

# Artificial Intelligence as a Strategic Opportunity to Rearrange and Renew Public Management\*

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**ABSTRACT** Technological progress has been running parallel to the development of different paradigms in public management. The current context of emerging technologies allows Public Administrations to initiate a holistic process of comprehensive innovation to organise and renew the different management models used in Public Administration along with the internal decision-making mechanisms. Artificial intelligence offers a strategic opportunity in public management to strengthen decision-making and capacity for action by modernising structures and management mechanisms within Public Administration.

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## 1. Introduction

The current technological revolution is transforming the economic model, the political system, the labour market, social organisation and even patterns of behaviour in our society. The overwhelming pace of technological changes since the beginning of this century is generating a new kind of society: the fourth industrial revolution.

These technological advances brought about by the revolution 4.0 represent a great opportunity for major public institutions such as Public Administrations to solve the majority of their conceptual and organisational problems. In addition to this, Administrations are finding that they are increasingly lacking protagonism in the context of governance compared to new social actors such as enterprises and social movements, which diminish a large part of their institutional legitimacy.

With the arrival of new information and communication technologies (ICTs) and the roll-out of e-Administration, an optimal relationship has been attained between such institutions and citizens by improving Administration front-offices. In addition, ICTs have contributed to the achievement of greater equity in the provision of public services and to favouring systems of participation in public decision-making. However, other relevant aspects and issues relating to the management model and administrative efficiency have remained unchanged. Everything related to the back-office has not experienced any significant improvements or change.

The digitisation of Public Administration

provides a climate that is conducive to innovation, harnessing the new technological paradigm to organise different management models for Public Administration and reduce the current legitimacy deficit through higher levels of institutional quality.

The current context of emerging technologies offers a new opportunity for Public Administrations to innovate holistically to improve both internal decision-making mechanisms and public-management models. Artificial intelligence as a strategy could fuel the exponential growth of a more collaborative and citizen-oriented Public Administration.

## 2. Technological advances and their impact on the public sector

In recent decades, reforms of institutional organisations have been marked by different events such as the development of technology, political changes, and the economic and financial crisis. In countries around us, Public Administrations have not maintained a passive and invariable stance.

One example of this is Poland. In Poland, from 1990 onwards, there was the greatest transition in terms of powers from a centralised authoritarian state after the communist regime to a system of local self-government. The introduction of a Local Government Law brought about significant administrative reform promoted by Regulski among others.<sup>1</sup>

Spanish doctrine, on the other hand, argues

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<sup>1</sup> P. Swianiewicz, *Local government in Poland: the transition from a centralised authoritarian State to the system of local self-government*, Diputación de Barcelona, Barcelona, 2006.

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that there have been no genuine reformation processes but rather a modernisation of fundamental aspects of the Administration related to public management, seeking efficiency or administrative quality.<sup>2</sup> The different measures and legislative reforms adopted have not affected the structural core of the Public Administration but have allowed for the implementation of new information and communication technologies (ICTs).<sup>3</sup>

With the technological revolution that began in the 1950s, the Public Administration has reconsidered the need to adapt to new technologies and initiated a new process of administrative modernisation with the automation and computerisation of administrative activity. Over this last decade, with the explosion of the Internet, new information technologies are generating technological innovations with a major social and economic impact such as Big Data, artificial intelligence, 3D printing, the Internet of Things and robotics, among others. This technological revolution represents a great opportunity to regenerate the Public Administration with a profound transformation that is significant enough to bring about cultural and structural change.

One of the great challenges is related to digital transformation in the public sector because it represents a decisive leap in improving the effectiveness and efficiency of Public Administration, just as computerisation once did.

Digital administration is the result of a process of transformation within Public Administrations based on the innovative use of electronic media and disruptive technologies for the automation of activity and operations, openness to citizens, data collection and collaborative analysis, and the provision of digital services.<sup>4</sup> The incorporation into the public sector of disruptive technologies such as artificial intelligence and blockchain, among others,

offers a new paradigm to consolidate the digitalisation of Public Administrations.

### **2.1. European commitment to the digital transformation of the public sector: Spanish-Polish initiatives**

The European strategic agenda notes the interest of European institutions in digital transformation, promoting the right digital tools and finding financial support through Next Generation EU funds and the Multiannual Financial Framework.<sup>5</sup> In particular, the European Commission is immersed in the “Path to the Digital Decade” policy programme and has adopted different measures to maximise the benefits of digital transformation for all citizens, public administrations and companies in Europe. One example of this is Regulation (EU) 2021/694 of the European Parliament and of the Council of 29 April 2021 establishing the Digital Europe Programme for the period 2021-2027, focusing particularly on ensuring that areas of public-sector interest relating to health, education and justice can deploy state-of-the-art digital technologies, such as artificial intelligence.<sup>6</sup>

In response to the digital policies set by the European Commission, the governments of the different member states are putting forward interesting proposals to promote digital transformation in different sectors of society.<sup>7</sup> Examples of this can be seen in both Poland and Spain.<sup>8</sup> Both countries presented their national artificial intelligence strategies: the National Artificial Intelligence Strategy (ENIA) in Spain, and the Policy for the development of artificial intelligence in Poland.<sup>9</sup>

<sup>5</sup> C.A. Ciaralli, *Condizionalità finanziaria, rule of law e dimensione (sovra)nazionale del conflitto*, in *Federalismi.it*, no. 16/2022, 80; N. Lupo, *Next Generation EU e sviluppi costituzionali dell'integrazione europea: verso un nuovo metodo di governo*, in *Diritto Pubblico*, fasc. 3, 2022, 729

<sup>6</sup> COM (2018) 434 final 2018/0227(COD).

<sup>7</sup> Understanding the digital development of a country involves monitoring and analysing a number of key indicators and trends <https://goingdigital.oecd.org/countries/pol>.

<sup>8</sup> The 2022 edition of the Digital Economy and Society Index (DESI) reflects the position of both countries: Spain ranks 7 out of the 27 EU Member States and Poland ranks 24 out of 27. However, between 2017 and 2022, Poland's aggregate DESI score grew slightly more than the EU average, indicating that Poland is catching up with the rest of the EU.

<sup>9</sup> OECD.AI (2021), promoted by EC/OECD (2021), National AI Policy Database, consulted on 6/6/2023,

<sup>2</sup> M. Arenilla, *Cuatro décadas de modernización vs reforma de la Administración Pública en España*, in *Methaodos. Revista de ciencias sociales*, no. 5 (2), 2017, 303; A. Nieto, *Un primer paso para la reforma de la Administración española*, INAP, 2013, 163-183.

<sup>3</sup> Among others, the Modernisation Plan of the General State Administration (1992), the Modernisation Plan of Measures for the Improvement of Administration (2006-2008) and the CORA Report 2013.

<sup>4</sup> A. Cerrillo, *La transformación digital de la Administración Local*, Fundación Democracia y gobierno local, 2021.

The Polish public sector has undergone an advanced technological transformation in recent years. One of the government's priorities is the digitisation of Public Administration. The Polish government is working to harness the potential and risks of AI as one of its priorities. At the end of 2020, as part of Poland's national AI strategy, an important document entitled Policy for the development of artificial intelligence in Poland was approved by the Council of Ministers.<sup>10</sup> One of the strategic areas for the development of AI in Poland is the public sector, with strong interest in the roll-out of AI contracts, among other things. The document referred to above, as well as establishing the framework and basic principles for the deployment of AI technologies in Poland, includes a series of measures and targets in the short term (up to 2023), medium term (up to 2027) and long term (2027 onwards). Among the most immediate measures, there is concern to promote the use of unconventional public procurement modes more suited to the implementation of innovative solutions in the public sector.

In addition to planning activities, the government launched the GovTech Polska project in 2019 to find innovative technological and digital solutions that address the specific challenges of the Polish public sector. GovTech Polska is an institution that cooperates with the Polish government, and its area of activity is technological innovation in the public sector, including public procurement.

Spain's government, on the other hand, designs its action strategy through the Digital Spain Agenda 2025. Updated for the year 2026, this governmental measure sets out a series of actions and reforms structured into different strategic pillars.<sup>11</sup> One of these pillars refers to the digital transformation of the public sector that promotes the digitisation

of public administrations at all levels and areas of action, especially employment, justice and social policies. In this strategic context, there is a Plan regarding the Recovery, Transformation and Resilience of the Spanish Economy that reiterates the commitment of the Spanish executive to digital transformation and is configured as a cross-cutting goal that grounds the different policies proposed, such as the modernisation of Public Administrations.<sup>12</sup> To further strengthen such measures, the 2021-2025 Digitalisation Plan for Public Administrations has been drawn up as a catalyst for technological innovation from the public sphere.<sup>13</sup> The Spanish strategy focuses particularly on promoting the use of AI in Public Administration with the creation of innovation labs for new services and applications in Public Administration (GobTechLab).

### **3. The paradigm shift in public management**

Transformations in contemporary societies derived from technological advances have been running parallel to the development of different paradigms in public management. With the arrival of the new millennium, the management of contemporary Public Administrations is undergoing a process of change as a result of adaptation processes following the technological revolution. It is helpful to set out, even briefly, the evolution of management models to understand the role that new emerging technologies can play in the transformation of public management.

#### **3.1 Public management models**

Since the end of the 19th century, Public Administration has been channelled through various models inspired by the main currents of the moment: the client model, the bureaucratic model, the managerial model and the governance model.<sup>14</sup> The transition from one model to another has not been radical. Gradually and progressively, the Administration has been adapting to new

<https://oecd.ai>.

<sup>10</sup> Resolution no 196 of the Council of Ministers of 28 December 2020 on the establishment of the Policy for the development of artificial intelligence in Poland from 2020.

<sup>11</sup> The agenda has recently been revised incorporating two new cross-cutting pillars to promote impactful strategic projects through public-private partnerships (Strategic Projects for Economic Recovery and Transformation - PERTE) and the co-governance of State and Regional Government (Territorial Networks of Technological Specialisation - RETECH).

<sup>12</sup> Lever IV, on an Administration for the 21st Century, includes the 11th component: Modernisation of Public Administrations.

<sup>13</sup> Ministry of Economic Affairs and Digital Transformation, *Digitalisation Plan of Public Administrations 2021-2025. Digital Administration and Digital Public Services Strategy*, 1.

<sup>14</sup> For a more in-depth study of the different public management models, see M. Baena del Alcázar, *Manual de Ciencia de la Administración*, editorial síntesis, 2005, 87.

changes, incorporating the strategies and tools of each model. The different public-management models that have succeeded one another are not mutually exclusive. In Public Administration, several models can and in fact do coexist.

At first, the model that dominated until just over a century ago was the client model that responded to the natural logic of any organisation by resorting to networks of family and friends. Present in most Western countries, it is considered harmful to public institutions due to shortcomings such as arbitrariness, clientelism and corruption. In order to alleviate such anomalies, a second model designed by Weber appears, more rigid and neutral than the previous one, based largely on meritocracy. Although this model provides a value of great importance to achieve economic development, and institutional and legal security, it hinders the flexible and effective provision of services. It is the organisational paradigm of modern society focused on rationality and legality and ties in with the modern State.

In the late 80s, with Anglo-Saxon influences, the managerial model emerges, following the current of New Public Management. It is a flexible model with an economic vision that focuses on the effectiveness and efficiency of public organisations and on privatisation proposals for public services. For this model, public management improves when managers have some discretion and flexibility with the use of resources to carry out their responsibilities. But this model weakens the State by forgetting public principles and institutional values.

At this time, a new model appears with the need to build collaboration networks with public-private actors to solve social problems. The complexity of actors and problems linked to the defence of the common good and general interest cannot be resolved exclusively by public authorities. Companies, citizens and social movements must also be engaged and collaborate through technology-based social networks. This governance model is a plural model that calls for balance between efficiency and democratic participation with a more open, participatory and collaborative way of governing. This model is based on the idea that legitimacy is achieved not only by being effective and efficient but also with the democratic element that combines

transparency or participation.

Although both the Weberian model and the managerial model are the two great paradigms of public management, there is no one dominant model. There is no prevalent pure model. Rather, in a somewhat disorderly way, Public Administrations operate under a mixture of models in which one can glimpse “a bureaucratic culture with a managerial culture of efficiency and business inspiration”.<sup>15</sup>

Since the mid-2010s, new collaborative dynamics involving social actors in the process of public decision-making with the new generation of technologies and social media have sparked doctrinal proposals about new paradigms.<sup>16</sup> These proposals aim to combine both legal and institutional security with innovation capacity and flexibility to achieve effectiveness and efficiency in the context of this new society. This bureau-business model is an orderly mix between the bureaucratic model and the managerial model that combines business practices with public values.<sup>17</sup> It is evident that all these technological advances and the changes they generate are once again affecting the course of contemporary public management with a more complex governance model that adds in citizen participation, co-management of services, collaborative systems and public-private partnerships.

### 3.2 The interaction of ICTs in public management

ICTs have transformative potential within Public Administration, and this affects the evolution of public management, as the doctrine has shown.<sup>18</sup> Despite the reluctance reflected in the relationship between public

<sup>15</sup> C. Ramió, *Inteligencia artificial y Administración Pública. Robots y humanos compartiendo el servicio público*, Madrid, Catarata, 2019, 35.

<sup>16</sup> J.I. Criado, *Nuevas tendencias en la Gestión Pública*, INAP, 2016, 36-37; C. Ramió, *La Administración pública del futuro. Instituciones, política, mercado y sociedad de la innovación*, Tecnos, 2017, 149.

<sup>17</sup> C. Ramió, *Inteligencia artificial y Administración Pública. Robots y humanos compartiendo el servicio público*, 144.

<sup>18</sup> C. Hood and H. Margetts, *The tools of Government in the Digital Age*, London, Palgrave, 2007; J.I. Criado and J.R. Gil, *Las tecnologías de la información y la Comunicación en las Administraciones Públicas contemporáneas*, in *Administración Pública y Tecnologías de la Información y Comunicación*, Mexico City, INFOTEC, 2016; J.I. Criado, *Entre sueños utópicos y visiones pesimistas*, Madrid, INAP, 2009.

management and ICTs in the past, Public Administrations have gradually adopted technologies in the different phases of technological innovation.

During the consolidation of the bureaucratic model, information technologies supplanted certain internal management activities. The use of ICT was limited to automating tasks. Then, during the new public management stage, a period of computerisation began in the public sector. With the arrival of new applications derived from the Internet and web pages, ICTs have been used to digitise and achieve efficiency focused on an economic vision to optimise internal processes and reduce administrative burdens.

In line with public governance, new digital technologies and communication systems facilitate public-sector collaboration with new actors through online services and interoperability between Public Administrations.

Therefore, the interaction of ICT and public management is of particular importance to understand the current public management paradigm. The role of new emerging technologies such as artificial intelligence is decisive in this new stage of technological innovation that is set to trigger a significant transformation in public management.

#### **4. Artificial intelligence and its impact on public administration management**

In Southern European countries, the use of artificial intelligence tools is less developed than in the United States, but in recent years their incorporation into the public sector is increasing. Within its lines of action, the European Union is prioritising the development of a specific and harmonised regulatory framework for artificial intelligence in all Member States in line with the values and fundamental rights of the Union in order to achieve legal certainty. Europe understands the opportunities of the transformation this new emerging technology brings and of addressing its challenges through a common approach based around artificial intelligence. Of particular importance is the European Union White Paper on Artificial Intelligence: A European approach to excellence and trust<sup>19</sup>

<sup>19</sup> Communication from the European Commission COM (2020) 65 final, of 19 February. The White Paper calls to establish both a policy framework to mobilise

and the proposed Regulation of the European Parliament and the Council laying down harmonised rules for artificial intelligence - the Artificial Intelligence Act.<sup>20</sup> Europe is aware that in order to achieve levels of demand that support the development and adoption of artificial intelligence in the European Union's economy and public administration as a whole, it needs to step up its efforts at different levels. Among the proposals contained in the White Paper on artificial intelligence, in addition to supporting collaboration with other Member states and ensuring access to data and IT infrastructures, it emphasises the need for public sectors to adopt artificial intelligence. Specifically, one of the actions included, Action 6, states: "The Commission will initiate open and transparent sector dialogues giving priority to healthcare, rural administrations and public-service operators in order to present an action plan to facilitate development, experimentation and adoption." It then notes that: "The sector dialogues will be used to prepare a specific 'Adopt AI programme' that will support public procurement of AI systems, and help to transform public procurement processes themselves."

As pointed out previously, both the Spanish and the Polish states, aligned with the European Digital Agenda, present their own strategies for the development of sustainable artificial intelligence, focused on citizenship: the National Artificial Intelligence Strategy (ENIA) in Spain, and the Policy for the development of artificial intelligence in Poland. EU Public Administrations are increasingly exploring the application of artificial intelligence to improve public services, the formulation of policies and internal management since there is no doubt that artificial intelligence could potentially

resources through public-private collaboration and an ecosystem of excellence, as well as a regulatory framework for artificial intelligence that generates an ecosystem of trust, respecting the values and rights of citizens of the European Union (EU). Two particularly relevant communications on artificial intelligence were previously adopted: The Communication from the European Commission on Artificial Intelligence for Europe COM (2018) 237 of 27 April and the Coordinated Plan on Artificial Intelligence, Communication of the European Commission COM (2018) 795 of 7 December.

<sup>20</sup> COM/2021/206 final, of 21 April. For a detailed analysis of both the White Paper and the proposed regulation, see E. Gamero, *El enfoque europeo de inteligencia artificial*, in *Revista de Derecho Administrativo*, no. 20, 2021, 268-289.

improve public management and the effective functioning of Public Administrations in public decision-making and service provision. Of particular interest are the AI Watch reports produced by the European Commission, which reflect results and comparative studies on the potential of artificial intelligence in the public sector.<sup>21</sup>

The economic growth and social well-being of today's society uses values created by consumer data, which are stored and processed mostly in infrastructures located in centralised clouds. In the near future, the data will come from industry, business and the public sector and will be stored in different systems, including computing devices operating at the edge of the network. Artificial intelligence, as a combination of technologies that groups data, algorithms and computing capacity, presents a very significant option. Artificial intelligence is, in turn, one of the most important parts of the data economy.

Artificial intelligence is based on the use of algorithms and data. The use of quality data through algorithms can facilitate such decisions and the provision of public services, improving the performance and outcomes of administrative activity. Therefore, Public Administrations should not hesitate to increase institutional capacities in data governance as a preliminary step to implementing artificial intelligence, establishing responsibilities in decision-making and guidelines to consolidate quality and the appropriate use of data. We saw previously how Public Administrations have adopted acts or developed actions through electronic means without the direct intervention of the people. The automation process has evolved as media have become technologically more advanced. Artificial intelligence is currently being used in automated administrative actions. One question that is open to debate is which decisions can be automated, and whether there are public decisions which require human intervention.<sup>22</sup>

<sup>21</sup> [https://ai-watch.ec.europa.eu/index\\_en](https://ai-watch.ec.europa.eu/index_en).

<sup>22</sup> J. Valero, *El régimen jurídico de la e-Administración*, Granada, Comares, 2007; I. Alamillo and X. Urios, *La actuación administrativa automatizada en el ámbito de las Administraciones Públicas. Análisis jurídico y metodológico para la construcción y explotación de trámites automáticos*, Escuela de Administración Pública de Catalunya, 2011; J. Ponce, *Inteligencia artificial, derecho administrativo y reserva de humanidad: algoritmos y procedimiento administrativo tecnológico*, in *Revista*

There is consensus that the use of artificial intelligence allows for the automation of regulated decision-making, but the potential offered by artificial intelligence points to the possibility that Public Administrations can automate discretionary decision-making. All this taking into account the general principle of precaution for discretionary decisions, needing to assess, among other things, the type of decision, the environment in which it should be made, and the availability of data.<sup>23</sup> Public Administrations are progressively using algorithms and incorporating bots to automate actions.

Artificial intelligence could also offer a great opportunity to implement an institutional and organisational renewal of Public Administration and contribute to its adaptation in a context in which the paradigm of governance coexists with other management models.

All the technological advances developed over the last four decades have had an impact on public management. Hence, the arrival of emerging technologies such as artificial intelligence makes us think that there will be a radical transformation in public management with repercussions in terms of its models. The new model must strike a balance between old and new paradigms, allowing a hybrid system to emerge, as some authors have already ventured.<sup>24</sup>

The disparity of competences and diversity of activities carried out by Public Administration prevents us from relocating all its activity within a single model, separating it out from the rest. The coexistence of both models is possible and also advisable given the diversity of administrative activities. For activities pertaining to the regulation of rights, the bureaucratic model would be a better fit, whereas the managerial model would be more in keeping with the provision of services. However, for all possible public-private partnerships, the governance model would be required.

Artificial intelligence presents a great opportunity to rearrange the different

*General de Derecho Administrativo*, no. 50, 2019.

<sup>23</sup> A. Cerrillo, *Actividad administrativa automatizada y utilización de algoritmos*, in (AAVV) *Las políticas de buen gobierno en Andalucía (I): Digitalización y Transparencia*, Instituto Andaluz de Administración Pública, 2022, 259-287.

<sup>24</sup> C. Ramió, *Innovación pública en Iberoamérica: presente y tendencias de futuro*, CLAD, 2021.

management models within the pre-eminent governance model. Artificial intelligence would allow us to definitively achieve, as the doctrine has shown, a solid, objective, neutral and effective bureaucratic model impervious to clientelism and corruption with higher levels of legal certainty through the automation of processes. We must be on alert so that artificial intelligence algorithms do not give rise to mathematical management with consequences in terms of political patronage. There are proposals for Public Administrations to have artificial intelligence programmes of neutrality and equity that are responsible for validating the other algorithms and artificial intelligence programmes. In turn, artificial intelligence in the management model would benefit areas of the Administration that provide public services such as social services, health and education, by achieving greater effectiveness and efficiency. Finally, in a scenario of public-private collaboration, the intensive use of artificial intelligence by Public Administrations would ensure the possibility of planning, controlling and evaluating private organisations that deliver public services.

Doctrinally, one predicted vector of change in 2020-2030 is the possibility of anticipating a radical shift in management models linked to digital administration and the introduction of artificial intelligence in public management.<sup>25</sup> This task will require both innovative thinking to anticipate the multiple impacts and the reflection of such issues in public debate. The doctrine considers that the traditional dynamics of modernisation and innovation in Public Administrations will have to be renewed and thus achieve modern, solid public institutions that adapt to the possible changes that will mark the 21st century. And in the design of such institutions, a strategy of technological renewal linked to AI and robotics is necessary.

Public Administration must not be reactive to management innovation through artificial intelligence; it must be opened up, as indicated by the Ibero-American Charter for innovation in public management, to possibilities in the improvement and economic sustainability of public services offered by the implementation of artificial intelligence in favour of the common good and general

interest.<sup>26</sup> The same text expressly points out in its Preamble that Public Administrations are “innovative agents that are continuously transforming and expanding the policies and public services they provide to citizens according to their new demands and needs”.

Within the current digitalisation of Public Administration, a favourable climate for the promotion of innovation is being created, where artificial intelligence is a key element to achieve such innovation in public management. Undeniably, the incorporation of artificial intelligence into the public sector gives way to a new model of Public Administration based on data analysis.

Artificial intelligence like the other technological developments that characterise the exponential era -cryptocurrencies, big data, internet of things, driver-less cars ...- generate a series of impacts which should be anticipated through innovative thinking, managing to find a balance when faced with the challenges they present: extreme regulation, disincentivising technological change, or delaying it, so that effective and legitimate intervention comes too late.<sup>27</sup>

Issues of special importance are emerging at an astounding rate, eager for answers related to security and transparency, legal and ethical limits in the development of artificial intelligence that spark interest on the part of the European Union and the doctrine in the absence of a legal framework.<sup>28</sup> In particular, the use of tools based on artificial intelligence that we are seeing in the public sector to prevent corruption and fraud is significant.<sup>29</sup> We are seeing European initiatives such as the

<sup>26</sup> The Charter was approved by the XIX Ibero-American Conference of Ministers of Public Administration and State Reform, held in Andorra on 8 October 2020.

<sup>27</sup> O. Oszlak, *Los impactos de la era exponencial sobre la gestión pública en los países emergentes*, in *Revista del CLAD Reforma y Democracia*, no. 76, 2020, 31.

<sup>28</sup> European Parliament resolution of 20 October 2020 with recommendations to the Commission on a framework of ethical aspects of artificial intelligence, robotics and related technologies (2020/2012(INL)); D. Kowalski, *Public economic law-current problems and challenges on examples of digitalization and robotization*, in Jagiello, S. Kurša and F. Parente, *Influence of information on the Legal System*, Difin, 2021, 188.

<sup>29</sup> O. Capdeferro and J. Ponce, *Nudging e inteligencia artificial contra la corrupción en el sector público: posibilidades y riesgos*, in *Revista Digital del Derecho Administrativo*, issue 28, second semester, 2022, 225-258; J. Miranzo Díaz, *Inteligencia artificial y contratación pública*, I. Martín Delgado and J.A. Moreno Molina, *Administración electrónica, transparencia y contratación pública*, Madrid, Iustel, 2020, 105-142.

<sup>25</sup> C. Ramió, *Innovación pública en Iberoamérica: presente y tendencias de futuro*, 30.

Arachne programme launched by the European Commission based on artificial intelligence, which analyses the risks of irregularities in the European funds management file, including the detection of previous irregularities such as convictions for corruption.

In short, the combination of digital design, big data and artificial intelligence can help improve the functioning of public management, thus promoting good administration, by improving legislative quality, transparency, and techniques for preventing corruption, among others. However, at the same time, adverse effects can arise that are offset by initiatives in different countries such as the Charter of Digital Rights.

### 5. Conclusion

Since the end of the 20th century, society has undergone important changes. The technological revolution spearheaded largely by information technologies has altered labour, economic, social and political parameters. Public administrations are aware, on the one hand, of a decline in their legitimacy, as deeply entrenched institutions associated with the role of the State, and, on the other, that they should not be pushed to the side lines in the work undertaken to adapt their organisation and their activity, faced with the transformations taking place in different areas of society.

Progressively, public administrations have been adapting technologies in the different phases of technological innovation. The role of ICTs has contributed to strengthening public institutions and achieving a high level of efficiency. So far, Public Administration has made use of digital instruments to transform the direct service provided to citizens, achieving satisfactory levels of effectiveness. With the new emerging technologies, it is a good time to renew the internal organisation of Public Administration and reorder the different management models applied.

Artificial intelligence is one of the technological innovations that champion the exponential era and contribute to the recovery of legitimacy within Public Administration through quality decision-making and service provision. The application of this technology would contribute to achieving improvements linked to the institutional back-office, both by

renewing its management model and achieving a higher level of efficiency. This would deliver a governance model that engages organisations and citizens, a bureaucratic model that provides legal certainty, and a management model in the provision of quality public services. The implementation of technologies in the public sector paves the way for greater institutional quality and expands the scope of good governance and good administration

Interest in regulating and establishing a regulatory framework is still active and allows us to face the challenges that guarantee, among others, respect for fundamental rights, the assurance of transparency and security, always seeking a balance so as not to deter the implicit process of innovation. There are many varied challenges that arise in the academic horizon, and we must find answers for them, such as cybersecurity, interoperability, automated administrative activity, blockchain implementation, reliability, and legal and ethical limits.

Artificial intelligence is a useful and appropriate tool to implement an institutional renewal of Public Administrations that helps them to adapt in a complex context involving different actors. The objective is to go beyond simple digitisation and technological innovation and delve into the workings of management models to achieve greater institutional strength. With the improvements and advances brought by the implementation of new emerging technologies such as artificial intelligence, contemporary public management will embark on a change in direction.

By virtue of all this, this disruptive tool offers a strategic opportunity in public management to positively strengthen decision-making and the capacity for action by modernising structures and management mechanisms within Public Administration.