Smart Cities at the Service of Sustainable Development

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Sammary :

Smart cities, being an application of artificial intelligence, are one of the major topics of most countries in terms of most countries changing lifestyles of individuals. We note that these cities are related to certain legal issues, mainly innovation and creativity, whether in relation to the architectural aspect or the one concerning the multidimensional design of the models. While respecting the axes of sustainable development.

Added to this, the relationship between smart cities and information, which contains free-range ideas; others covered by confidentiality, require maintenance

Keywords:

intelligence, city, technology, innovation, information, privacy.

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المدن الذكية في خدمة التنمية المستدامة

الملخص:

المدن الذكية باعتبارها مترتبة عن الذكاء الاصطناعي، أصبحت تمثل الأولوية بالنسبة للعديد من الدول. بالنظر إلى طابع المعيشة المتطور. حيث أن هذه المدن نجدها مرتبطة ببعض المواضيع القانونية، أهمها متعلق بالإبداع والابتكار، بخصوص الهندسة المعمارية عموما، والتصميم متعدد الابعاد خصوصا.

يضاف إلى ذلك الشق المتعلق بعلاقة المدن الذكية بالمعلومات، البعض منها متاح للجميع والبعض الاخر سري يستوجب المحافظة عليه. وقد تطرقت النصوص الخاصة بتكنولوجيات الاعلام والاتصال للحماية المتعلقة بهذه المعلومات. إلا أنه بقي شق من المعلومات بدون غطاء قانوني.

الكلمات المفتاحية:

الذكاء، المدينة، تكنولوجيا، إبداع ، معلومات، الحياة الخاصة.

Les Villes intelligentes au service du développement durable

Résumé :

Les villes intelligentes, étant une conséquence de l'intelligence artificielle, représentent l'un des sujets majeurs de la plupart des pays au regard de l'évolution du mode de vie des individus. On constate que ces villes sont liées à certain sujets de droit, principalement l'innovation et la créativité, que ce soit par rapport au volet architectural que celui relatif à la conception multidimensionnelle des maquettes.

S'ajoute à cela la relation entre les villes intelligentes et les informations, qui contiennent des idées de libre parcours ; d'autres couvertes par la confidentialité, nécessitent un maintien.

Mots clés :

Intelligence, ville, technologie, innovation, information, vie privée.

Introduction

These last years are marked by the passage of the artificial knowledge to the artificial intelligence (A.I.). The first is the ability to correlate information, it is computing as we know it today. Artificial intelligence corresponds to the ability to gather this information , for extract more and more complex concepts .

Among the amplification consequences of the A.I field is the birth of the "Smart city". Also referred to as: digital city, sustainable city, eco-city or connected city. The smart city is part of a geographical area that can also cover smart neighborhoods or eco-neighborhoods as well as connected homes also referred to as the Anglo-Saxon Smart home.

According to the U.N , which is based on the aspects of sustainable development, these cities will host 66% of earth's inhabitants in 2050. Resilience and climate change require changes not only to our ways of life, to do, to think and to act. Finally, the requirement implies rethinking the tools of citizenship with and by digital, including the legal tool, which is also a major concern whether in comparative law or in Algerian law, given the interest currently in the « Algiers Smart City » project and « Tipaza smart city » project.

The problematic concerning intelligent cities necessarily results as one of the consequences of the A.I; and thus the position of the legislator in this matter, in particular the Algerian legislator.

Hence the following plan:

Chapter 1-The general framework of smart cities

Chapter 2-Smart cities: between innovation and invention.

Chapter 3-Security and privacy of data in smart cities.

Chapter I: The general framework of smart cities

Historically, it consists to rejecting the assertion that the "smart cities", or rather, in this case, the "smart cities" were "invented" by the company I.B.M. What this society eventually did is put words on processes "already there". And it is this "already there" that is precisely interesting.

It is almost universally agreed that the world has been facing accelerated change in the last few decades. We are talking about globalization, revolution or digital transition, ecological transition, sustainable development, etc.

It is not a question of starting a research on the innumerable links of causalities which intervene in the large-scale changes, it is simply a matter of reminding that, in the register of these major changes, one of the most important seems to be the urbanization of the world[1].

[1] - It is necessary to join here the remarks of Alfred SAUVY who, speaking of the demography, underlined at the same time its importance and its lack of recognition in the big societal changes: "The small hand of the watch is the most important, but it seems motionless. The slowness of the demographic phenomena carries with them consequences, while stealing them from the attention of

In another context, the "official" birth of "intelligence" seems a bit confusing. The term "smart" appears for the first time in the vocabulary of institutions in 1992, with the adoption of "Smart growth" [2]. Anyway, it seems more and more necessary, if we want to confront the questions raised around this recent emergence, to sort out the different directions and the different options embodied by the expression "smart cities ". Moreover, some propose to take the expression in its literal sense [3].

It is in this proposal to consider that the word "intelligent" did not happen by chance or simply because of a marketing strategy without foundations. This approach presents the danger of a metaphorical reduction.

To attribute intelligence to the city would be to consider it "as a human being, at least as an animal," in any case a living being. The hypothesis formulated previously does not fall into this trap since it proposes to move the question of intelligence towards non-human entities, towards artificial intelligence.

That said, many references to the "smart city" do not have this subtlety.

This is how the variations around this expression inform us about this trap of literalism. For example, one of the most common challenges of "smart cities" is to set one word against another, the antonym in this case [4].

Mainly, the "smart city" would however distance itself from the technological obsession that would have been characteristic of what was called, in the previous generation of public policies, the "digital cities".

For a decade, the use of the concept of digital city was at its peak, and referred instead to the technical side of the city. Today, the notion of smart city highlights the aspect of the augmented reality of the human relationship. This progression manifests the idea that usage is more important than the technique itself. This is undoubtedly one of the first keys of the smart city [5].

When it comes to reality, it is difficult to define exactly what a smart city is. There are no criteria that would measure the degree of "intelligence" of a city. We can only say that this or that city is an example in this respect (Barcelona, Lyon, Amsterdam, ...), thanks to the different rankings that are published every year [6].

Moreover, the closest example is the "Algiers smart city", whose strategic plan was defined by the P.D.A.U.[7] 2035, aims to solve the major problems plaguing the city of Algiers for its transformation into a modern city more accessible, cleaner,

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the contemporaries who undergo them "Seminar organized by the mission on the site of Greater Lyon, on September 1st, 2017.

[2] - Agenda 21 of the UN Conference on Environment and Development in Rio de Janeiro. In 1997.

[3] - According to Antoine Picon: "The hypothesis is apparently simple: in the smart city, in the smart city, it is appropriate to take the term intelligent in a much more literal sense than it could appear. Intelligent in the sense of what learns, understands, reasons.

[4] - If there are "intelligent cities", it would be that there are also towns or villages "stupid". Collective report to the Ministry of Europe and Foreign Affairs in France, towards a French model of shared smart cities, June 27, 2018.

[5] - Raisonnance Journal, Reflections of French Mayors, Thematic No. 6, Smart City, July 2015, p.4.

[6] -According to the criteria listed by I.B.M.

[7] - Master plan of planning and urban planning.

safer and more attractive. Based on the roadmap proposed by the project team, water, transport and energy are the priority areas to consider[8] .

Thus, we can identify three criteria that characterize a smart city, and thus distinguish it from a digital city:

1. The presence of data platforms that can collect and aggregate a large amount of information from different sources.

2. Relevant information available at the territorial level. Data platforms must be able to redistribute useful information in an intelligible way.

3. Citizen participation in the process. This participation can be more or less active[9] .

As for the part of the exploitation, and for the industrialists, this urban growth constitutes potential and profitable new markets. However this phenomenon is not homogeneous on the space of the world.

Urbanization is more or less advanced according to the continents, Africa and Asia still have a majority of rural people. But as urbanization progresses, urban dwellers should be in the majority by 2030, and these continents, the most populated, shelter the majority of large cities[10] .

Thus, in a symptomatic way, almost all existing projects within the framework of the "Partnership for Smart Cities and Communities" are projects with a very explicit focus on sustainable development. I.C.T (information and communication technologies)[11] becoming the elements of an engineering service to this project but being practically by no means at the heart of a specific project. It is no longer a question of training the users of the I.C.T, it is rather a question of training the users of the I.C.T to practices of durability.

Also, it is no longer a question of fighting, for example, against the digital divide, or of mobilizing the social world and citizens around the public debate, but of mobilizing them for public debates on sustainable development, of course linked to cities. in this context.

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[8] - Thus, To overcome the delay generated in the I.C.T sector in Algeria, an experimental laboratory and a Technology Innovation Hub were launched in April 2018. The laboratory will test different solutions before their large-scale launch and will serve the purpose. in place of a regulatory framework favorable to innovation. Kamila AIT YAHIA GHIDOUCHE, Safia BELGHACHE, Representation of the smart city by the citizen: Case of the Algiers Smart City project, Revue des sciences commerciales, Vol.17, N ° 01: December 2018, p111.

[9] -- For example, I.B.M has signed a partnership with P.S.A to collect and analyze data from sensors on cars, in order to imagine the car of tomorrow. In this case, the participation of the driver is passive - even if it is naturally essential to have his authorization to be able to collect the data.
Philippe SAJHAU, I.B.M - Partnership and integrated approaches, facts reports, 1st half 2017, p06.

[10] - Predicted Jacques VERON in his analysis published in 2007, in; Nicolas DOUAY and Carine HENRIOT, China at the time of its smart cities, Geographic information n ° 3,2016, p. 91.

[11] -Law No. 18-04 of 10 May 2018.J.O. No. 27 of 13 May2018, p.03, laying down the general rules relating to postal and electronic communications.

This is how the Commissariat General for Sustainable Development, in its "Focus on smart cities" linked the development of smart cities to the development policies of the "sustainable city": "The smart city" is it for tomorrow ?

The introduction of I.C.T in the urban space opens the way to new features, new ways of managing, governing and living the city. Projects are emerging today and testify to the interest of cities for these new devices but also underlying industrial issues. While I.C.T s can contribute to making cities more sustainable, their development raises questions not only in terms of social acceptability, but also in terms of how they are financed or the transformations they bring about in the nature of the economy. services rendered and the report of citizens / users to the city[12].

Chapter 2-Smart cities: between innovation and invention

The granting of a private intellectual property right thus appears to be necessarily indirect protection.

In accordance with the theory of the unity of art, the works of the mind are protectable by copyright, regardless of genre, form of expression, merit or destination[13]. Accordingly, copyright protects software or computer programs[14] , subject to compliance with the standard conditions applicable in the field. On the other hand, it is established that the ideas and principles underlying a work of the mind are not protectable by copyright.

This exclusion covers in particular methods as well as mathematical principles.

In smart cities innovations; only the formatting of an algorithm will be protected by documents or software (an algorithm built into the source code), provided however that it includes a certain degree of originality.

For the software used in artificial intelligence, and thus in smart cities, this originality is assessed according to the "mark of intellectual contribution" of its author.

Contrary to the classic appreciation of originality, built around the notion of the author's imprint of personality, the originality of the software is based more on a "personalized intellectual effort". Therefore, the software integrating an algorithm will have to go beyond the simple execution. Moreover, the dissociation between protection of the software and its functionalities results in the possible reuse of the algorithm by a third party who has managed to extract it legally.

[12] - General Commissariat for Sustainable Development in France, in its "Focus on Smart Cities", No. 143, September 2012.
[13] -Article 03 of ordinance No. 03-05 of 19 July 2003. J.O No. 44 of 23 July 2003 p 03. on copyright and related rights.
[14] - Article 04 of the previously mentioned ordinance .

For its part, the purpose of patent law is precisely to protect the invention itself, provided that it meets the criteria of novelty, inventiveness and industrial application[15].

Nevertheless, the texts of intellectual property in Algeria, the text on patents, expressly excludes computer programs and mathematical methods from the field of patentability, even if this prohibition is not intended to apply an invention whose only implementation requires a computer program[16] .

In other words, as with copyright, indirect protection remains possible. Special attention must therefore be paid to the drafting of the patent for intelligent cities, the latter having to claim the process and not the program as such[17].

By empowering the systems, it is also the creations generated by an artificial intelligence, without the direct intervention of individual in the creative process of the result considered, which risks escaping the appropriation by the copyright of a creative process.

Returning to copyright, as previously emphasized, all works of the mind, of whatever kind, form of expression, merit, or destination. It remains to be emphasized that the only condition that allows a creation to qualify as a work of the mind is that it is original, namely that it bears the imprint of the personality of its author that it also has moral rights, such as the right to respect or the right to paternity.

Courts and tribunals have already decided the question of the protection of works made by computer-aided man: they are protected by copyright, the computer apprehended as a tool not being exclusive of human creativity in which must be sought the imprint of the personality of the author.

The Paris Court of Appeal has already found that the computer-assisted work "may be protected by copyright provided that the originality desired by the designer" appears, ie the imprint of his personality[18] . Moreover, we find the position maintained by the court of cassation[19] . Similarly, when it comes to smart cities, artificial intelligence type "advanced analytics" can be apprehended as a tool for realization and not as a participant in the creative process, and the work assisted by artificial intelligence can benefit, of its private person author, protection by copyright.

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[15] - -Conditions listed in article 03 of ordinance n ° 03-07 of July 19th, 2003. J.O n ° 44 of July 23rd, 2003 p.23, on the patents of invention.

[16] - -Article 07 of ordinance 03-07, previously mentioned.

[17] - - Report "National Strategy in Artificial Intelligence", Artificial Intelligence Legal Issues, Subgroup 3.2.B Contribution, March 2017.

[18] - Paris Court of Appeal, May 3, 2006, RG 05/03736.

[19]- - "... Whereas the judgment, after having noted that the report of expertise which was limited to study the languages of programming implemented, and evoked the algorithms and the functionalities of the program, not protected by the copyright, notes that the interested parties had not provided any evidence to justify the originality of the components of the software, such as programming lines, codes or organization chart, or preparatory design equipment ... ". Court of Cassation, Civil Chamber 1, hearing 14 November 2013, no. Of appeal: 12-20687.

On the other hand, this is not the case of the work carried out autonomously by an artificial intelligence, especially in smart cities, benefiting from an ability to analyze the environment, learning and subjectivity that allow you to make choices.

Now, here are the limits of the positive copyright law: only an individual can be author. This limit is found in the definition of originality, without which no creation can claim protection by copyright, and which is intimately related to the personality of the author.

The legal patterns of intellectual property law are unsuitable for creations made with artificial intelligence. On the basis of this observation, the DELVAUX draft report "asks for the definition of" own intellectual creation "criteria applicable to copyright-protected works created by computers or robots". This recommendation, however, was not retained in the final report adopted by the European Parliament on February 16 , 2017.

But the problem remains, already in 2012, euRobotics, a coordination action funded by the 7th framework program of the European Union, proposed a "Green Paper on legal aspects of robotics" highlighting a misuse of copyright in robotic technologies resulting from the overlap between the personality of the author and his subjective choices, and the protection of his creations by copyright. The creation of a robot personality, retained by euRobotics, could be a reflection: robots could be given a unique legal personality that would make it possible to enact rules of devolution of the rights own and adapted to their specificity[20] .

Robot-assisted works can be protected by copyright; the robot apprehended as a tool not being exclusive of human creativity. Thus, when the creative process is left to the physical person who bears the imprint of his personality, this person will be author, within the meaning of the code of intellectual property, the work considered subject to its originality.

Such will be the case of the creation generated by an artificial intelligence using data selected by the user in consideration of his choices and his personality[21] .

More specifically, in the case of smart cities, we find the "Building Information Modeling" tool, also known as "Building Information Model" (B.I.M), "Unique Building Information Model" (B.I.M) or "Digital Model of Building "(D.M.B), which is a technology and related processes for the planning, design, construction and management of a building, infrastructure project or industrial facility.

As a digital mock-up, digital file, concentrating all the technical information of a built structure, according to the progress of its realization and its exploitation, a BIM not only allows the data sharing but also their reproduction and modification by several users in a collaborative and interactive way.

[20] - Marie SOULEZ, Legal questions about artificial intelligence, Digital challenges - N ° 1 - March 2018, p 81.

[21] - Report "National Strategy in Artificial Intelligence", Artificial Intelligence Legal Issues, Subgroup 3.2.B Contribution, March 2017.

In practice, a good use of this tool could offer many advantages, such as allowing the acceleration of constructions while offering a real technical, economic and environmental optimization.

From a legal point of view, however, the B.I.M is not yet framed despite its major issues, especially with regard to copyright.

A necessary contractual framework of the B.I.M with regard to copyright.

Thus, the author of a work of the spirit enjoys in this work, by the mere fact of its creation, an exclusive property right that is opposable to all. This right includes intellectual and moral attributes as well as heritage attributes[22] .

According to Article 04 of algerian prescription 03-05, the following are considered to be works of the mind: drawing and architectural works, plans and sketches.

That said, the B.I.M refers to both a business process and software for integration, generation and exploitation of data to design, build and operate (maintenance, repair, modification) a building during its life cycle.

For this, the B.I.M practices are divided according to their degree of maturity (from 0 to 3):

- The level 0 of B.I.M: is a simple computer-aided creation, the file is not a 3D file but a traditional file. For example, they may be architectural drawings. This level of B.I.M is actually the current level of construction. So there is no digital interaction and no revolution in interoperability.
- Level 1 of B.I.M: is the boot level of digital interaction in construction (2D or 3D files). However, these files are not used for building design but for visualization purposes. The use of 2D or 3D file is in this case a complement to the use of traditional files, allowing better viewing and projection. Models made in 3D by an actor of the B.I.M are not intended to be modified by another actor because they do not contain data useful to other contributors of construction. The usefulness of this level of B.I.M is purely representative.
- Level 2 of B.I.M : is the beginning of interoperability and digital interaction between construction actors. The files transmitted to the actors of the B.I.M contain important data which can evolve. The actors can modify, as and when the project progresses, the data and thus the graphic representations allowed by the software B.I.M.

The different actors of construction can work on the same data to make them evolve. The communication therefore takes place with a different temporality. The exchange is not simultaneous because the data are added one after the other and are transmitted to other contributors who can in turn add or modify data.

- Level 3 of B.I.M: is the level at which interaction between actors and interoperability is at its peak. The file models exchanged between the actors are rich, the modifications are constant and the data allow the management of the life of the

[22] - Marie SOULEZ, Lexing Litigation Intellectual Property, March 2017.

structure after its construction, therefore in its exploitation phase. The contributions on the model are simultaneous. A single model is stored on a centralized server that is accessible to all actors in the model who can make changes simultaneously[23].

Therefore, since they are original, all contributions to the B.I.M, as well as the final digital model, in 2D or 3D, could be considered as works of the mind, implying the respect of the economic and moral rights of their author (s) and their use or exploitation by a third party will be subject to prior and specific authorization.

In the case of multiple contributions, article 15 of Ord 03-05 specifies that "is said of collaboration the work in the creation of which several natural persons competed". Also according to the article 14 of the ordinance 03-05 is called composite the new work to which is incorporated a pre-existing work without the collaboration of the author of the latter. Is considered collective, according to Article 18 of the same ordinance , the collective work is created on the initiative of a natural or legal person who publishes, publishes and discloses it under his direction and his name and in which the personal contribution of the various authors participating in its elaboration is based on the whole for which it is conceived, without it being possible to attribute to each of them a distinct right over the whole achieved.

Therefore, depending on the degree of collaboration and digital interaction, a B.I.M could be described as a collaborative, composite or collective work.

For this reason, the use of a B.I.M will require the contracting authority, or the prime contractor in charge of a design contract, to contractually provide for the system of assignments of rights author necessary for its activity, taking into account all the results generated, in addition to data and related software[24] .

The problem is this: the file, whether 2D or 3D or simply created with the assistance of a computer in the level 1 or level 2, is the property of the person who created it. When this person transfers to a new player in the construction (including to enrich the file), each author must assign or grant a license on its intellectual property rights to the original creator or to the new speaker.

The copyright assignment meets formal requirements and mandatory information. This assignment is never presumed and must be the subject of a contract, each of the rights transferred must be mentioned separately in the deed of assignment, the rights assigned and the duration of the assignment must be indicated under penalty of nullity of the assignment. On the other hand, this formalism is not prescribed for the license[25] .

[23] - Xavier PICAN, "Digital Rights and Building" mission, Report to the President of the Higher Council for Construction and Energy Efficiency, January 31, 2016
[24] - Marie SOULEZ, Lexing Litigation Intellectual Property, March 2017.
[25] - Xavier PICAN, "Digital Rights and Building" mission, Report to the President of the Higher Council for Construction and Energy Efficiency, January 31, 2016.

Chapter 3-Security and privacy of data in smart cities

The advance of information and communication technologies is also continuous, in a field where the number of information produced and stored is growing more exponentially and where both technological objects and software create new uses and produce new data. The development of sensors for smart cities will increase the size of the digital universe by 10 between 2014 and 2020.

It is absolutely necessary to recall that while the concept of an intelligent city is not subject to any legal framework, on the other hand the activities that characterize it, by the use of sensors, by the nature of the data collected, data processing and its subsequent use, the public domain in which these activities are carried out and the types of services rendered, many of which are either public services in the classical legal sense or general interest, are subject to laws and regulations each as such.

In other words, the legislation on the protection of personal data is applicable, the definition of sensitive data remains, etc. We can give as an illustration, the counters "intelligents" or "communicating" electricity.

And besides, the reasoning could be pushed further. Insofar as other data not immediately qualified as public data, but collected as part of a smart city are of general interest, since their processing allows the optimization targeted by the smart city; also these data are in the possession of operators who can derive a decisive advantage in competitive terms when they do not belong to them and contribute to the achievement of objectives recognized as being of general interest by the public authorities, they should be considered as essential facilities - their immaterial nature has no reason to exclude them - or as common goods that may be covered by licenses[26].

For this, the smart city is based on high-performance telecommunications infrastructure. The use of data is seen as a lever for steering and action. In addition to a telecommunications network, the production of data requires the upstream implementation of technical devices, sensors, databases and telecommunications networks. To do this, most cities have opened a data management center to create, collect, store, analyze or disseminate information through an open data policy.

A city's willingness to open up its data in an exploitable format is aimed at developing internal and external services through the creation of platforms or applications broadcasting these new services. The idea is that smart initiatives develop information and communication infrastructures so that, in turn, these infrastructures reinforce these initiatives through the development of an ecosystem of data creation and services[27] .

[26] - Gilles J. GUGLIELMI, Governance and participation: do smart cities make the co-citizen ?, Democracy Colloquium, participation and citizen governance. Center for Comparative Public Law Panthéon-Assas (Paris-2), 23 and 24 May 2014.

[27] - Sandra BREUX and Jérémy DIAZ, The Smart City, Report submitted to the City of Repentigny, National Institute for Scientific Research Center - Urbanization Culture, January 2017.

In the same context, information and communication technologies can also represent a potential for sustainable development, mainly in the area of the environment. The use of I.C.T s would notably reduce climate change without even generating emissions.

For example, the use of I.C.Ts could increase the productivity and efficiency of some sectors. The transport sector and the construction sector are among the major generators of greenhouse gases: the I.C.T tools in the field of freight logistics make it possible to optimize and manage operations in order to reduce fuel consumption or mileage .

In the building sector, I.C.T can reduce GES emissions by up to 15%. In terms of energy, I.C.Ts can be used to optimize the distribution and production of networks, but also to set up systems to promote the production of local energy and green energy.

In particular, I.C.Ts can reduce greenhouse gas emissions from the energy sector. The intelligent building sector is also fueled by information technology. Sustainable building favors the use of sustainable materials and the reduction in the use of non-renewable resources. It participates in sustainable building by using technologies to facilitate the design, construction and operation of buildings[28] .

Knowing that the city is the place of both the desire for tranquility, even anonymity but also the sometimes frenetic desire for movement, research information, ...

The first issue is how I.C.Ts articulate with the "real" world. Intelligent cities sometimes make us fear a mechanistic, robotic city on which the unexpectedness of human action would no longer take hold. Worse, this automated city would make us lose "contact" with reality as the technology would eventually annihilate our ability to pay attention and make decisions[29] .

Secondly, it should be emphasized that the role of I.C.Ts, used in smart cities, varies according to the perspective adopted by each approach. For example, according to the participatory and inclusive approach, I.C.Ts have a supportive role to citizen consultation and participation, and can then be seen as one means among others to implement solutions to social and political problems raised .

According to the technological approach, I.C.Ts, because of their growing importance in the economy and in the lives of individuals, arise from the outset as all-purpose solutions, or even as a necessary way to solve the problems facing cities.

Finally, according to the innovative approach, the I.C.Ts are especially valued for the consequences of their integration on the organizational culture as well as on the communications and the relations between the social actors, in addition to being a promising niche on the economic level.

[28]- Joëlle SIMARD, The Smart City as a Vector for Sustainable Development: The Case of the City of Montreal, Sherbrooke University, July 2015.

[29] - David MENASCE, Legitimacy, power and social impact of smart cities, facts reports, 1st half 2017, p06

"Digital culture" is challenging the "status quo", looking for new ways to design, deliver and fund projects, and more responsive citizenry.

The characteristics of the I.C.T which are put forward to show their added value in the definition of solutions to urban issues are:

- Interactivity between components (interoperability, connectivity, network communication);
- Integration of technologies and data from various sources (sensors, geo-localization, internal or outsourced voluntary seizure, cross-checking of data);
- temporality, with continuous transmission and analysis of data;
- automation or empowerment of collection and processing devices;
- Open data (availability and accessibility)[30] .

That said, the challenge of data protection in smart cities begins when we realize that the combination of private and public is needed, and only made possible by the flow of data. This circulation must be fluid and efficient but also framed by the principles of respect for privacy and individual freedoms. For example, in the context of smart cities, smart meters are obvious progress. Monitoring consumption allows both to facilitate the billing for the operator and to offer individualized consumption solutions for the user[31] .

It must be understood, first of all, that the data essential to the functioning of smart cities are not necessarily held by the public authorities. They may be in the hands of some of their partners in local public action[32] . Beyond personal data, the question of ownership of non-personal or anonymised data is keenly addressed today. The challenge here is to find a balance between the economic value of this "new black gold" and the accessibility of data (open data), necessary for innovation.

In terms of time, the balance between data use and privacy was based on the anonymization of the data. From a practical and legislative point of view, in the United States, Europe and the rest of the world, anonymisation was the way to allow the use of data while ensuring respect for privacy. Indeed, if the data can not be associated with the individual from which they come, then the information they contain can not harm it[33] .

Thus, the distinction between pseudonymisation and anonymisation is obvious: The technical distinction between anonymisation and pseudonymisation processes has an impact on the legal qualification of personal data. The scope of this notion

[30] - The Smart City for the Common Good, Report of the Committee on Ethics in Science and Technology, adopted at the 86th meeting of the Commission on Ethics in Science and Technology on June 16, 2017, Quebec, Canada.

[31] - Edouard GEFFRAY, the political and legal consequences of smart cities, facts reports, 1st half 2017, p06.

[32] - Typically, the delegates of public services such as the distribution of water, electricity, gas, or as transport, parking - or even in the hands of purely private actors - telecommunications operators for example -.

[33] - Yves-Alexandre DE MONTJOYE, artificial intelligence and protection of life, facts reports, 2nd semester 2017, p80.

helps to ensure the high level of protection that is normally due to personal data. All information that retains an identifying power can fall into this category, which includes pseudonymised data. Conversely, anonymous data are only considered personal until the implementation of a reliable and irreversible anonymisation process.

In principle, the data can only be kept in an identifiable form for the duration necessary for the purpose of the treatment, anonymity being required in the event of prolonged storage, particularly for statistical, historical or scientific purposes .

The potential for identification therefore conditions the application of the protective devices of the persons whose data are collected, either by reference to their content or their number, or temporally. This explains why it is sometimes difficult to distinguish "pure" anonymization techniques from pseudonymisation techniques, the transition from one to the other being established by the yardstick of a simple detail. There would therefore be a gradation, a kind of relative anonymity, the reliability of the device is again appreciated in light of all relevant factors. In this case, it suffices that there is a risk of correlation between two isolated pieces of information, as was the case here, for the qualification of processing of personal data to be retained.

Traceability takes over here identification, since it still allows to isolate an individual "anonymous"[34] .

The potential intersection of information is the most important threat to the right to privacy and the protection of personal data. Indeed, it increases the risk of re-identification, at higher levels of data processing.

In particular, some data of territorial interest are produced by private operators who are not delegated public services. The question is then how public authorities can access these data, benefit the community, without questioning the business models of these companies or the protection of individuals.

There are several ways of accessing this private data that can reconcile these requirements:

- paid access. It does not necessarily have to be considered as prohibitive for the communities if this cost is less than the installation of a system of sensors allowing them to access the same data;
- free access which provides access to aggregated data for better understanding;
- access via data portability and consent of the individuals concerned. Indeed, today, the private sectors that produce data likely to interest the territories (telephone operators, transport companies, energy distributors ...) hold personal data[35] . And this portability must be provided by law.

The rights of the people whose data are collected are thus threatened, for logical reasons. Respect for the right to prior consent, rights of access and rectification, as

[34]-Philippe MOURON. The protection of personal data in the urban environment - from the Measurement of advertising audience to smart cities. Lamy magazine Law of the immaterial, 2017, No. 139, p. 54.

[35] -From the smart city to the territory of intelligence (s) .The future of the smart city .Report to the Prime Minister entrusted to: Luc BELOT, MP for Maine-et-Loire, April 2017.

well as the right to oppose further processing is not compatible with the goals of smart cities, which require speed of execution and crossing of the data.

This is all the more true with regard to multiple secondary treatments, sometimes not originally planned, which will be added to those carried out directly with people, and which will sometimes have the effect of re-identifying them.

This would, however, justify obtaining a new consent, with the risk that officials may have a legitimate interest in overruling it. These same difficulties arise in respect of the obligations that are placed on them.

This is the case of the prior information that must be communicated to the people whose data are collected, including indirectly, indicating in particular the types of data used, the purposes pursued, or the identity of those responsible for treatment.

It also questions compliance with the principle of proportionality, or "minimization", according to which collections must be limited to data that are necessary for the purposes intended. Assuming that this principle is respected at the first level, the subsequent crossings of which they may be subject for new purposes.

This consideration also concerns the shelf life of the data, which should normally be limited. However, the interest of the secondary uses explains that they can be recorded for durations exceeding that of the first treatment. Again, these risks had already been identified at the connected objects level[36].

Finally, the rights of individuals on their data are certainly reinforced and enriched with new prerogatives, such as the right to data erasure and portability.

Conclusion

In definitive , it should be noted that "the smart city" is the "city of tomorrow", is confronted with various legal issues. Mainly, as regards the exploitation of rights and the protection of information; thus the protection of privacy. Some texts already answer some problems; because in this kind of situation the classical texts always apply on the "new cases" exposed, it is about a adaptation of texts, since the qualification remains the same.

However, for the most appropriate legal solution with the situation; it is important to take into consideration certain situations, from which follow the following remarks:

- The increased growth of smart cities first requires the adaptation of some rules of law; which must be distorted; in order to arrange the technological evolution, and thus the premature birth of the rule of law .Car law in this matter is no longer a consequence but rather - in most cases - an adaptation.

-The silence of the legislator has been so slow in the protection of confidential data "business intelligence". Moreover, we will inevitably face the "same silence" in

[36] -Philippe MOURON, Personal data, The risks of Smart Cities. Systems Expertise Information, 2017, p. 103.

terms of confidential data related to smart cities. Hence the urgency of legislating in this area. In order to identify the conditions that allow texts to remain a good servant without becoming a bad master.

Smart cities being a consequence of artificial intelligence are found at the crossroads, with other intelligences - including business intelligence. Relations imposed by technological watch. It is especially a question of taking into account the interdisciplinarity between "the intelligences", in order to avoid "the war between the intelligences".

-At last, to multiply the thought relative to smart cities, by the "round table" which is essential, because the thought can in no case be that technological; to combine technology with other interests; political, social, psychological and so legal; in order to achieve a more sustainable development . And above all, in order to set as the main goal the widening of the social inequalities created following this urban phenomenon: "smart cities".