

**THE ADEQUACY OF THE PROCUREMENT FUNCTION
BETWEEN DIGITAL TRANSITION AND CYBERSECURITY: THE
NECESSARY QUALIFICATION AND SPECIALISATION OF
CONTRACTING AUTHORITIES**

Pier Marco ROSA SALVA¹

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¹ Research fellow in Administrative law and lecturer in Comparative and European Administrative law, University of Udine, Italy.

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1. THE PUBLIC PROCUREMENT FUNCTION FACING THE CHALLENGE OF INNOVATION.

The implementation of the digital transition in the public administration, in cities and territories requires the creation of digital infrastructures, the purchase of hardware and software tools and, more generally, the development of new and smart solutions capable of combining the use of data, artificial intelligence, blockchains and other technologies to provide services capable of improving the quality of citizens' daily lives.

Public contracts are the means by which the administration pursues these objectives. However, the design and awarding of these contracts is not an easy task, since it requires specific technical skills which enable to resort to complex procedures and contractual schemes, and the knowledge of the current specific regulatory framework on the subject consisting of several sectoral provisions.

As also highlighted by the European Commission, in the face of such complexity² public authorities must necessarily have adequate expertise. Otherwise, in the absence of sufficient administrative capacity³, there is a real risk that the potential of new public contracts for innovation will remain unexploited, thus preventing digital development. Already today, the new public contracts for innovation made available by the regulatory

² European Commission, *Analysing the potential for wide scale roll-out of integrated SCC solutions*, at, https://ec.europa.eu/energy/sites/ener/files/documents/d2_final_report_v3.0_no_annex_iv.pdf, 2016, 18.

³ See European Commission study, *Stock-taking of administrative capacity, systems and practices across the EU to ensure the compliance and quality of public procurement involving European Structural and Investment (ESI) Funds*, at <https://op.europa.eu/en/publication-detail/-/publication/d1082259-0202-11e6-b713-01aa75ed71a1>, 2016.

framework to public administrations are underused due to a greater tendency to resort to "traditional" instruments, lack of skills and the fear of making mistakes with consequent responsibilities.

Therefore, after having reconstructed the European and national framework on the purchase of Information and Communication Technologies (ICT) and the related cybersecurity needs, this contribution aims at verifying in what terms, in the light of the principles of adequacy and good performance, the function of awarding public ICT contracts might be reserved, by means of the qualification system, to authorities with sufficient expertise to which other administrations will need to turn.

This is not a new topic for Italian legal doctrine⁴, which, on the one hand, has already investigated the usefulness of cooperation between public administrations also at transnational level⁵ in public contracts and services and, on the other hand, the implementation of a qualification system that was never implemented and was already provided for in Legislative Decree No. 50/2016. It is, however, an issue that regains importance at the present time, where the professionalisation of contracting authorities becomes indispensable for the implementation of the NRRP and digital transition⁶.

And it will be from the perspective of the digital transition that this issue will be addressed, as the level of technical skills required poses an unprecedented challenge in terms of administrative capacity and professionalisation of the public function.

⁴ In this sense see also M. P. CHITI, *Le innovazioni sulla qualificazione delle amministrazioni aggiudicatrici*, in R.CAVALLO PERIN, M. LIPARI, G.M. RACCA (eds), *Contratti pubblici e innovazioni. Per l'attuazione della legge delega*, Napoli, 2022, 65 ff. On the qualification system see par. 5.

⁵ See G.M. RACCA, *Gli accordi fra amministrazioni pubbliche: cooperazioni nazionali ed europee per l'integrazione organizzativa e l'efficienza funzionale*, in *Dir. amm.*, 2017, 101 ff.; R. CAVALLO PERIN, G.M. RACCA, *La cooperazione amministrativa europea nei contratti e servizi pubblici*, in *Riv. it. dir. publ. com.*, 2016, 1457 ff. See also G.M. RACCA, *Principles of joint cross-border public contracts and transnational effects*, in S. DE LA ROSA, P. VALCARCEL FERNANDEZ, *Les principes des contrats publics en Europe/Principles of public contracts in Europe*, in *Droit administratif/ Administrative Law collection* (dir. J.B. AUBY), n. 30, Bruxelles, 2022, 555 ff.

⁶ See, in particular, G.M. RACCA, *Le innovazioni necessarie per la trasformazione digitale e sostenibile dei contratti pubblici*, and R.CAVALLO PERIN, M. LIPARI, G.M. RACCA (eds), *Op. Cit.*, 9 ff.

2. INNOVATION AND PROCUREMENT IN THE EUROPEAN REGULATORY FRAMEWORK. A CRITICAL ISSUE: THE NEED FOR PROFESSIONALISATION AND ORGANISATIONAL ADEQUACY.

The need for a public administration to have an appropriate structure and adequate capacity to deal with the preparation and award of the most innovative contracts clearly emerges from the role that is nowadays attributed to public procurement within the European and national innovation strategies and the related regulatory framework. In the context of public innovation, the issue of administrative organisation as a fundamental component of its activity⁷ is the key element, as the administration must be reorganised so as to be able to effectively address and manage the digital transition, especially in procurement activities⁸.

The relevance of the procurement function for the digital transition of public administration and for the stimulation of innovation is, indeed, an established fact: since the use of innovative public investments is a key course of action to ensure smart, sustainable and inclusive growth, the procurement of innovative products and services plays a key role in implementing the efficiency and quality of public services, while addressing the main challenges of contemporary society⁹. The role of public procurement, which has stimulated

⁷ See G. BERTI, *La pubblica amministrazione come organizzazione*, Padova, 1968.

⁸ See B. CAROTTI, *Algoritmi e poteri pubblici: un rapporto incendiario*, in *Giorn. dir. amm.*, 2020, 5 ff. On the need for the recruitment of personnel with the appropriate skills see: S. STACCA, *La selezione del personale pubblico al tempo delle tecnologie digitali*, in www.aipda.it; G. CARULLO, *Gestione, fruizione e diffusione dei dati dell'amministrazione digitale e funzione amministrativa*, Turin, 2017.

⁹ See the Commission Communication of 3 March 2010, COM (2010) 2020 on the European Strategy 2020.

research since 2003¹⁰, has developed in particular in recent years¹¹ with the introduction of a series of actions aimed at achieving an "Innovation Union"¹², as the 2010 Digital Agenda for Europe¹³, which was followed by the complementary 2015 Digital Single Market Strategy¹⁴ and the 2020 Shaping Europe's Digital Future strategy¹⁵ finally completed in 2021 by the Digital Compass 2030: The European Model for the Digital Decade¹⁶.

Through these strategies, the public function and the interaction with the citizen are destined to increasingly rely on the use of digital tools, data and artificial intelligence in an

¹⁰ The European policy to stimulate innovation, although originally part of broader economic and social goals, was born in the context of the 2000 Lisbon Strategy, in particular in 2003, when the Commission identified with the communication of 4 June 2003, COM (2003) 223 final, *'Investing in research: An action plan'*, to be then developed with the 2004 directives, which introduced inter alia pre-commercial procurement, and in the following years with the communications of 13 September 2006, COM (2006) 502 final, *'Putting knowledge into practice: A broad-based innovation strategy for the EU'* and of 14 December 2007, COM (2007) 799 final, *'Pre-commercial Procurement: Driving innovation to ensure sustainable high quality public services in Europe'*, to be further developed in the context of the 2020 strategy.

¹¹ In fact, the Green Paper on the modernisation of EU public procurement policy (in the Communication of 27 January 2011, COM (2011) 15) had already pointed out in 2011 that only a very small part of public procurement was aimed at promoting innovation.

¹² See Commission Communication of 6 October 2010, No COM (2010) 546.

¹³ See the Commission Communication of 26 August 2010, No COM (2010) 245, which first established the key role of ICT for the achievement of Europe's 2020 targets.

¹⁴ The Strategy, set out in the Commission Communication of 6 May 2015, SWD (2015) 100 final, *'A strategy for a Digital Single Market in Europe'*, further developed the Digital Agenda, introducing specific provisions in relation to three different pillars: 1) improving consumer and business access to digital goods and services across Europe; 2) creating a favorable environment for digital service networks to flourish; 3) maximising the growth potential of the digital economy.

¹⁵ The Strategy, set out in the Commission Communication of 19 February 2020, COM (2020) 67 final, *'Shaping Europe's Digital Future'*, focused on the goals of technology at the service of people, a fair and competitive economy and an open, democratic and sustainable society.

¹⁶ See Commission Communication of 9 March 2021, COM (2021) 118 final, *'Digital Compass 2030: The European Model for the Digital Decade'*.

open, democratic, and sustainable environment, which also need to guarantee high security conditions.

Cybersecurity, as the set of activities needed to protect national digital infrastructures and systems from cyber threats¹⁷, is today both crucial for the creation of a digital Europe and for the implementation of the transition of public administration in this sense, and to support online services since security concerns can be a major disincentive to their use. The creation of services based on data and dynamic information flow can be hindered in the absence of adequate protection forms¹⁸, such as in the case of the health sector.

Achieving 100% of core public services online for businesses and citizens by 2030 requires therefore both innovation and cybersecurity¹⁹. The construction of innovative and at the same time safe solutions is therefore the goal towards which the procurement functions of every public administration must strive, as an instrument capable of including in this perspective also European companies²⁰ and making innovation the real object of the contract.

Efficiency and development no longer concern only the awarding procedure (i.e. the purchasing methods), but directly the subject matter or the result of the contract: the

¹⁷ Pursuant to Article 1, Law Decree No. 82/2021, converted into Law No. 109/2021, on '*Urgent provisions on cybersecurity, definition of the national cybersecurity architecture and establishment of the National Cybersecurity Agency*', cybersecurity means '*the set of activities, without prejudice to the powers referred to in Law No. 124 of 3 August 2007, and obligations deriving from international treaties, necessary to protect networks, information systems, computer services and electronic communications from cyber threats, ensuring their availability, confidentiality and integrity and guaranteeing their resilience. 124 of 3 August 2007, and the obligations deriving from international treaties, necessary to protect networks, information systems, computer services and electronic communications from cyber threats, ensuring their availability, confidentiality and integrity and guaranteeing their resilience, also for the purposes of protecting national security and the national interest in cyberspace*'.

¹⁸ See the '*EU Cyber Security Strategy for the Digital Decade*' in the Commission Communication of 6 December 2020, JOIN (2020) 18 final.

¹⁹ See point 3 of the Digital Compass 2030.

²⁰ See Commission Communication of 3 October 2017, COM (2017) 572 '*Effective public procurement in Europe and for Europe*'.

promotion of research, technological development and innovation are now at the heart of the strategies for public contracts, as the goal to be pursued²¹. Innovation, which holds multiple meanings²², affects the process, i.e. the research and development processes, and the result of such processes²³.

It is the same Directive 2014/24/EU (recital no. 47) that urges Member States to use public procurement strategically to best stimulate innovation, albeit according to a logic focused mainly on environmental and social goals that can be pursued through public procurement, without considering the digital transition and innovative procurement per se²⁴.

However, in recent years, the scientific debate has led to a more pronounced emphasis on the role of the administration as a promoter of innovation, since it is the result not only of research activity per se, but also of the presence of a system of innovation, composed of different social, political, organisational and institutional elements²⁵ capable of facilitating and exploiting the potential of modernity²⁶ despite their complexity.

²¹ See European Commission, *Procurement Guidelines for Innovation*, No C (2021) 4320, updated, following the adoption of the European SME Strategy and the 2020 Industrial Strategy and the Recovery and Resilience Facility, from the previous version of 15 May 2018, No C (2018) 3051. See also Communication of 15 May 2018, No. COM (2018) 306, *A new European agenda for research and innovation - an opportunity for Europe to shape its future*.

²² Cf. point 1.1. of the *Procurement Guidelines for Innovation*, cit. See M. PIGNATTI, *European strategies for innovation in public contracts*, in *DPCE Online*, 2021, 1747 ff.

²³ See R. EVERETT, *Diffusion of Innovations*, New York, 2003; OECD, *Intelligent Demand: Policy Rationale, Design and Potential Benefits*, Paris, 2014.

²⁴ See in this regard. M.E. COMBA, *La domanda pubblica come leva per l'innovazione: le potenzialità degli appalti innovativi per le Anchor Institutions*, in *federalismi.it*, no. 4/2019; L. BUTLER, *Innovation in Public Procurement: Towards the 'Innovation Union'*, F. LICHÈRE, R. CARANTA, S. TREUMER (eds.), *Modernising Public Procurement: The New Directive*, Copenhagen, 2014, 337 ff.

²⁵ See C. EDQUIST, N.S. VONORTAS, J. M. ZABALA-ITURRIAGAGOITIA, *Introduction*, C. EDQUIST, N.S. VONORTAS, J. M. ZABALA-ITURRIAGAGOITIA, J. EDLER (eds.), *Public Procurement for Innovation*, Cheltenham-Northampton, 2015, 1-2.

²⁶ Cf. M.E. COMBA, *Op. cit.*, 49.

Hence the importance of public intervention to create the right contexts for innovation, in the digital and the related cybersecurity sphere as well. In this logic, it is important that the use of innovative public contracts is not only intended as the use of procurement in the sense of the mere acquisition of IT solutions or IT services that already exist, but also as the trigger of a broader process by means of more complex asset schemes, such as public-private partnership figures capable of leading to new solutions for public services, smart cities, health system, public transports, and so on.

It is no coincidence that innovative public contracts are articulated in a series of different figures united by the fact that they have as their object the achievement of a result that cannot be satisfied by products already on the market, but through a new solution to be developed within a reasonable time²⁷, the use of which requires the possession of adequate skills in the field of the commissioning administration, both in terms of identification of the need for innovation, and in terms of articulating the procedure to award the innovative contract and to monitor and verify its execution.

Public administration clearly needs to have an organisational structure and officials capable of allowing an unhindered, but efficient and effective, use of these instruments. The administrative capacity (also known as procurement capacity where it specifically refers to the ability to award public contracts) becomes a fundamental issue in this respect.

This is not a new challenge and it is linked to the persistent issue, of the system for the qualification of contracting authorities which is specific to our legal order and aimed at certifying that a public administration has the organisational and professional capacity required to award public contracts even in aggregate form as central purchasing authorities.

This issue is marginal at European level where the main concern is to increase the professionalisation of authorities without conditioning the exercise of functions to a certification system.

²⁷ See M.E. COMBA, *Op. cit.*, 50, who also reports on the different ways of classifying innovative contracts. See also G.M. RACCA, C.R. YUKINS, *Introduction. The Promise and Perils of Innovation in Cross-Border Procurement*, in G.M. RACCA, C.R. YUKINS (eds.), *Joint Public Procurement and Innovation. Lessons Across Borders*, Brussels, 2019, 2 ff.

As of 2017, the European Union has in fact outlined a strategy for public procurement aimed at improving the concrete implementation of procedures and supporting investments in several respects, promoting, among other things, professionalisation and cooperation between authorities in public contracts as a tool for efficiency, integrity and development of the internal market²⁸.

In particular, for this professionalization the European Commission recommended (i) the development of professionalisation policies that ensure strategic results through high skills and cooperation between administrations, (ii) improved training as well as human resource management to attract highly qualified staff and implement their skills over time, and (iii) ensured the availability of appropriate tools and methodologies through the creation of one-stop online portals, the development of IT solutions with related training, and the promotion of a strategic approach to digitisation²⁹.

The use of the most innovative tools is then facilitated by the subsequent Innovative 2021 Procurement Guidelines, which reiterated how specialised training, cooperative procurement and the promotion of an entrepreneurial culture can stimulate the acquisition by administrations of the necessary capacities to implement innovative procurement³⁰.

So, although the European regulations do not impose a qualification system for contracting authorities per se, they do however recommend their qualification in terms of the needed skills and tools to fully exploit the potential offered by innovative contracts. In the European perspective this is also fundamental in the logic of enhancing cooperation and

²⁸ See the Communication from the Commission of 3 October 2017, COM (2017) 572 final '*Efficient public procurement in Europe and for Europe*', which points out that the strategy is then complemented by three concrete initiatives concerning a mechanism for large infrastructure projects aimed at providing clarity and guidance to contracting authorities, a recommendation for the professionalisation of public purchasers, and the launch of a consultation to define guidelines on public procurement for innovation. On these strategies see M. PIGNATTI, *Op. cit.*

²⁹ See Commission Recommendation of 3 October 2017, (EU) 2017/1805, '*on the professionalisation of public procurement - Building an architecture for the professionalisation of public procurement*'.

³⁰ Communication of the European Commission of 6 July 2021, 2021/C 267/01, '*Procurement Guidelines for Innovation*'.

collaboration, by means of the establishment of central purchasing authorities as well, as a strategy for raising the quality level of public procurement as well as for the aggregation of demand³¹.

The adequacy of the organisational structure and the cooperation between administrations can thus only be confirmed as fundamental, especially in such a complex and technical field as ICT.

3. PURCHASING ICTS AND ENSURING CYBERSECURITY NEEDS. THE NATIONAL REGULATORY FRAMEWORK.

The need for adequate procurement structures to meet the requirements of digital transition and cybersecurity represents a critical issue also emerging from domestic law governing the purchase of ICT solutions and requiring compliance with cybersecurity requirements.

The purchase of hardware or software is not only based on the application of public contract regulations set out in Legislative Decree No. 50/2016 and related legislative texts (such as, in particular, Legislative Decree No. 76/2020, converted into Law No. 120/2020), but also on specific provisions on digitisation as well as cyber security, which are also largely outlined in the guidelines issued by the Agency for Digital Italy (AGID - Agenzia per l'Italia Digitale) or the Agency for National Cybersecurity (ACN - Agenzia per la Cybersecurity Nazionale)³².

³¹ See already Art. 3(10) and Art. 11 of Directive 2004/18/EC and, today, the new directive 2014/24/EU).

³² Established by Law Decree No. 82/2021, converted into Law No. 109/2021, bearing "*Urgent provisions on cybersecurity, definition of the national cybersecurity architecture and establishment of the National Cybersecurity Agency*", which systematised experience accumulated over the previous five years in the light of the DPCM 17 February 2017, bearing "*Directive bearing addresses for national cyber protection and cybersecurity*", also in the light of that accrued by other countries, and based on the provisions of Law Decree No. 105/2019, converted into Law No. 133/2019, bearing "*Urgent provisions on the national cyber security perimeter*". ACN is still in the start-up phase of its activities, with the gradual transfer to it of the relevant functions and with the recruitment of the relevant personnel, which foresees the closure of the first recruitment phase by the end of 2023, for 300 units out of

3.1. The discipline of purchasing ICT solutions.

ICT contracts are specifically considered by Legislative Decree No. 82/2005 (containing the Digital Administration Code), which since its introduction has outlined a series of provisions that were subsequently amended over time aimed at regulating the development, purchase and reuse of IT systems by the public administration, which is not always free in its choice but is required to carry out a number of assessments depending on the specific subject of the public contract. A distinction must therefore be made depending on whether the administration needs to acquire software solutions, hardware tools or services rather than jointly develop complex solutions in several of these profiles.

(a) The purchase of software solutions only is in fact subject to a special discipline under Chapter VI of Legislative Decree No. 82/2005 on the 'Development, acquisition and reuse of IT systems in public administrations' to be applied in coordination with the Guidelines on the acquisition of software adopted by AGID on 9 May 2019³³. Pursuant to

800 planned for 2027. See in this regard F. SERINI, *La nuova architettura di cybersecurity nazionale: note a prima lettura del decreto legge n. 82 del 2001*, in *federalismi.it*, 2022, n. 12, 241 ff.; S. MIELE, *Il Perimetro di Sicurezza Nazionale Cibernetica e il nuovo 'golden power'. Dalla compliance delle aziende e della pubblica amministrazione alla sicurezza nazionale*, in G. CASSANO, S. PREVITI (eds.), *Il diritto di Internet nell'era digitale*, Milan, 2020, 186 ff.

³³ The Guidelines were adopted through the determination of the Director General of AGID of 9 May 2019, no. 115. They are non-binding guidelines, which, as highlighted in their introduction (point 1.1), contain recommendations to be used as an aid with respect to a decision-making path that remains under the administration's responsibility: they are therefore "*not merely a regulatory tool, but rather a suggestion for new accompanying, awareness-raising and information processes*". Generally speaking, according to the Council of State, Com. spec., par. 10 October 2017, no. 2122, the choice of providing for the adoption of guidelines, strengthened by dl.gs. 217/2017, is in line with the need to ensure a regulatory framework updated to technological development. In principle, these are recognised as having *erga omnes* validity and a binding character, since they are general administrative acts similar to the regulatory acts of the independent administrative authorities, although under Articles 14-bis and 71 of the CAD it is also possible to adopt non-binding guidelines, as in the case of the ones under consideration. On the AGID

Article 68, the acquisition of computer programmes or parts thereof must take place (i) in compliance with the principles of cost-effectiveness and efficiency, protection of investments, reuse and technological neutrality and (ii) only following a comparative assessment of a technical and economic nature between the following different solutions available on the market: (a) software developed on behalf of the public administration; (b) reuse of software or parts thereof developed on behalf of the public administration; (c) free or open source software; (d) software usable in cloud computing mode; (e) proprietary software by means of a user licence; (f) software combination of the previous solutions.

It should be noted in particular how, prior to purchasing in accordance with the procedures set out in Legislative Decree No. 50/2016, a comparative assessment of the various solutions available is necessary on the basis of the following criteria: a) the overall cost of the programme or solution as the cost of purchase, implementation, maintenance and support; b) the level of use of open data formats and interfaces, as well as of standards capable of ensuring interoperability and application cooperation between the various IT systems of the public administration; c) the supplier's guarantees in terms of security levels, compliance with personal data protection regulations, and service levels, taking into account the type of software acquired. Only in the event that it proves justifiably impossible to access solutions already available within the public administration or free or open source software suitable for the needs to be satisfied, will the acquisition of proprietary software be permitted by means of a user licence.

With a view to fostering re-use and thus prevent unnecessary acquisitions of software from the market, Article 69 requires public administrations owning IT solutions and programmes developed on the specific instructions of the public purchaser to make available the relevant source code complete with documentation and released in the public domain under an open licence, free of charge for use by other public administrations or legal entities that intend to adapt them to their own needs except for justified reasons of public order and security, national defence and electoral consultations. Similarly, the specifications and project specifications must provide that the contracting administration is always the

guidelines see P. FALLETTA, *Le linee guida dell'Agenzia per l'Italia digitale*, in *Giorn. dir. amm.*, 2021, 163 ff.; F. NOTARI, *Il percorso della digitalizzazione delle amministrazioni pubbliche: ambiti normativi mobili e nuovi modelli di governance*, in *Giorn. dir. amm.*, 2020, 21 ff.

owner of all rights to the ICT programmes and services specifically developed for it, unless it is excessively burdensome for proven technical and economic reasons, so that such documents must be published through one or more platforms identified by AGID.

There is therefore first and foremost this specific discipline for decisions on the adoption and purchase of IT solutions, i.e. software to be understood as a notion that encompasses every type of computer application, from web, desktop and mobile applications, to semi-processed components, frameworks, libraries, plug-ins, operating systems and websites. The software includes moreover not only the source code, but also all other artefacts produced during the development process and use³⁴. These provisions are clearly oriented towards their reuse intended as a set of activities aimed at being able to use the software that is released in open source by a public administration³⁵ in a different context from the one for which it was originally made without the need to sign any agreement, but only by submitting to the terms of the licence itself and with the obligation to include, in the event of adaptations and modifications, the new source code of the implemented solution, which is again subject to reuse.

In fact, administrations are obliged to include in AGID's Developers Italia platform all newly implemented and reusable solutions, including their source code, during the development phase or at its end. In this logic, the release of new software must take place by means of a code hosting tool, which hosts it and makes it available under an open licence,

³⁴ In this sense the illustrative list in point 1.2 of the Guidelines.

³⁵ *The open source* modality is realised through the concession to the public of the rights to use, copy, modify, distribute even modified copies, of the software: this type of software can be subject to reuse where it is owned by an administration, so that not all *open source software is reusable*, although *open source* software in the ownership of the administration must always be reusable. See S. DEL GATTO, *I sistemi proprietari, l'open source e la pubblica amministrazione*, in *Giorn. Dir. amm.*, 2021, 571 ff.; F. MARTINI, *Open source, pubblica amministrazione e libero mercato concorrenziale*, in *Dir. econ.*, 2009, 677 ff.; F. FRACCHIA, *Open source e pubblica amministrazione*, in M. BERTANI (ed.), *Open Source*, Milano 2005, 216 ff.; G. GHIDINI, V. FALCE, *Open source, General Public License e incentivo all'innovazione*, in *Annali italiani del diritto d'autore*, 2004, 3 ff.; A.G. OROFINO, *Open Source e pubblica amministrazione*, in G. CASSANO (ed.), *Diritto delle nuove tecnologie informatiche e dell'internet*, Milan, 2002, 1317 ff.

according to the recommendations of point 3.4.1. of the Guidelines³⁶. For this reason, once the need has been identified only at the outcome of a comparative assessment, which takes into account the possibilities of reuse or recourse to other open source solutions³⁷, the use of proprietary software may be assessed, through recourse to user licences and/or ex novo implementations, in this case following the procedures outlined in the public contract regulations³⁸.

(b) The administration will have to proceed in accordance with the latter provisions when it intends to acquire different goods, such as hardware components only, or services consisting of hardware and software components in particular when it is a matter of developing and acquiring specific solutions, or when it is a matter of proceeding with the total outsourcing of information systems, as well as when it is a matter of acquiring the completion of projects or realisations for which such assessments have already been carried out. In all these cases, although on the one hand it will not be necessary to carry out a comparative evaluation procedure on the existence of other software solutions, on the other hand it will nevertheless be necessary to proceed with complex evaluations, both technical and legal, in order to ensure that the identified need is then satisfied through the acquisition of a solution or the carrying out of an innovative procedure that allows a new solution to be identified and developed, if necessary also through appropriate research activities.

³⁶ In fact, the Guidelines are concerned with guiding administrations to choose the most suitable *code hosting* solutions, which allow the best functionality for publishing source code, preventing additional costs for other administrations wishing to find and use the same software.

³⁷ A) software developed on behalf of the public administration (so-called *make option*); B) Re-use of software or parts of it developed on behalf of the public administration (*re-use option*); C) free software or open source software (this refers to software with a licence certified by the OSI - *Open Source Initiative*); D) software that can be used in cloud computing mode (this does not include HaaS and IaaS solutions); E) proprietary software through recourse to a licence for use; F) software combining the previous solutions.

³⁸ On the use of the market as a *second best*, only possible where it is impossible to access already available solutions, see F. MARTINI, *op. cit.*

The concrete implementation of the digital transition thus presupposes the performance of a complex evaluative activity of a technical and legal nature, which must be capable not only of identifying or hypothesising the solution or service to be acquired, but also of outlining or designing the specific procurement procedure. This complexity is necessarily higher where it is not a matter of the mere purchase of solutions for public administrations, but rather of the development of innovative projects at territorial level in which the digital component is combined with other purposes of an environmental, social and economic nature, as is the case in urban regeneration interventions, implementation of infrastructures for sustainable mobility, renewable energy and energy efficiency, waste recovery and recycling.

3.2. The need to include cybersecurity requirements in the purchase and development of ICT solutions.

Thus, if the purchase and development of ICT solutions for public activities present numerous challenging elements for an administration that aims at innovating itself, its cities and territories, the achievement of these objectives today postulates the consideration of a further complex aspect, namely that of information security³⁹, which has the objective in the face of the quantitative and qualitative increase in computer threats and attacks of protecting an organisation's information system through the study, development and implementation of

³⁹ On cybersecurity, see R. BRIGHI, P.G. CHIARA, *La cybersecurity come bene pubblico: alcune riflessioni normative a partire dai recenti sviluppi nel diritto dell'Unione Europea*, in *federalismi.it*, 2021, no. 21, 18 ff.; I. MACRÌ, *Cybersecurity per la Pubblica Amministrazione*, in *Azienditalia*, 2021, no. 12, 1996 ff.; B. BRUNO, *Cybersecurity tra legislazioni, interessi nazionali e mercato: il complesso equilibrio tra velocità, competitività e diritti individuali*, in *federalismi.it*, 2020, no. 14, 11 ff.; M. NIELES, K.L. DEMPSEY, V.Y. PILLITTERI, *An Introduction to Information Security*, in *NIST Special publication 800-12*, Rev. 1, 2017; A. COLELLA, *Analisi comparata delle architetture decisionali in materia di sicurezza cibernetica dei paesi dell'area euro-occidentale*, in A. TORRE (ed.), *Costituzioni e sicurezza dello Stato*, Santarcangelo di Romagna, 2013; S. MIELE, *I principi strategici delle politiche di cybersecurity*, 2013, in *sicurezzanazionale.gov.it*.

strategies, policies and operational plans aimed at preventing computer incidents and, when they occur, at dealing with and overcoming them⁴⁰.

From the initial concept restricted to computer security, i.e. the protection of the computer, it was extended to information security, i.e. the protection of information and data, until the coining of the term cybersecurity, which extends the perimeter of protection to encompass the protection of assets, as a set of values of an organisation, since risk factors are not only linked to technology but also to people's rights and freedoms⁴¹.

From economically motivated threats, we have moved on to financial fraud, espionage and sabotage, up to veritable cyberwars and information wars, even conducted between states⁴². New challenges arise with respect to the use of artificial intelligence⁴³ and the Internet of Things also in terms of security, which offer new ways of carrying out cyber-attacks increasingly able to exploit security gaps in information systems, as well as the vulnerability of the human factor⁴⁴. In order to deal with such threats and prevent the misuse of software and artificial intelligence, the design phase of the system and the IT tools that make them up either from their implementation or during implementations and upgrades becomes fundamental in the preparation of protection plans and measures.

It is no coincidence that the new European Strategy on cybersecurity itself is aimed at promoting "“cybersecurity along the digital supply chain (including data and cloud, next-generation processor technologies, ultra-secure connectivity and 6G networks)”⁴⁵ an aspect destined to be further implemented within the future cybersecurity directive, which is

⁴⁰ Thus the UNI/EN ISO 104559 standard for IT management.

⁴¹ In this sense see R. BRIGHI, P.G. CHIARA, *Op. cit.*, 20-21.

⁴² See G.M. LOSANO, *Guerre ibride, omicidi mirati, droni: conflitti senza frontiere e senza diritto*, in L. FORNI, T. VETTOR (eds.), *Sicurezza e libertà in tempi di terrorismo globale*, Turin, 2017, 22 ff.

⁴³ See in this respect the ENISA report of 15 December 2020, *Artificial Intelligence Threat Landscape Report*.

⁴⁴ Cf. R. BRIGHI, P.G. CHIARA, *op. cit.*, 22.

⁴⁵ See Communication of 6 December 2020, JOIN (2020) 18 final, point 1.7, on the presence of security in the technology supply chain.

destined to replace the previous 2016/1148/EU (the so-called NIS – Network and Information Systems – directive)⁴⁶. It is precisely in this perspective that the Italian Government has urgently outlined the new cybersecurity architecture through the aforementioned Law Decree No. 82/2021, converted into Law No. 109/2021, in order to ensure the full and secure implementation of the NIS and to address all these risks implementing the previous regulatory framework on the subject⁴⁷ and redesigning the set of competences on the subject referring, among other things, to the NIS the task of promoting common actions aimed at ensuring cybersecurity and cyber resilience for the development of the digitalisation of public administrations. The National Cybersecurity Strategy 2022-2026 has been approved by a DPCM in May 2022 in adherence to the NIS directive and has as its first priority 'Ensuring a

⁴⁶ See the proposal for a directive '*on measures for a high common level of cybersecurity in the Union, repealing Directive (EU) 2016/1148*', referred to in the Commission Communication of 16 December 2020, COM (2020) 823 final, which requires each national authority to adopt a national cybersecurity strategy identifying '*guidelines on the inclusion and definition of cybersecurity requirements for ICT products and services in public procurement*'; '. The NIS Directive was transposed into our law by Legislative Decree No. 82/2018, which defined rules of coordination between administrations and procedure for the adoption of future documents, which was then followed by Legislative Decree No. 105/2019, converted into Law No. 133/2019, which as seen (cf. footnote 26) outlines the new cybersecurity architecture, following the EU Regulation 2019/881, on ENISA, the European Union Agency for Cyber Security, and the certification of cybersecurity for information and communication technologies, and repealing Regulation (EU) No 526/2013 (previous '*Cybersecurity Regulation*').

⁴⁷ The security of IT infrastructures was initially considered by Article 51 of Legislative Decree No. 82/2005, which referred to special guidelines for the identification of '*suitable technical solutions to guarantee the protection, availability, accessibility, integrity and confidentiality of data and the operational continuity, of systems and infrastructures*'. The discipline had then been implemented, albeit very cautiously inter alia with the Prime Minister's Decree of 24 January 2013, containing the first government guidelines on cybersecurity, to which were added, also in 2013, the National Strategic Framework for the Security of Cyberspace and the National Plan for Cyber Protection and Cybersecurity. The Presidency of the Council of Ministers had then issued the directive of 1 August 2015, which also focused on the importance of public-private partnerships in the field, which was then followed by the Prime Minister's Decree of 17 February 2017. The new provisions concerning the new cybersecurity framework thus complement the discipline that had already been outlined over time by AGID through its own guidelines, which in particular had adopted the Guidelines on '*Security in ICT procurement*' in Determination 220/2020, providing good practices and indications for verifying the level of security of acquisition processes and for raising it, which were then also supplemented by the recommendations on the *Transport Layer Security (TLS)* standard set out in AGID Determination 471/2020. These recommendations were then merged into the Guidelines for Technologies and Standards for the Security of Interoperability via APIs of IT systems of 21 May 2021, which provide technical indications on the precautions required for secure exchanges between providers and suppliers.

cyber resilient digital transition of the Public Administration (PA) and the productive fabric' and aims to promote - also through the use of forms of certification and standards - high standards of cybersecurity within the public administration through the use of the necessary technologies, such as cryptography, the commitment of which is fostered throughout the entire life cycle of ICT systems and services, as well as the development of digital technologies, research and competitiveness for the realisation of highly reliable products and services⁴⁸. The Implementation Plan of the Strategy itself calls (Measure No. 6) for the future introduction of legal rules that enhance the inclusion of cybersecurity elements in the ICT procurement activities of the public administration, with a view to providing guidance to both the latter and market operators to ensure that IT goods and services, purchased by public entities in the context of tenders or specific framework agreements, meet adequate levels of cybersecurity.

These are all needs that have taken on a necessarily urgent character in the wake of the crisis in Ukraine which has in the meantime led the Government to require public administrations, through Article 29 of Law Decree No. 21/2022 converted into Law No. 51/2022, to immediately diversify the products in use in order to prevent damage to the security of networks, information systems and IT services resulting from the risk that companies producing IT security technology products and services linked to the Russian Federation would not be able to provide services and updates to their products⁴⁹.

As a consequence the public administration must ensure that the design and supply of ICT services and products take place according to the logic of cybersecurity by design, in line with the provisions of AGID itself with the Guidelines on Security in ICT Procurement⁵⁰

⁴⁸ See the National Cybersecurity Strategy 2022 - 2026 and its Implementation Plan, available at <https://www.acn.gov.it/strategia-nazionale-cybersicurezza>.

⁴⁹ The ACN then adopted the Circular of 21 April 2022 containing procedural recommendations for the diversification of the products in use. Art. 29 of Law Decree No. 51/2022 then provided, among other things, for the obligation also for the central purchasing authorities to update their offers by including additional products suitable for enhancing cybersecurity and differentiating the products in use.

⁵⁰ In the same vein are the Guidelines for Security in Application Development, aimed at ensuring that the public administration's own organisation and technical structure is able to guide and monitor the development of the

and by d.l. 105/2019 converted into l. 133/2019, which requires the entities included in the cybersecurity perimeter, and in particular the central purchasing authorities to which they turn, to coordinate with the National Assessment and Certification Centre in order to prevent possible risks associated with the supply object of the public procurement and its use⁵¹.

The marked complexity of the relationship between law and technology that is manifested in the awarding of innovative ICT contracts⁵² requires the presence of qualified contracting authorities specialised in the field. Those ICT contracts must take place within a complex and unstructured regulatory framework where the primary legislative framework is flanked by technical-operational provisions constantly expanding in the legal system⁵³.

4. THE PRINCIPLES OF ADEQUACY AND GOOD PERFORMANCE IN PUBLIC CONTRACTS FOR DIGITISATION: THE NEED TO IMPLEMENT THE QUALIFICATION SYSTEM OF CONTRACTING AUTHORITIES. THE RELATIONSHIP BETWEEN ADEQUACY AND LEGALITY.

services provided and so that the software development cycle is centred precisely on the principle of *security by design* (or *by default*).

⁵¹ Article 1(6) of Legislative Decree No. 105/2019, converted into Law No. 133/2019, imposes in particular reporting obligations vis-à-vis the CVCN of orders concerning ICT supplies, systems and services, intended to be deployed on networks, information systems and information technology services, to which the CVCN's evaluation and verification powers are linked, which, however, give rise to a number of coordination problems. See in this regard B. BRUNO, *op. cit.*, 29 ff.

⁵² On the complex relationship between the system of sources and technique see E. D'ORLANDO, *Politica, tecnica e scienza: il sistema delle fonti di fronte al dilemma della complessità*, in *Dir. amm.*, 2021, 713 ff.

⁵³ On the topic of atypical sources and *soft-law* see, among numerous contributions, M. RAMAJOLI, *Soft law e ordinamento amministrativo*, in *Dir. amm.*, 2017, 147 ff.; M. MAZZAMUTO, *L'atipicità delle fonti nel diritto amministrativo*, in *Dir. amm.*, 2015, 683 ff.; R. BIN, *Soft law, no law*, in A. SOMMA (ed.), *Soft law e hard law nelle società postmoderne*, Turin, 2009, 31 ff. On the complexity of the current system of legal sources in administrative law see also M.A. SANDULLI, *Introduzione. La complessità delle fonti, le tendenze del Sistema e il ruolo dei principi nel diritto amministrativo*, in M.A. SANDULLI (ed.), *Principi e regole dell'azione amministrativa*, Milan, 2020, 4 ff.

The complexity faced by public procurement in the digital transition requires to be addressed in light of the principles of adequacy and good performance, so as to ensure that adequate and specialised contracting authorities are created, equipped with an organisation and officials capable of pursuing the innovation results foreseen by European and national strategies. It is a matter of ensuring, on the basis of these principles, that the procurement function is exercised particularly in the area of ICT services and supplies only by authorities with the necessary competences⁵⁴, so that they are able to offer the most innovative responses to the needs of modernity.

The question arises not only in terms of the need to promote a greater professionalisation of public procurement structures on the basis of European recommendations, but also to identify in advance those with the minimum skills and experience needed to operate in that sector, so as to ensure its most legitimate, profitable and safe exercise. In fact, it is on the administrative capacity of an authority that its legitimacy to respond to certain needs through the ownership of a specific function⁵⁵ is measured.

The issue can only be addressed in the light of the principles⁵⁶ governing the organisation of the administration and the exercise of functions including their allocations among authorities both vertically, between territorial administrations of different levels, and also horizontally, among those on the same level depending on their resources and competences. If the principles of subsidiarity, adequacy and differentiation set forth in Article 118 of the Constitution pertain to the vertical distribution of functions among constitutionally relevant territorial authorities, the principle of adequacy is nevertheless also relevant in terms of the delegation of functions among territorial authorities at the same level or in favour of

⁵⁴ Cfr. R. CAVALLO PERIN, *L'organizzazione delle pubbliche amministrazioni e l'integrazione europea*, in L. FERRARA, D. SORACE (eds.), *A 150 dall'unificazione amministrativa italiana*, Vol. I, Florence, 2016, 10.

⁵⁵ See E. CARLONI, F. CORTESE, *Diritto delle autonomie territoriali*, Milan, 2020, 85 ff. See. Also R. CAVALLO PERIN, G.M. RACCA, *La cooperazione amministrativa europea nei contratti e servizi pubblici*, cit., 1457 ff.; R. CAVALLO PERIN, *Relazione conclusiva*, cit.; G.M. RACCA, S. PONZIO, *La scelta del contraente come funzione pubblica: i modelli organizzativi per l'aggregazione dei contratti pubblici*, in *Dir. Amm.*, 2019, 38.

⁵⁶ On principles see, among numerous contributions, M.A. SANDULLI (ed.), *Principi e regole dell'azione amministrativa*, Milan, 2020; E. D'ORLANDO, *Lo statuto costituzionale della pubblica amministrazione*, Padua, 2013; M. RENNA, F. SAIITA (eds.), *Studi sui principi del diritto amministrativo*, Milan, 2012.

those of an associative nature if it is understood also as a prerequisite for good performance, efficiency and effectiveness of public action.

The principle of adequacy requires that the attribution of the function be based on the existence of a suitable and capable organisational structure, which ensures its efficiency and effectiveness as can be inferred from Article 4, paragraph 3, letter g), of Law 59/1997, which links the exercise of the function "to the organisational suitability of the receiving administration". In this sense, adequacy imposes a symmetry on the authority requesting the service with its ability to define it, select it, and control its execution⁵⁷.

As emphasised by the legal doctrine, the legislator's choice to emphasise the principle of adequacy in an autonomous manner is to be read in the sense of reinforcing the focus on the capacity to actually perform the functions with the consequence, deriving from principles of subsidiarity and differentiation, of the possibility of not conferring the same functions to all entities of the same type and level and of defining sub-criteria, such as size thresholds, as prerequisites for their allocation⁵⁸.

Adequacy and differentiation are relevant even beyond the vertical distribution between territorial authorities⁵⁹ in spite of their location within a rule on the distribution of functions. The principle of good performance⁶⁰ implies, in fact, the need for administrative action to be carried out in the most appropriate and convenient manner possible in compliance with the criteria of efficiency, effectiveness and cost-effectiveness set out in Law 241/1990, which impose the appropriateness and substantive correctness of action⁶¹ with a

⁵⁷ See G.M RACCA, S. PONZIO, *Op. cit.*, 2019, 38.

⁵⁸ Cf. E. CARLONI, F. CORTESE, *Op. cit.*, 89.

⁵⁹ In this sense also E CASSETTA (edited by F. FRACCHIA), *Manuale di diritto amministrativo*, Milan, 2020, 83.

⁶⁰ On the principle of good performance see, among other contributions, M.R. SPASIANO, *Op. cit.*, in M.A. SANDULLI (ed.), *Op. cit.*, 63 ff.; M. R. SPASIANO, *Il principio di buon andamento*, in M. RENNA, F. SAIITA (ed.), *Studi sui principi del diritto amministrativo*, Milan, 2012, 117 ff.; A. SAIITA, *Il principio di buon andamento della pubblica amministrazione nella giurisprudenza costituzionale*, in *Dir. e soc.*, 1988, 53 ff.; A. ANDREANI, *Il principio di buon andamento della pubblica amministrazione*, Padova, 1979.

⁶¹ On criteria of *economy, effectiveness and efficiency*, see A. MASSERA, *I criteri di economicità, efficacia ed efficienza*, in M.A. SANDULLI (ed.), *Codice dell'azione amministrativa*, Milan, 2011, 30; L. MERCATI, *Efficienza*

view to ensuring its highest quality. In the most recent interpretations, good performance encompasses the ability of the administration to achieve the result, the *ex ante* possibility of satisfying the needs in view of whose protection it was established⁶².

As general principles, adequacy and good performance also govern the exercise of the functions of awarding and executing service and supply contracts, as well as public-private partnership contracts. According to Article 30 of Legislative Decree No. 50/2016, the procurement must guarantee "the quality of the services" and be carried out "in compliance with the principles of cost-effectiveness, effectiveness, timeliness and fairness"⁶³. All these principles basically impose to have contracting authorities capable of performing acts that are suitable and congruous with respect to the purpose they must pursue⁶⁴, in an *ex ante* perspective of the suitability of the organisation to satisfy the interests entrusted to its care: we refer not only to the ability to achieve the pre-established results, such as the acquisition of services and supplies⁶⁵, but also more broadly in terms of its ability to redefine public

della pubblica amministrazione, in S. CASSESE (ed.), *Dizionario di diritto pubblico*, Milan, 2006, 2143 ff. On the inclusion of efficiency in Art. 1, l. 241/1990, despite the fact that it is not expressly mentioned, see also D. SORACE, S. TORRICELLI, *Diritto delle amministrazioni pubbliche*, Bologna, 2021, 319, as well as V. CERULLI IRELLI, *La nuova legge sul procedimento amministrativo*, in G. SCIULLO (ed.), *Le nuove regole dell'azione amministrativa*, Bologna, 2006, 11 ff.

⁶² M.R. SPASIANO, *Il principio di buon andamento*, in M.A. SANDULLI (ed), *Op. cit.*, 75 ff.

⁶³ On the principles in public procurement, see P. SCARALE, *Art. 30*, in A. CARULLO, G. IUDICA (eds.), *Commentario breve alla legislazione sugli appalti pubblici e privati*, Milan, 2018; S. DETTORI, *Art. 30*, in L.R. PERFETTI (ed.), *Codice dei contratti pubblici commentato*, Milan, 2017; R. CAVALLO PERIN, M. RACCA, *Art. 2 Principi*, in L.R. PERFETTI (ed.), *Codice dei contratti pubblici commentato*, Milan, 2013; M. CHITI, *I principi*, in M.A. SANDULLI, R. DE NICTOLIS, R. GAROFOLI (eds.), *Trattato sui contratti pubblici, I, I principi generali. I contratti pubblici. I soggetti*, Milan, 2008, 145 ff.

⁶⁴ See to this regard, in addition to S. DETTORI, *Art. 30, cit.*, 288, and P. SCARALE, *Art. 30, cit.*, 391, S. DETTORI, *Il ruolo dei principi nella disciplina dei contratti pubblici*, in *Nuove autonome*, 2012, 2, 299; A. ZITO, *Il Codice dei contratti pubblici: i soggetti ed i principi*, in *Guida pratica per i contratti pubblici di servizi e forniture. Vol I - The Procurement Market*, Presidency of the Council of Ministers, Department for Information and Publishing, Rome, 2010, 10.

⁶⁵ See S. PONZIO, *La valutazione della qualità delle amministrazioni pubbliche*, Rome, 2012, 16.

demand in the social, environmental and, above all, innovative logics outlined at both European and national level⁶⁶.

The adequacy of the procurement function is in this sense strictly related to the realisation of the digital transition by means of innovative public contracts concerning not only the purchase of ICT supplies and services, but also the development of new solutions through negotiated procedures or partnerships in particular in the field of the development of smart cities and territories.

Innovation in services and performance presupposes an administrative structure capable of managing highly complex procurement procedures controlling their execution and subsequent application such as in the health sector, where algorithms and the use of data become a resource for diagnosis, therapeutic decisions and the management of disputes. More generally, data, algorithms, and new technological solutions are at the heart of numerous innovative development projects not only of public activities in its most disparate sectors but also of cities and countries⁶⁷.

On the other hand, these are challenges that not only presuppose solid technical and design skills, but also require the ability to ensure compliance with the already highlighted cybersecurity requirements. The security must be ensured right from the design development stage but also – as a component of security as well – the legitimacy of programmes and algorithms intended to be used by the administration, in order to prevent developments, choices or even errors that could compromise their good and legitimate functionality.

Adequacy and good performance must, in this logic, be translated into the need for the contracting authorities to also have the competences to articulate the procedures in such a way as to ensure the satisfaction of all the standards of digitisation, including that of the

⁶⁶ Cf. G.M. RACCA, S. PONZIO, *op. cit.*, 36-37. See also R. CAVALLO PERIN, *Final Report at the Conference Public Procurement: Innovation and Rationalisation. The strategies of aggregation and European cooperation in the new directives*, Council of State, Rome, 14 May 2014, 36-42.

⁶⁷ On the role of innovative contracts in the development of cities, see, among numerous contributions, G.F. FERRARI, *Smartness and the Cities*, in G.M. RACCA, C.R. YUKINS (eds.), *Op cit.*, 173 ff. and L. FOLLITO-LALLIOT, P.T. MCKEEN, *Procurement and Smart Cities: Exploring Examples on Both Sides of the Atlantic*, in G.M. RACCA, C.R. YUKINS (eds.), *Op cit.*, 195 ff.

legitimate programming of the source codes of the algorithmic solutions, in order to guarantee right from the conception of the source code the respect of the principles of algorithmic legality, that is, among other things, transparency and non-discrimination of the computerised process that will be acquired. As noted by the Council of State, in fact, the use of algorithms within the civil service presupposes compliance with three principles: the knowability whereby everyone has the right to know the existence of automated decision-making processes that concern him/her and to receive meaningful information on the logic used; the non-exclusivity of the algorithmic decision whereby the decision must not be based solely on the automated process, but rather on human contribution as well to verify, validate or deny the automated decision (HITL - Human In The Loop); the algorithmic non-discrimination according to which the data controller should use mathematical statistical procedures appropriate to the profiling action putting in place appropriate technical organisational measures to ensure, in particular, the rectification of factors affecting the accuracy of the data and the minimization of risk errors⁶⁸.

In the perspective of ensuring the implementation of the digital transition in compliance with the principles of adequacy, good performance, efficiency and effectiveness, and also legality, the administrative capacity of the public administration in the field of ICT public procurement therefore becomes fundamental, which translates into the need for the design and awarding of contracts to be carried out by offices with adequate professional skills and specific experience, capable of ensuring the use of the most sophisticated contractual tools and the most innovative but, at the same time, most complex procedures. The system of qualification of contracting authorities reserves the exercise of procurement functions to those administrations that exceed certain dimensional thresholds and/or meet certain pre-established criteria, and this seems to be able to meet the needs above, particularly when articulated in such a way as to specifically consider the ICT sector.

This is certainly not a new issue, unknown to the national legal system, in which the qualification of contracting authorities has focused on the cooperative logics that find concretisation in the aggregating authorities of demand such as central purchasing authorities and aggregating entities endowed with a certain professional purchasing capacity, while it

⁶⁸ See Cons. Stato, Sec. VI, 13 December 2019, no. 8472; Cons. Stato, Sec. VI, 9 February 2021, no. 1206; Sec. VI, 8 September 2021, no. 6236.

has never become operational as a general prerequisite for the action of administrations as contracting authorities⁶⁹. In fact, despite the prevailing silence of the European discipline, which has seen merely calls for greater professionalism in the management of procurement, the Italian legislator with Articles 37 and 38 of Legislative Decree No. 50/2016 outlined a system of aggregation of contracts centred on the qualification of contracting authorities and central purchasing authorities in an attempt to give greater consistency and organicity to previous interventions in this sense (such as Article 13 of Law No. 136/2010 on the creation of the figure of the single contracting authority), which however never became operational⁷⁰.

If such previous interventions already responded to the need to reduce the number of contracting authorities in order to implement their competences and functionality, they still appear to be insufficient both in their current articulation and in the first reform perspectives under consideration in Parliament with respect to the challenges posed by digital innovation in the civil service.

It is worth recalling on this point the consideration already expressed by the Council of State in its opinion on Legislative Decree No.50/2016, where it already noted that "the new procedures and particularly innovative award criteria [...] require competent and specialised contracting authorities, which master the tools and are able to govern the procedures"⁷¹. Not only competence, indeed, but also specialisation, i.e. "specific preparation in a given field of an activity, of a discipline"⁷². This latter aspect does not appear to be

⁶⁹ In this sense also M. CHITI, *Le innovazioni sulla qualificazione delle amministrazioni aggiudicatrici*, cit. On the qualification of contracting authorities, see also C. PANETTA, *La qualificazione delle stazioni appaltanti*, in *Giustamm*, 2016, no. 7; G.M. RACCA, *Le centrali di committenza nelle nuove strategie di aggregazione dei contratti pubblici*, in *semplificazione è possibile: come le pubbliche amministrazioni potrebbero fare pace con le imprese*, *Italiadecide Rapporto 2015*, Varenna, in www.giustizia-amministrativa.it.

⁷⁰ In fact, the entry into force of the qualification system has been continually postponed, especially with regard to municipalities that are not provincial capitals, at first because of the transitional regime, which deemed sufficient the registration in the single registry of contracting authorities pursuant to art. 33-ter, Law Decree No. 179/2012, converted into Law No. 211/2012, as well as the lack of the Prime Minister's Decree and the intervention of the ANAC implementing it pursuant to Article 38, paragraph 6, Legislative Decree No. 50/2016.

⁷¹ Cons. Stato, Comm- spec., para. 1 April 2016, no. 855.

⁷² In this sense the Treccani dictionary.

adequately emphasised in the current legal framework, although it appears necessary to enhance it in the light of the principles examined enabling it to better interpret adequacy and good performance in a specific sector of administrative activity. Only specialisation by sector or commodity type makes it possible to carry out appropriate market analyses by sectors and territories possibly in coordination with specialised bodies from other areas to make informed decisions, verify their implementation and, above all, ensure appropriate controls⁷³.

Otherwise, there is a risk of jeopardising, at least in a time perspective, the implementation of the objectives of digital transition as the Court of Auditors has already found with respect to the implementation of the previous Three-Year Plan for Information Technology 2017-2019 due to the lack of appropriate figures and skills, among other things, especially with regard to the use of open source software⁷⁴. On the other hand, ensuring the dissemination of new technologies in the administration and the development of innovative projects, also at territorial level, would require the presence of managerial officials with a multidisciplinary and specific training, who would combine technological, legal IT, and legal skills in the field of public contracts together with managerial ones so as to also bridge the information asymmetry with the production companies⁷⁵.

Only a professionalised administration endowed with a set of such skills will be able to adequately identify its own needs and those of the area of competence, preparing specifications and calls for tenders, assessing whether there are already available solutions, in particular suitable for reuse, or whether it is necessary to develop new ones in an innovative key possibly through partnership logics, understanding the operation of programmes and their costs, monitoring their preparation and subsequent use⁷⁶. It should not be a mere aggregation of previous offices but structures that become capable of upgrading public

⁷³ See in this sense also G. M. RACCA, S. PONZIO, *Op. cit.*, 39.

⁷⁴ C. Conti, Deliberation No. 15/SEZAUT/2020/VSGO of 14 July 2020, on the '*Report to Parliament on the status of implementation of the Three-Year Plan for Information Technology 2017-2019 in local and regional authorities*'.

⁷⁵ Cf. S. DEL GATTO, *Op. cit.*, 577.

⁷⁶ See G. CARULLO, *Principle of Technological Neutrality and the Design of Public Administration Information Systems*, in *Cyberspazio e diritto*, 2020, 33 ff. On the need to increase digital skills, see also I. MACRÌ, *Le competenze digitali per l'innovazione dell'Amministrazione Pubblica*, in *Azienditalia*, 2022, 906 ff.

demand and also operate by aggregating the needs of different administrative authorities, leading to the development of innovation particularly in the relationship between citizens and the administration.

In this way, not only will it be possible to deploy all the potential of the legal instruments currently available to the administration, which is still often unexploited due precisely to a lack of skills but it will also be possible to launch and complete all the projects aimed at implementing smart cities and smart lands with the ultimate goal of improving the quality of citizens' daily lives.

5. THE QUALIFICATION OF CONTRACTING AUTHORITIES IN THE ITALIAN SYSTEM BETWEEN NRRP, INCOMING REFORMS AND ANAC GUIDELINES. THE INADEQUACY OF THE CURRENT PERSPECTIVES.

Notwithstanding the importance that the qualification system of contracting authorities could assume in the implementation of the digital transition and in the promotion of innovation, an examination of the current regulatory framework on the subject, as outlined in Articles 37 and 38, Legislative Decree No. 50/2016, appears sufficient to reveal that it is not sufficiently adequate nowadays. These are provisions that have never actually become operative and that are still suspended until 30 June 2023 contrary to what would be required by the principles already examined, and moreover they appear to suffer from an excessive generality in that they do not take into account the specificity of many sectors of intervention, such as the ICT sector and all those sectors characterised by particular complexity and technicality, such as healthcare, waste treatment and complex energy systems.

Indeed, if the non-implementation of the system already in itself appears to disregard the principles of adequacy and good performance, its current articulation does not appear to be respectful of them either.

Pursuant to Article 37, paragraph 1, contracting authorities may indeed proceed with the acquisition of supplies and services for an amount exceeding €40,000 (today temporarily

increased to € 139.000) and of works for an amount exceeding € 150,000 only if in possession of the necessary qualification pursuant to Article 38 without any categorisation by product types of the qualification areas.

Even if Article 38, paragraph 1, in the original version provided that qualification was to be obtained "in relation to the fields of activity, territorial basins, type and complexity of the contract and by ranges of amounts", the "fields of activity" term was referred merely to the stages of the purchasing procedure (such as design, awarding and execution), and therefore not to product sectors, and subsequently, to dispel any doubt, it was also deleted by Article 8 of Law Decree No. 76/2020, converted into Law No. 120/2020.

Even in the context of aggregative demand figures, such as central purchasing authorities and aggregators, some of which are qualified *ex lege*⁷⁷, the specialisation is not envisaged on the basis of the product sector of intervention, although it is clear how the centralisation of the function favours the acquisition of high general skills that can be put to use in more specific product sectors.

Also from this last point of view, the centralisation of ICT procurement is not fully favoured first of all by the suspension until 30 June 2023 of Article 37, paragraph 4 as well that required municipalities that are not provincial capitals for supplies and works exceeding Euro 40,000.00 and works exceeding Euro 150.000.00 to proceed: a) by resorting to a central purchasing authority or qualified aggregating entities; b) by means of unions of municipalities established and qualified as central purchasing authorities or by associating or consorting in central purchasing authorities in the forms provided for by the law; c) by resorting to the single contracting authority established at the provinces, metropolitan cities or wide area authorities.

In these cases, under the threshold there is only the obligation to resort to CONSIP or other aggregating entities including the regional central purchasing authorities for the purchase of solutions available from them and suitable to the needs of the administration.

⁷⁷ Such as CONSIP S.p.a., the Ministry of Infrastructures and Sustainable Assets, the Interregional Superintendencies for Public Works, Invitalia, and the aggregating authorities referred to in art. 9, Law Decree No. 66/2014, converted into Law No. 89/2013.

It is only recently that a different perspective has begun to appear in the legal system with the NRRP through which the government has committed itself to reform the public contracts code in the first half of 2022 with the aim of 'streamlining the regulation of public contracts, increasing legal certainty for businesses and speeding up the awarding process while maintaining procedural guarantees of transparency and equal treatment'⁷⁸.

The reform of the code is destined to take place in several phases, the first of which has already been completed with the adoption of several simplification decrees, including Law Decree No. 77/2021 converted into Law No. 108/2021, which with a view to ensuring the swift and effective awarding of contracts, has centralised the awarding phase providing (Article 9) that central administrations, regions, the autonomous provinces of Trento and Bolzano, and the local authorities are responsible for the operational implementation of the measures provided for in the NRRP, through their own structures or by availing themselves of external implementing entities identified in the NRRP, or in accordance with the procedures provided for by the European national legislation in force. At the same time, an initial reduction of the number of contracting authorities has been envisaged (Article 52) with particular reference to municipalities that are not provincial capitals, which in relation to the works of the NRRP and NCP will proceed with the acquisition of supplies, services and works in addition to the modalities indicated in Article 37, paragraph 4, of Legislative Decree No. 50/2016, also through unions of municipalities, provinces, metropolitan cities and provincial capitals.

In the next phase, however, an intervention to be completed by mid-2023 is planned as part of the reform of the provisions of the code, which is also intended to affect the qualification system in a general sense in order to reduce the number of contracting authorities, to set up a telematic platform through which to assess procurement capacity, and to give ANAC the power to review their qualification. In the logic of promoting collaboration, the reform also aims at simplifying and digitising the procedures of central purchasing authorities and to implement full interconnectivity and interoperability between administrations by the end of 2023.

⁷⁸ See Axis 4, reform 1.10, of NRP component M1C1, entitled '*Public contracts and PA payment times*'.

It is in this logic that the Government has formulated the draft delegated law on public contracts, which was passed by the Parliament as Law of 21 June 2022, No. 78⁷⁹, which among the guiding criteria also provides for the "c) redefinition and strengthening of the regulations on the qualification of contracting authorities, pertaining to ordinary sectors and special sectors, in order to achieve their numerical reduction, as well as their unification and reorganisation, also through the introduction of incentives for the use of central purchasing and auxiliary contracting authorities for the performance of public tenders; definition of the modalities for monitoring the unification and reorganisation of the contracting authorities; enhancement of the qualification and specialisation of the personnel working in the contracting authorities, also through the provision of specific training courses, with particular reference to the single contracting authorities and the central purchasing stations operating at the service of local authorities"⁸⁰.

While finally aiming at implementing the qualification system of the contracting authorities by means of a renewed discipline, the provision leaves room for further implementations, if analysed in light of the principles of adequacy and good performance, which would suggest to clarify from the outset the need for a qualification also by sectors of activity understood as product sectors in order to be able to also consider separately ICT supplies or, at least, the more complex innovative procedures aimed at outlining new innovative solutions. Therefore, the Government's drafting phase of the legislative decree will be fundamental within which it appears possible to also enhance the different product sectors of activity, as an aspect that does not appear to be excluded by the delegation of powers and that, on the contrary, is included in the need to strengthen the discipline, precisely to improve its adequacy and ensure the good performance.

If this could be the prospect, the general indications for the qualification system of contracting authorities and central purchasing authorities, which were in the meantime outlined by the Presidency of the Council of Ministers and ANAC with the protocol of 17

⁷⁹ The bill was submitted by the Government on 21 July 2021 to the Senate (S. 2330), and it was then approved by the latter on 9 March 2022, then by the House (C. 3514) on 24 May 2022 with some modification, and then ultimately approved again (S. 2330-B) by the Senate on 14 June 2022.

⁸⁰ For a first interpretation of the delegation see R.CAVALLO PERIN, M. LIPARI, G.M. RACCA (eds), *Op. cit.*

December 2021 with the aim of initiating a collaboration to finally start a system that complies with the criteria set forth in Article 38 of Legislative Decree No. 50/2016, "pending the adoption of the enabling act and the relative legislative decree", could be enhanced as well. Quality, efficiency and professionalism are identified as the guiding criteria of the system aimed at ensuring the unification of demand through forms of aggregation and the selection of contracting distracts capable of directly managing the set of phases in which the acquisition of a good, service or work is articulated in compliance with the principles of cost-effectiveness, effectiveness and efficiency.

The protocol outlines the basic features on which the system is to be based, while referring the identification of the appropriate operational modalities to ANAC - but always in agreement with the Presidency - through specific guidelines⁸¹. The first version of these guidelines was adopted on 28 September 2022, after the conclusion of an evaluation procedure that involved also stakeholders and other public administrations (based on a first draft of 3 March 2022). But with an openness to future modifications and implementations following further steps and opinions that still need to be delivered⁸².

Indeed, while one cannot but agree with the initiative to finally give structure and concreteness to a system that has never been operational, some further implementations probably remain possible in light of the principles of adequacy and good performance.

The Guidelines, in fact, focus on a form of qualification having as its object the set of activities that characterise the process of acquiring goods, services or works, with regard to tender design and tendering procedure on the one side, and the supervision and verification of the execution of the contract on the other. The qualification certifies therefore the ability of the authority to directly manage the activities in the two different areas of (i) tender design and awarding process, or/and of (ii) the supervision of the execution and control of the correct

⁸¹ Article 4 of the Protocol identifies the basic qualitative and quantitative requirements for qualification, while Article 5 identifies the bonus requirements, all of which are then taken up by the ANAC guidelines.

⁸² In fact, the Unified Conference of State, Regions, Cities and Local Governments postponed, during the meeting of 28 September 2022, the delivery of its opinion, requesting that a special technical panel be set up to monitor the application of the text and identify the necessary improvements and adjustments.

fulfilment of obligations, including final testing⁸³. And this is only in relation to (i) works contracts, (ii) services and supplies contracts or (iii) both types of contracts according to three increasing levels related to the economic value of each contract.

The requirements for qualification are then outlined separately, with identification of the relative scores, for design and award of works (point 5), design and award of services and supplies (point 6), awards by central purchasing bodies (point 7) and their execution (point 8). In all these cases, the presence of a tender/purchasing or similar office in the administration as well as the presence of an organisational structure of employees with specific competences is required.

Although further evaluations will be possible in the light of future versions of the Guidelines and of the reform of the Legislative Decree No. 50/2016, the absence of an articulation of the system also with respect to the sectors of intervention of the contracting authority appears confirmed. The same reference to the presence of the tender office alone may in some cases appear insufficient, since in the case of more complex contracts each of the phases of the procedure, starting with its design, requires a coordinated approach of several different offices, each one having its own competences (e.g. digitalization or ICT office, but also environmental office, waste management office and other technical offices).

The lack of specialisation, otherwise, not only risks to limit the use of innovative instruments, but also drives to the outsourcing to private professionals and operators of the management of the most complex procedures opening up the issue of the public or private nature of the function. This is a point that, as the doctrine has already pointed out⁸⁴, is not resolved by the enabling act 78/2022, which appears to leave the government the option of

⁸³ See Article 2 on the '*Scope of the qualification of contracting authorities and central purchasing authorities*'.

⁸⁴ See M.P. CHITI, *Le innovazioni sulla qualificazione delle amministrazioni aggiudicatrici*, cit., 70 and 76 ff. On the legislator's preference for a publicist model see also G.M. RACCA, *La Corte di Giustizia e le scelte nazionali per una efficiente e trasparente aggregazione dei contratti pubblici: una sfida per l'evoluzione digitale della "funzione appalti" nazionale, regionale e locale*, in *Riv. it. dir. publ. com.*, 2021, n. 2, 220 ff. As pointed out by V. CERULLI IRELLI, *Le innovazioni normative e i contratti pubblici*, in R.CAVALLO PERIN, M. LIPARI, G.M. RACCA (eds), *Op. cit.*, 59-60, the delegated legislator will in any case have to be able to overcome the reluctance of local administrations in particular, which have also in the past blocked the implementation of the qualification system in order to preserve their autonomy and the right not to aggregate.

increasing the space for private contributions in a more flexible vision of the procurement function but with related risks.

In turn, flexibility appears destined to be enhanced, insofar as the directive criteria of the delegation aim at encouraging the aggregate purchasing activities but according to variable logic, which should also be enhanced with a view to ensuring benchmarking and preventing overly broad and rigid forms of aggregation and this without excluding consideration of an extension to transnational aggregation perspectives⁸⁵.

Thus, while the development of a discipline aimed at finally giving concrete implementation to the qualification system of the contracting authorities certainly appears to be fundamental to promote the best and most appropriate exercise of the public procurement function, the solution currently proposed still appears to suffer from certain deficits, which would deserve to be addressed particularly in view of the subsequent implementation of the legislative decree on the matter. To ensure the full application of the principles of adequacy and good performance, and thus the most efficient and effective implementation of the digital transition.

6. FOR A BETTER ARTICULATION OF ADEQUACY AND GOOD PERFORMANCE IN THE PROCUREMENT FUNCTION FOR DIGITAL TRANSITION AND INNOVATION.

If the development of the qualification system by the ANAC certainly represents an important step forward in the perspective of ensuring the proper implementation of the principles of adequacy and good performance, further reflections seem possible in the light

⁸⁵ As pointed out by G.M. RACCA, *Le innovazioni necessarie per la trasformazione digitale*, cit, 15 ff., and G.M. RACCA, *Principles of joint cross-border public contracts and transnational effects*, cit.; R. CAVALLO PERIN, G.M. RACCA, *European Joint Cross-border Procurement and Innovation*, in G.M. RACCA, C.R. YUKINS (eds.), *Op. cit.*, 124; R. CAVALLO PERIN, G.M. RACCA, *Administrative Cooperation in the Public Contracts and Service Sector for the Progress of European Integration*, in F. MERLONI, A. PIOGGIA (eds), *European Democratic Institutions and Administrations: cohesion and innovation in times of economic crisis*, Turin, 2018, 265 ff. See also again M.P. CHITI, *Op. cit.*, 74 ff.

of the Law No. 28/2022 and of the first version of the Guidelines recently adopted – but subject to possible future modification – in order to help ensure the development of technological innovation in the exercise of public functions and services and, at the same time, of the best ICT security standards, which are now indispensable.

From a first point of view, adequacy and good performance would seem to suggest a greater articulation of the areas of qualification, in a functional perspective also focused on the sectors of intervention, with regard above all to supplies and services instead of only by values and contract types. This would be an implementation that should not be underestimated in a historical phase in which cybersecurity requirements become inevitable and must be developed right from the design phase of the ICT solution to be acquired.

Specialisation, combined with the experience that comes with working in a certain sector, leads to the formation of a background of certain skills, which enable the qualified contracting authority to assist other administrations right from the design phase to understand the possible solutions it is looking for to meet its needs but especially choose among the procedures and contract types available, and then deal with the awarding and subsequent implementation phases.

Furthermore, sectoral specialisation could allow the contracting authority to assist other administrations in adherence also to the principle of legal collaboration even in the preliminary design phases, where all the market analyses and evaluations between reuse and acquisition of new solutions outlined in the AGID Guidelines must take place. The professionalisation of the procurement capacity presupposes a specialisation also by product type such as to allow market analyses, including sectoral ones, and to develop territorial coordination with other local, regional, national or European entities⁸⁶. Wanting to hypothesise a different solution, qualification could also be linked, as already mentioned, to the presence within the qualified authority not only of the tender office but also of other specialised offices, which could support the former in procurement activities in certain sectors, such as ICT but also ecology, energy, health, sustainable and interactive mobility:

⁸⁶ G.M. RACCA, *La contrattazione pubblica come strumento di politica industriale*, in C. MARZOLI, S. TORRICELLI (eds.), *La dimensione sociale della contrattazione pubblica: disciplina dei contratti ed esternalizzazioni sostenibili*, Naples, 2017, 171.

qualification could thus be recognised in these more particular sectors only to the authorities that own the relevant offices.

As already pointed out by the doctrine, this specialisation could be implemented in particular through the development of specialised central purchasing bodies, whose activity may also consist of concluding framework agreements for ICT services to which other administrations could also adhere⁸⁷.

In the light of the principles of adequacy and good performance, it would thus seem to be possible to implement a flexible and varied system capable of leading to the realisation of an innovative network system of public procurement in which each contracting authority is qualified and taken into consideration with regard to its operating context and sector, ensuring the presence of the necessary professionalism for specific contracts⁸⁸.

Moreover, the qualification could also be articulated according to the contractual scheme under consideration. Thus, the competence to award PPPs, at least of a certain value, could be independently considered for qualification according to the complexity of the design of such procedures particularly in the case of more complex and economically significant projects.

Traditional tendering models, indeed, as we have seen, hardly facilitate strategic procurement favouring fragmentation of demand and purchasing power, whereby a more articulated qualification system could allow the single contracting authority to receive requests from other entities, process them but also possibly counter-propose alternative solutions in a logic adhering to all the aforementioned principles, including that of loyal collaboration.

It is no coincidence that in other European legal orders the organisational models of central purchasing authorities differ by sector of interest or territorial area favouring more

⁸⁷ See G.M. RACCA, *Le innovazioni necessarie per la trasformazione digitale*, cit., 16 ff.

⁸⁸ Again see G.M. RACCA, *Le innovazioni necessarie per la trasformazione digitale*, cit., 20-23.

complex collaborations, including cross-border and transnational ones, also based on benchmarking and on Building Information Modeling (BIM).

Other aspects could also then be assessed in the qualification process, such as the ability to systemise purchases through databases, the ability to use BIM, smart contracts but only where there is already a specific basic capability of combining innovation and security in the implementation of digital transition in territories, to create smart cities and smart lands. The recourse to blockchain, smart contracts, big data, and more generally to all innovative tools clearly requires adequate and specialised purchasing authorities capable of ensuring ex ante the good performance of a function, such as that of public procurement, which has a fundamental role in the implementation of today's strategies for the future both in the digital field and in many others, which must be guaranteed first and foremost through the advancement of purchasing mechanisms⁸⁹.

***Abstract.** The development of digital and innovative public functions and services increasingly requires public administrations to use complex procurement procedures or public contracts, such as innovation partnerships, public-private partnerships, or pre-commercial procurements, to design new solutions and tools capable of responding to the demands of an increasingly dynamic, complex and interconnected society, while at the same time ensuring cybersecurity and compliancy with the legal frameworks. The award of these types of contracts is not, however, simple and requires adequate skills, often of a multidisciplinary nature, which administrations (especially local and smaller ones) do not always hold. It appears therefore essential, in light of the principles of adequacy and good performance, that the design and management of procedures regarding these public contracts is entrusted to authorities with adequate technical expertise. Hence, in the perspective of increasing smartness and digitalization within the public administration, an effective and appropriate implementation of the qualification system for contracting authorities, provided by the public contract code and which is being reformed, seems to be a necessary solution to ensure a better and broader use of the innovative contractual instruments offered by European and national legislation for digitalization.*

⁸⁹ See J.B. AUBY, *Conclusioni*, in R.CAVALLO PERIN, M. LIPARI, G.M. RACCA (eds), *Op. cit.*, 136.