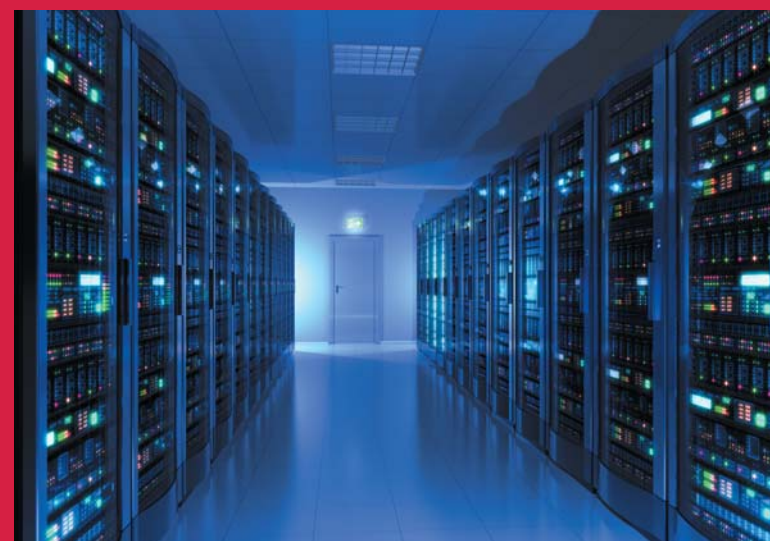


THE POLITICAL AND LEGAL CONSEQUENCES OF SMART CITIES

Interview with Edouard Geffray
Secretary General, CNIL

Legal perspective with Jean-Bernard Auby
Professor of Public Law at Sciences Po Paris



Master of Requests of the Conseil d'Etat (French Council of State), Edouard Geffray first joined the CNIL (Commission Nationale de l'Informatique et des Libertés) as Director of Legal and International Affairs and of Expertise, in February 2012. He was appointed Secretary-General of the CNIL in September 2012. He is a graduate of ENA (National School of Administration / Ecole Nationale d'Administration) and of Sciences Po Paris, and has a Master's Degree in History.

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- DATA PROTECTION
- PUBLIC SERVICES

Not only public services but also the citizens' quality of life can now be improved through the use of data. Using concrete examples (transport, smart meters, etc.), Edouard Geffray discusses in an interview the criteria needed to ensure a fair balance between data protection and freedom of the individual, on the one hand, and innovation, on the other. Jean-Bernard Auby then focuses on detailing the legal consequences around the emergence of smart cities.

David Ménascé: From the perspective of a stakeholder like the CNIL, what are the main issues around smart cities?

Edouard Geffray: Before answering, we need to have several underlying concepts in mind.

First, personal data in a way provides the atoms of the smart environment. These then are the basic particles that form smart cities. The data in itself does not make the city smart, but it does provide the city's intelligence. In other words, it provides the intelligence for urban services to be smart, optimising transport, energy or water services.

Next, the dynamic of smart cities has changed dramatically. The first smart cities came about through an approach that might be termed planned or top-down – to push the point somewhat. The first smart cities were often new cities that a central authority – political and administrative power – organised with private service providers.

The dynamic was turned on its head with the arrival, tangentially, of private or association stakeholders, which positioned themselves between the citizens and the traditional stakeholders in the city's administration. This new interface, a sort of very fine layer between the existing systems, created a new dynamic with the shift from a centralising rationale to a more innovative balance between top-down approaches and bottom-up approaches. We are now confronted with a more mixed landscape, less planned and more innovative.

The third general aspect refers more specifically to the role of the public power and public services. The ramp-up of open data policies and general interest data have a potentially very positive effect on urban public services by fulfilling the famous Rolland laws defining the public service: continuity, quality, universality. Here we find that the articulation between bottom-up approaches and centralised, more top-down, policies provides the most promise. This interlink between public and private can actually contribute to achieving service quality, universality and continuity.

D.M.: Could you give us some examples?

E.G.: All network infrastructure provides areas in which the interlink is promising and fertile.

The transport sector is a prime example: the use of data can optimise transport modes by avoiding interchanges and smoothing users' trips involving several modes of transport.

More fundamentally, it is now possible to inscribe the transport dimension into a broader urban perspective and also by trying to better understand the interaction between stops and public transport frequency, the use of other public services – childcare centres, schools, etc. – and the pathways of citizens' professional and personal lives. A district with, for example, a high proportion of shift workers can now have transport far better suited to their needs. Through the judicious use of data, it is also possible to improve the living conditions of people suffering hardship, combat exclusion and assist the most vulnerable members of society.

It is there that the interlink between bottom-up initiatives and public policy becomes most meaningful. The use of data, innovation and political will can really improve not just transport services but far more fundamentally the quality of urban life and truly make the city smart.

Data can indeed objectify the urban system but only political will can point it in the direction of the general interest. It's this that makes sense of the partnerships. The operator has the economic and technical intelligence of the data but the community also has its social intelligence. That's where there is something to be invented. In other words, it will be by bringing together all the city's stakeholders – citizens, public authorities and economic stakeholders – that the city will really be able to be smart. Otherwise, it will only be mechanical or economic.

D.M.: What are the main risks around data use?

E.G.: The challenge starts when you realise that this interlink between private and public is only made possible by the flow of data. This flow must be fluid and efficient, and also framed by the principles of respect for privacy and personal freedom.

The example of smart meters clearly illustrates this point. Smart meters are an obvious step forward. Tracking consumption simplifies billing for the operator and provides personalised consumption solutions for the user.

But if the read frequency at which consumption is measured ultimately makes it possible to reconstruct the intimacy of people's lives, that is, to know if they have had guests, get up regularly during the night, etc., then this innovation presents an obvious risk in terms of respect for personal freedom.

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D.M.: Indeed, but how do we find a balance between the two?

E.G.: The principles for finding a fair balance between data protection and innovation are relatively simple.

First principle: adjust the system's default settings so that they are as balanced as possible. If we take the example of the smart meter again, the aim is to set the default read frequency at 30 minutes. This period enables the operator to monitor consumption with sufficient detail but without risking being able to map the user's personal life in detail. If it were set at two hours, the operator would not be able to optimise the user's consumption.

The second principle is that of the person's consent to change the system's default settings. In the case of the smart meter, the read frequency can be increased with the user's consent. Similarly, local storage of data is permitted for six months without allowing the company access to it. If users want to have their consumption analysed to be offered alternative and better suited plans, they may consent to their data being accessed.

Finally, after the balanced default settings and personal consent, the third principle is aggregate data processing. The point here is to ensure data anonymity. Open data rationales – allowing for the circulation of data between different services – must not be detrimental to end users' privacy. In other words, if data sharing is necessary, the data made available online must not be detrimental to citizens. The aim therefore is to ensure the data's anonymity from the beginning and to guarantee that people's identity cannot be extrapolated from it. Take the example of geolocation. Knowing the geolocation data of an individual can help deduce a certain number of things. Imagine if your employer could track your every move; they could immediately know if you were looking for another job, for example. It was precisely for this reason that France's Lemaire Law entrusted the CNIL with standardising data anonymisation methods in order to secure the legal framework.

These principles in no way hinder innovation. To use a driving metaphor, they are not a brake pedal but rather a seatbelt in the system. Without protection of the freedom of the individual, the city would simply be mechanical but in no way smart.

D.M.: Do you think Europe is in advance on these issues?

E.G.: Europe is the leading personal data market. It is estimated that its market will be worth US\$1,700 billion in 2020.

Data protection has become a really serious issue for competitiveness given the value of the "latest innovation" in new approaches to the collaborative economy or smart cities. Most new stakeholders are only fine layers in a vastly more extensive existing infrastructure. But ultimately, it is these fine layers that "scoop the winnings".

Above all, individuals are increasingly sensitive to the issue of protecting their data. For example, in the last four years, the number of complaints filed with the CNIL has doubled. If we want the digital society to be tenable, it is crucial that the individual retains control over it. Protecting personal data is the fundamental condition for people having trust in the smart city. Those who will rise to these challenges are those who will hand the power back to the users.

LEGAL PERSPECTIVE: SMART CITIES, DATA AND DIGITAL LAW

By Jean-Bernard Auby



“DATA CAN INDEED OBJECTIFY THE URBAN SYSTEM, BUT ONLY THE POLITICAL WILL CAN POINT IN THE DIRECTION OF THE GENERAL INTEREST. THE OPERATOR HAS THE ECONOMIC AND TECHNICAL INTELLIGENCE OF THE DATA, BUT THE COMMUNITY ALSO HAS ITS SOCIAL INTELLIGENCE.”

1. SEVERAL REMARKS FIRST ABOUT WHAT WE MEAN BY “SMART CITY”

My perception of it is based on the idea according to which the phenomenon combines three evolutionary lines.

First, the “smart city” movement reveals a gradual but deep transformation of the relevant cities’ infrastructure. Technological changes – in particular those that involve new information and communication technology: the Internet of things, etc. – mean that this infrastructure meets more efficiently the needs to which it responds. Another major transformation is down to the fact that the infrastructure’s components are increasingly interconnected; they operate less and less in isolation. Finally, under conventional urban infrastructure – or above if you prefer – sits a digital meta-infrastructure made up of various communication channels – public and private – in which flow masses of data enabling smart cities to function.

The second area of change concerns digital technology and data directly which are the fuel of the smart city. Here, mountains of data are constantly being collected (by a growing number of sensors the most commonplace of which are our smartphones), which then flow through the aforementioned meta-infrastructure. This data is more

or less aggregated by public authorities – more or less is a key issue for the future – which use it to operate their equipment, but also make it available to all – open data – both to inform and also to allow its reuse by citizens, companies, associations, etc., which in turn apply it to create their own services.

The third area of change concerns governance. There is a huge margin of uncertainty surrounding the way in which the operation of smart cities will be regulated, and especially the way in which public and private action will intermesh. However, the governance of smart cities is also gradually being transformed by the free circulation of a growing amount of information about their operation: this change is the seed for transforming the relationship between public authorities, citizens and private organisations, by a sort of potential rebalancing of these relationships.

2. ALL THESE CHANGES INVOLVE, HERE AND THERE, THE LAW, REQUIRING IT TO ADAPT

For me, the main legal consequences of these changes involve digital technology law. But there are others to be considered.

a) The most obvious legal issues are those around data and digital technology law.

The issue that most immediately springs to mind is privacy protection. The mountains of data flowing through smart cities each day include a lot of personal data: where we physically are at a given time, our water and power consumption, how we use certain public infrastructure, etc. The rules of France's 6 January 1978 law on information and freedom of the individual are there to protect us from digital intrusion into our private life, but they will struggle in the context of the smart city. Data anonymisation will be a particularly sensitive issue.

Although particularly sensitive, privacy issues are not the only legal problems that the data regime in digital cities raise and will continue to raise. It is crucial to first understand that the data needed for smart cities to function is not necessarily held by the public authorities. It may be in the hands of some of their partners involved in the local public business – typically, delegated public service operators of water, electricity, gas, transport or parking services – or even in the hands of purely private operators – telecom companies for example. Hence the current emergence of the notion of “general interest data” that the holder should make available to the public authorities. This is what the French Law “for a digital Republic” dated 7 October 2016 sets up with regard to delegated public service operators. Underneath the corresponding discussion lies a far more general conversation that is far from over, about whether data can be the subject of copyright.

Data held by public authorities raises other problems. The aim of making it public under open data arrangements is now a reality as a result of France's 7 October 2016 law, which made it compulsory for municipalities with more than 3,500 residents to allow people access to and for them to use data, in theory, free of charge. A few exceptions will apply to national organisations, like INSEE-the French bureau of statistics and IGN-French institute of geographic and forest information. It will not always be easy to implement these

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principles as some municipalities are not well equipped to comply: disperse data, processed in different formats, formats unsuited to being opened and reused, etc.

Another issue addressed in the 7 October 2016 law is whether public authorities can base their decisions on algorithmic processing of data sets. The Law says they can, while nonetheless requiring that the addressees of the decisions be informed of this state of affairs and that the description of the algorithm components be held at their disposal.

b) Other questions not directly linked to digital law will be raised and are already being raised.

Establishing the infrastructure of smart cities requires and will continue to require changes to public contract law. The most obvious area today concerns the way in which the requirements for innovation – central to smart cities – will be incorporated into this law: a particular form of public contract, the so-called “innovation partnership”, was recently devised for this purpose. Over and above this change, it is easy to imagine that the interconnected nature of the smart city's infrastructure will require for its production and management “consortium” contractual mechanisms involving a great many parties binding them over a long term. It is not sure that such mechanisms will fit easily into existing law.

It is a safe bet, too, that town planning law – urban planning, building permits, etc. – will have to adapt to a context in which smart city regulations require a great many concerns and constraints to be managed concurrently: from privacy concerns to ever-changing technology, from the energy transition to improving traffic, etc.

Finally, local institution law will not escape as it will undoubtedly be necessary to find new ways of articulating the relationship between local government with its resources and new powers and better informed citizens, on the one hand, with a private sector that will certainly have played a key role in actually constructing the smart city, on the other. Smart city management law has, by and large, yet to be invented.