behavior analysis.

All data is collected in a completely anonymous manner: the platform maps the user profiles that can be exploited by the Metropolitan City and by private operators to understand when consumers use such services, which they prefer, in which areas and through which modality.

KM4city is founded on *dashboards*: control and synthesis visualization structures which are used to monitor the status of mobility services, parking, vehicles and people flows, events, maps, public services quality, wifi quality and, also, weather forecast²⁶.

Currently, with its data, KM4city covers Tuscany as a whole in terms of road information, points of interest²⁷, public

²⁶ This tool also allows users to create multiple control panels using different elements (i.e. numbers, percentages, indicators, graphs, compare web pages, weather forecasts) that are automatically updated in the dashboard based on the parameters set by the users.

²⁷ In reference to culture, tourism, accommodation, restaurants, education and business.

transportation services, information on hospitals, traffic flow, parking, environment and social media²⁸.

Among regional level best practices, the creation by Tuscany of an online platform called “Star” is rather important. It allows access to manufacturing businesses’ single gateways in all Tuscan municipalities, the execution of online procedures related to certified notifications of construction work start (SCIA) and the dispatch of communications related to the characteristics of hospitality structures, as well as tourist rental communications.

In the Metropolitan City of Milan, instead, the creation of a single metropolitan gateway for manufacturing businesses in relation to the sixteen municipalities in the entire North West area of Milan is underway, while a metropolitan level SUAP is already in use in the Metropolitan City of Bologna.

6. Closing observations

From the national and European legal framework and from examined best practices it emerges how the adoption of common ontologies and interoperable platforms is perceived as a central issue by the European Union (cfr. EU Commission Action Plan, reg. 2018/1724), by State level (i.e. CAD, 2019-2021 three-year plan and Digital Agenda), as well as regional and metropolitan level.

The regulatory interventions carried out until today have not yet given a satisfactory response to the fundamental question underpinning the survey at hand, namely which level of government should provide interoperable models and uniform standards for the exchange of static and dynamic data among the many Union and State public administrations’ digital platforms.

On closer inspection a similar problem of “competence allocation” was found in the context of personal data protection: in such sector, as we know, there was an initial harmonization intervention at European level through directive 95/46 which

²⁸ In this regard, a control on social media is carried out through Twitter Vigilance: a tool for analyzing Twitter in real time and offline which ensures the collection of 98% of tweets / retweets related to events of the metropolitan area. Twitter Vigilance allows to evaluate moods of city users on services, it informs city users, discovers and evaluates new trends. Twitter Vigilance is used in Florence and Tuscany by Lamma for weather forecasting and by SII-mobility to evaluate mobility services.

established fundamental principles and common objectives to be gradually pursued in the various member States. D.lgs 196/2003, “personal data protection Code” has therefore been adopted to achieve the objectives set by the EU directive. Lastly, in order to fill the previous regulation’s gaps, especially with regards to profiling and automated personal data handling, the European legislator has intervened once more, this time with regulation 2016/679 which established a self-sufficient and binding legislation in each one of its elements for every member State.

From the different perspective of creating a single digital gateway the European Union has immediately intervened with the “regulation” source to outline the minimum quality requirements of information available online in internal market sectors, but leaved open the real IT systems interoperability issue. Regulation 2018/1724 sometimes defers the definition of technical instruments, especially that of interoperable models and *formats* to a future intervention by the Commission through enforcement measures for the adoption of which there is often a lack of peremptory terms (cfr. art. 18, subparagraph 5, art. 24, subparagraph 4, art. 25, subparagraph 5).

Let us consider art. 18, subparagraph 5, according to which the Commission *may* adopt enforcement measures which provide interoperability requirements to facilitate the gathering of information within the common user interface. The provision of a discretionary intervention by the Commission seems incompatible compared to those provisions of the regulation which impose the exchange of information on rights, procedures and services among the many member States’ IT systems.

To that we must add the non-provided peremptory term by which the Commission shall define, through its own enforcement measures, methods of automated collection and exchange of anonymous statistics on visits at the single gateway and the connected web pages²⁹. State authorities in charge and the

²⁹ The statistics must be collected and exchanged, in accordance with art. 24 reg. 2018/1724, in an anonymous and aggregate manner and will have as their object data relating to the number, origin and type of users of the single gateway, their preferences, and information on the availability and quality of information, procedures and assistance services accessible through the single gateway. Similarly, art. 25 reg. 2018/1724 provides an anonymous feedback tool on the quality of services and information provided through the single gateway

Commission, summoned to collect the aforementioned statistics, shall therefore carry out a “profiling activity” pursuant to art. 22, subparagraph 2, letter b), reg. 2016/679, but the lack of a peremptory term by which collection and exchange methods must be established could severely impact users’ rights.

Ultimately, in light of regulation 2018/1724 the responsibility to guarantee national IT system interoperability seems to bear down on the single member States according to the respective distribution of competence between central and local level, while for IT platforms set up at European Union level the responsibility falls on the European Commission.

From the Italian perspective, in light of the definition offered by Constitutional Court in the matter of “computerized information coordination of state, regional and local administrations data”, the imposition of *interoperable* standards fully falls within the realm of exclusive State competence according to art. 117, subparagraph 2, letter *r*, Const.

Nevertheless, having considered the complexity of such “coordination activity” at national level, and the lack of opportunity for a *top down* approach, the path that will lead to the provision of interoperable systems at national level will be gradual and with “gradual geometry” from a territorial standpoint. A fundamental coordination role among central, regional and local levels may be, indeed, carried out by Metropolitan Cities. Such entities are, in fact, conceived with a support function to municipalities in the “promotion and integrated management of services, infrastructure and communication networks of interest of metropolitan cities” and in the “promotion and coordination of computerization and digitalization services in the metropolitan area”.

From this perspective Metropolitan Cities may coordinate among themselves to identify interoperable formats and ontologies, to offer therefore good practices able to steer the legislator from a *bottom-up* perspective which is best suited for a strongly municipalized administrative system like the Italian one.

Compared to the path which has led to the identification of a European regulation on personal data protection, the route to

and the common interface. Art. 25, par. 5, reg. 2018/1724 also provides the Commission intervention without indicating any peremptory term.

identify a correct digital platform interoperability regulation should be, therefore, characterized by a fundamental modification: the key role of Metropolitan Cities which, in the privacy sector, has lacked.

The Metropolitan Cities should intervene in the exercise of their computerization and digitalization promotion and coordination role to *suggest* and *propose* models, common ontologies, interoperable standards both for national and EU platforms.

From a supranational perspective, metropolitan best practices may be outlined at coordination group's meetings, as per art. 30 reg. 2018/1724 and may guide the EU Commission toward the adoption of those acts which the regulation defers for the identification of interoperable formats and models for the different platforms established by the EU.

The new Metropolitan City, although conceived as "instrumental" for national government levels, especially municipal, may therefore have usefulness well beyond State boundaries, exercising a stimulus and steering role also with EU institutions.

From a national standpoint, instead, the arrangement of a panel between AgID's Steering Committee and Regions and local governments' representatives, including Metropolitan Cities seems appropriate in order to discuss operational issues which currently infringe upon the interoperability of national platforms in sectors covered by the regulation 2018/1724.

In this perspective the current conference-system with governmental preponderance does not prove to be sufficient³⁰.

The presence of only two territorial governments' representatives, appointed by the Unified Conference, inside AgID's Steering Committee is not, in fact, suitable to guarantee

³⁰ Such as the "permanent Conference for technological innovation" which is chaired by a representative of the Prime Minister and is formed by the President of the National Center for Information Technology in Public Administration, the members of the CNIPA and the Head of the Department of Innovation and Technology. Similarly, the "Technical Committee of Intelligent Communities", established within the AgID, is composed of only two persons designated by the Permanent Conference for relations between the State, the Regions and the autonomous Provinces of Trento and Bolzano, one designated by the National Association of Italian Municipalities and one from the Union of Italian Provinces.

adequate means of connection between central government and local governments and does not consider the computerization and digitalization systems coordination role, attributed to Metropolitan Cities by the Delrio Law.

The panel should therefore see the dialogue among AgID's Steering Committee, a representative from each Metropolitan City and territorial governments representatives appointed by the Unified Conference at a number higher than two units compared to the current system.

At the so-integrated panel the *best practices* employed at regional and metropolitan level could be discussed: such practices may exercise a *boosting role* before the State legislator to define the regulations on “computerized information coordination of state, regional and local administrations data” and, therefore, to define technical means of communication among public administrations IT systems at national level.

In particular, a list of standards and formats allowing the various state, regional and local public administrations platforms to communicate could be arranged at the panel, as well as a timetable which outlines the various phases of the digitalization process with “gradual geometry”.

Such synthesis document should therefore guide the State legislator toward the imposition of interoperable formats and the provision of a gradual process which shall lead to the exchange of transnational information concerning internal market by December 2022 and to the full execution of online procedures by all state and local public administrations by 2023.