DATA AND SERVICES

RECLAIMING PERSONAL DATA: LYON METROPOLE COMMITS AND EXPERIMENTS

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Caroline Januel
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GRANDLYON
la métropole

A WORD

from **David Kimelfeld,**
President of Lyon Métropole

"Within the last few years, protecting the personal data of citizens has become a major social issue. In 2017, one of every three French citizens tried to remove personal information from the internet. An increasing number of stakeholders are sounding the alarm and inviting us to imagine new forms of data governance that take the rights of users more fully into account. The issue of making a profit from data is also the focus of everyone's attention. These questions concern companies, but also the areas where Smart City projects are being developed. In 2013, Lyon Métropole committed to this innovative approach in favor of economic development and urban transformation. We launched experiments in all sectors, from transportation to education, by way of health, smart grids, water management, the dematerialization of administrative procedures, communication in the public area and assistance for mobility. At the heart of this approach, the open data public platform, data.grandlyon.com (where one thousand data sets have been opened), serves the territory by facilitating the emergence of innovative projects that have been tested in the city's urban laboratories (Tubà and Erasme). By participating since 2016 in the "MesInfos" national experiment, we were also pioneers in the area of personal data management, even before the European General Data Protection Regulation (GDPR) was put into effect. In partnership with the FING (a French acronym for New-Generation Internet Foundation), Lyon Métropole wanted to take an alternate approach to that of worldwide service platforms by making individuals active digital users instead of passive consumers.

This project has explored what it means to restore their personal digital data to individuals through new services adapted to their needs and affirming their rights with respect to their personal data. Thanks to "MesInfos", two hundred citizen-testers were able to choose whether to make their data available or not and see how this data could be applied, with the effective support of Tubà. After more than two years of development, the goal is to make known the social and economic benefits of this experiment and to strengthen the positioning of Lyon Métropole as an area of innovation at the service of local residents. Soon, individuals will be able to master their digital identities and control their personal data, know more about themselves and improve their consumption, contribute to the production of collective knowledge by choosing to share certain data, and test new services and new uses. Personal data is essential for providing service to users and to stimulating economic development through the innovations created using this data. The acceleration of digital technology and the multiplication of data should enable us to improve life in the city for everyone and make it more sustainable, simpler and more pleasant. The idea is to avoid being the victims of digital intrusion in our lives; rather, we can anticipate and take advantage of the strengths of the territory and, above all, of its citizens, to meet the goals of urban innovation. From this perspective, Lyon Métropole is well positioned to become a trusted third party in the relationship between citizens, the internet and personal data use by private players."

CONTENTS

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FOREWORD

This document arose from a desire to share the experience of Lyon Métropole with the issue of personal data. As information to be protected and a source of value, personal data is currently the center of attention. What first comes to mind are the various commercial exploitations and illegal uses of personal data, confidential files revealed in broad daylight and the implementation of the General Data Protection Regulation (GDPR) in May 2018 by the European Parliament. The value of personal data no longer needs to be demonstrated: it is the heart of the digital economy. However, the ways this data can be collected, processed, cross-tabulated and exchanged have not yet been fully explored.

An increasing number of stakeholders are sounding the alarm about the risks of this situation and inviting us to imagine new forms of data governance that give more power and rights to data owners. The FING (a French acronym for "New-Generation Internet Foundation"), which is a reference think tank on digital transformation, is among these stakeholders. In particular, the FING has initiated the MesInfos partner project for experimenting with Self Data, which refers to the "production, use and sharing of personal data by individuals, under their control and for their own purposes".

Lyon Métropole has chosen to support this approach and explore ways to give greater power to area residents through new digital uses, such as choosing what is concretely done with their data and using or refusing to use a service offered to them, instead of feeding this service without the possibility of exerting real control. After two years of experimentation, the Department of Digital Innovation and IT Systems (DINSI) called on the Department of Foresight and Public Dialog (DPDP) to draw lessons regarding the role of a local authority in Self Data management. This document presents a non-exhaustive account of this experience, the difficulties encountered and the development of local expertise on the topic.

This document has been created in parallel to a FING document entitled:
"THE 2016-2018 MESINFOS PILOT PROJECT: Summary / Lessons / Actions!" - June 2018.

"By launching the MesInfos pilot project in 2016, the FING aimed to move the Self Data concept forward and come closer to a situation where individual control of personal data would be the "normal" rule in data economy. This document summarizes the pilot, lists the primary lessons of this unique project and notes the actions to undertake to move together toward implementing Self Data."

> Download the FING document on *http://mesinfos.fing.org/publications/*

WHY INVEST IN PERSONAL DATA?

The digitalization of administrations and companies has been accompanied by a growing desire to protect privacy and individual freedoms. In 1978, the French data protection law gave rise to the CNIL, the personal data regulation authority. Since then, the French and European legal framework has continued to evolve to support the processing of increasingly large data volumes. But data is now limitless and, using the pretext of free services and open access, the internet giants capture, use and exploit this data. Today, these procedures cause concern and are being called into question. Personal data has become a collective responsibility.

A GROWING CONCERN FOR THE FRENCH

In 2017, one of every three French citizens tried to remove personal information from the internet. Eighty-five percent of the French say they are worried about the protection of their personal data, according to a poll made by the CSA Institute in September 2017. In parallel, online use continues to progress, with online payments, storage of personal documents on servers and the publication of personal messages or photos on the social networks. After forty years of existence, the CNIL logged a record number of complaints last year. Most of them concerned the protection of personal data. This ambivalence has a name: the "privacy paradox". We are observing an increased use of intrusive technologies and unwise online practices. At the same time, we are seeing a growing demand for protection of privacy.

More than ever, the goals of digital literacy – which is the ability to understand and use digital technology in everyday life, at home, at work and in the community, with the aim of reaching personal objectives and extending personal knowledge and ability (OECD) – are determinant for individual life, of course, but also as a condition for social inclusion.

CRISIS OF CONFIDENCE AND ASYMMETRIC INFORMATION: RECONSIDERING A MODEL

We are all data producers, sometimes voluntarily (when we upload our résumé on Linkedin or make a comment on Facebook), sometimes after having given our agreement in a more or less straightforward way (accepting the General Conditions of Use to have access to a service or a social network), and often unconsciously by leaving "IT tracks" or metadata that can be exploited (for example, a query about a travel destination that leads to targeted publications).

In spite of regulatory principles, particularly those implemented by the CNIL, this data is collected and analyzed for commercial purposes by the digital giants, such as Google, Amazon, Facebook and Apple (GAFA), as well as by smaller organizations. This practice feeds the crisis of confidence and informational asymmetry between users and organizations. Individuals do not have the same information on their data and how it is used as the organizations.

This way of doing things has become familiar, but it is subject to criticism. Why are individuals not able to have more of an advantage in using their data (enhanced information, new possibilities)? Have organizations gone too far in collecting and processing personal data? Surveys like the one made by Institut Mines-Télécom-Médiamétrie in 20172, show a significant erosion of trust in the internet: “a lack of trust tied to frequently abusive collection of personal data and to greater surveillance of an individual's every act and gesture by certain market players”.

Various experts and observers have also sounded the alarm and point to the strategies of the personal data market. “There is no data sharing without trust” (David Godest, founder and President of a digital trade consulting firm). “Consumers no longer want to see their data looted. Currently, there is far too much dissymmetry between the GAFA web giants and private citizens […] We need to find a balance between the needs of players and the wish by consumers to recover control of their data”. (Isabelle Falque-Pierrotin, President of the CNIL)[4].

Today, and in spite of the numerous services offered by economic players through the use of data, the personal data market is clearly unbalanced. Faced with this situation, what can be done? Should we decrease data collection or reinforce protection? An alternative is possible.

SELF DATA: RE-ESTABLISH THE BALANCE OF POWER BETWEEN INDIVIDUALS AND ORGANIZATIONS ON A MORE EGALITARIAN BASIS

This option consists in exploring the ways to give control of their data back to citizens, by facilitating the consultation of personal data and by enabling them to benefit from the value of this data. Seen as a source of information, this data can be used for a number of projects, such as feeding services and providing economic, social and democratic information.

What would happen if “individuals not only had control of their data, but could use it for their finances, purchases, travel, communication and online relationships, web navigation and energy consumption?” (FING). Why not explore this possibility and aim for empowerment, making individuals independent in their relationship to personal data?

1. CSA Research, *La protection des données personnelles*, 2017; https://www.csa.eu/fr/survey/les-francais-et-la-protection-de-leurs-donnees-personnelles
2. Chair of Personal Data Values and Policies, Institut Mines-Télécom – Médiamétrie, *Données personnelles et confiance : quelles stratégies pour les citoyens-consommateurs en 2017?* ; *https://cvpip.wp.imt.fr/donnees-personnelles-et-confiance-quelles-strategies-pour-les-citoyens-consommateurs-en-2017/*
3. David Godest, *Collecte des données personnelles*: *Il n’y a point de partage de données sans la confiance*, Le Monde Economie, September 20, 2017; *https://www.lemonde.fr/idees/article/2017/09/20/collecte-des-donnees-personnelles-il-n-y-a-point-de-partage-de-donnees-sans-la-confiance_5188669_3232.html*
4. Isabelle Falque-Pierrotin: *La période du chèque en blanc sur les données est terminée*, Le Monde Economie, May 28, 2017 ; *https://www.lemonde.fr/pixels/article/2017/05/28/isabelle-falque-pierrotin-la-periode-du-cheque-en-blanc-sur-les-donnees-est-terminee_5135095_4408996.html*

Of course, there is skepticism with respect to these goals. How can this data serve individuals? It is still difficult to answer this question, but we can compare the situation with the introduction of personal computers, internet or content-producing tools. These innovations provoked the same reservations with respect to their use. Today, we have only to note the overwhelming number of household PCs, the generalized access to internet and the production of contents and knowledge by the general public.

Another recurrent objection: Is it realistic to attack the way the internet giants operate their platforms? Data has a value, one that market players profit from, but not the individuals involved. Why imagine that there is a technological and economic determinism and accept the situation, a situation that worries individuals and erodes their trust in organizations?

This way of seeing personal data is equivalent to a change of paradigm. The way individuals retake control of their personal data and use it to their own benefit has yet to be established, but the stakes are important! We must respond to the crisis of confidence between users and organizations, affirm the digital rights of users and explore the social, economic and partnership opportunities offered by personal data.

The world of data: a few definitions

Big Data: set of data produced by using digital technology and characterized by constant growth, increasingly rapid exploitation and variety.

Personal data: *information that refers to a living person who has been identified or may be identified (CNIL).* This includes a name, a personal address, a nominative email address, an internet protocol (IP) address, data giving a location, data retained by a doctor, etc. The "IT traces" or metadata generated by information and communication technologies may also involve personal data: time of sending an email, addresses of sender and receiver, the email subject, etc. All information that can be cross-tabulated to identify an individual and anonymous information that can be used to identify someone is also personal data and is concerned by the General Data Protection Regulation, or GDPR. Thus, the anonymization process must be made irreversible so that this data can no longer be considered as personal data.

Grand Lyon Data: an approach that provides broad access to metropolitan data and the public and private sectors, through the Grand Lyon Data platform *(https://data.grandlyon.com)*. It includes diverse data, such as the real-time status of traffic, the areas of economic activity, the location of glass recycling bins and water fountains and the amount of rainfall. Over 1,000 data sets were available in June 2018.

Open data: digital data that can be accessed publicly in an open format for free use. The open data approach aims to foster the exploitation and reuse of data beyond their original purpose. The mission established by DINSIC (Interministerial Department for Digital Technology and Governmental ITC Systems) aims to support the policy of openness and the sharing of public data produced or received within the context of public service (e.g., taxes, tourist statistics, air quality, etc.). The Open Data France association federates the communities committed to the development of open data. Lyon Métropole is one of the leading members of this initiative.

Self Data: the production, use and sharing of personal data by individuals, under their control and for their personal purposes. Initially proposed by the FING, this name seems to have become accepted in France, even though it is as yet little known. The term "MyData" is used internationally and includes various approaches that aim toward the empowerment of individuals with the help of their personal data. It is also the name of the network of the various stakeholders committed to this goal *(https://mydata.org/)*.

RETURNING PERSONAL DATA USE TO INDIVIDUALS: THE MesInfos PROJECT

The MesInfos project was launched in 2012 with the aim of proposing a new solution: "make it possible for individuals to recover the use of data concerning them for their personal purposes" (FING). The FING and several partners studied the possibilities, thought of ways to use data, noted the numerous questions that this type of project leads to and then, in 2016, launched the pilot project with the participation of Lyon Métropole.

A LOOK AT THE KEY PROJECT STEPS

2012-2013: Explore Self Data

Through workshops, monitoring of developments and creative exploration, the benefits of a possible restitution of personal data to individuals gradually appeared. These benefits lie in possible uses and concern various areas: management, control, self-knowledge, awareness, decision-making, action and contribution.

The economic and social value of sharing personal data with the private and public entities that collect it was also considered. These entities would be able to improve their knowledge of customers and users, regain their trust and invent new services. This would boost the innovation ecosystem, which could acquire new players and services.

Restitution principles were laid out: "The data of an individual – the data that he or she produces, leaves behind as a trace and the data owned by organizations – are made available to this individual through a "personal data store".... This data store communicates in a secure manner with the IT systems of companies and organizations to obtain data related to an individual and, for example, to update this data. Individuals may explore their data store themselves but will most frequently use "third-party" services (aggregators, comparers, organizers, etc.) that propose a concrete benefit and a simple interface" (FING)[5]. Self data involves three types of stakeholders: the personal data collectors who restore data, users who recover control of it and may decide to share part of it and re-users who take advantage of data sharing to offer new services to the original users.

In planning a first experiment, a number of questions were asked, in particular: Are people really interested in regaining control of their data? How can we give them tools that will help them acquire knowledge and the ability to act? What will personal data collectors gain from this? How can we ensure the security of restored information? How can individuals state their wishes and know they are followed? Should we work toward mandatory data return? With these last questions, we can see how the FING anticipated the principles of the General Data Protection Regulation, or GDPR, which became effective on May 25, 2018.

2013-2014: Experiment with Self Data

Eight large companies (Axa Assurances, Banque Postale, Crédit Coopératif, Société Générale, Les Mousquetaires Intermarché, Orange, Solocal Group and Ecometering from the GDF Suez Group) carried out an experiment of restoring the data they had collected to 200 volunteers. They also participated actively in the design of services for these testers. Below is a brief summary of the main lessons learned from this experiment:

- Concerning individuals, it was observed that they had a "positive but abstract perception of Self Data". They appreciated the principle of returning data but did not have a very clear idea of how it could be used. "It was only through applications that were, above all, useful, but also relational or entertaining, that individuals perceived the value of reusing their data" (FING)[6].
- Concerning the data collectors, they became aware of the "vast undertaking" involved. Since IT systems have not been designed to restore data, the project involved a mobilization of various company services (IT Department, Legal, Marketing, Customer Relations, Executive Management, etc.).
- As for data "re-users", they are interested in thinking up services based on personal data, but the technical challenge is enormous.

2014-2015: Ascertain the opportunities and challenges of Self Data

The MesInfos project makes France a pioneer in Self Data, in particular because of its inter-sectorial approach (energy, insurance, banks). The first project partners were joined by other companies, institutions, associations and competitive clusters.

Self Data opportunities were specified and discussed to coalesce the players around this concept. The main challenges were identified. Meeting these challenges is decisive for the development and growth of the ecosystem in the next few years:

- The intelligibility challenge: How can Self Data be made legible, desirable and credible for all stakeholders, from individuals to organizations?
- The empowerment challenge: How can Self Data truly give the greatest number of individuals knowledge and capacity?
- The economic challenge: What are the obstacles to the creation and circulation of value and to the emergence of new markets?
- The technical challenge: How can we make it easier to make Self Data available by using automatic, secure tools that are also standardized, decentralized and interoperable? »
- The legal challenge: How can we provide both power and greater security to individuals without creating legal uncertainties for organizations or systematically making the relationship unfavorable to them?

2015-2016: Launch the major projects of Self Data projects

Two new projects, MesInfos and MesInfos Energy, demonstrated the interest and challenges of restoring personal data on health and energy utilities to individuals.

5. FING, *Cahier d'exploration*, 2013; *http://doc.openfi*
6. FING, *Expérimentation MesInfos: synthèse, conclusions et défi pour le futur du Self Data*, October 2013-June 2014; *http://doc.openfi MesInfos_Mai%202015_VF_HD.pdf*

Close-up on the MesInfos Health project

During the first experiment in 2013-2014, we realized that certain data is singular. Health data is an example of this. When we asked them to rank their data, individuals pointed out that health data is "very important", "personal" and "visceral"; these are the terms they use. For the CNIL, this is also "sensitive data". We very quickly realized that this data needed to be handled in a different way. This led to a dedicated project, initiated in 2015, that used a more direct approach and a small group of testers, without a platform, to concretely explore the perspectives of Self Data in the health sector.

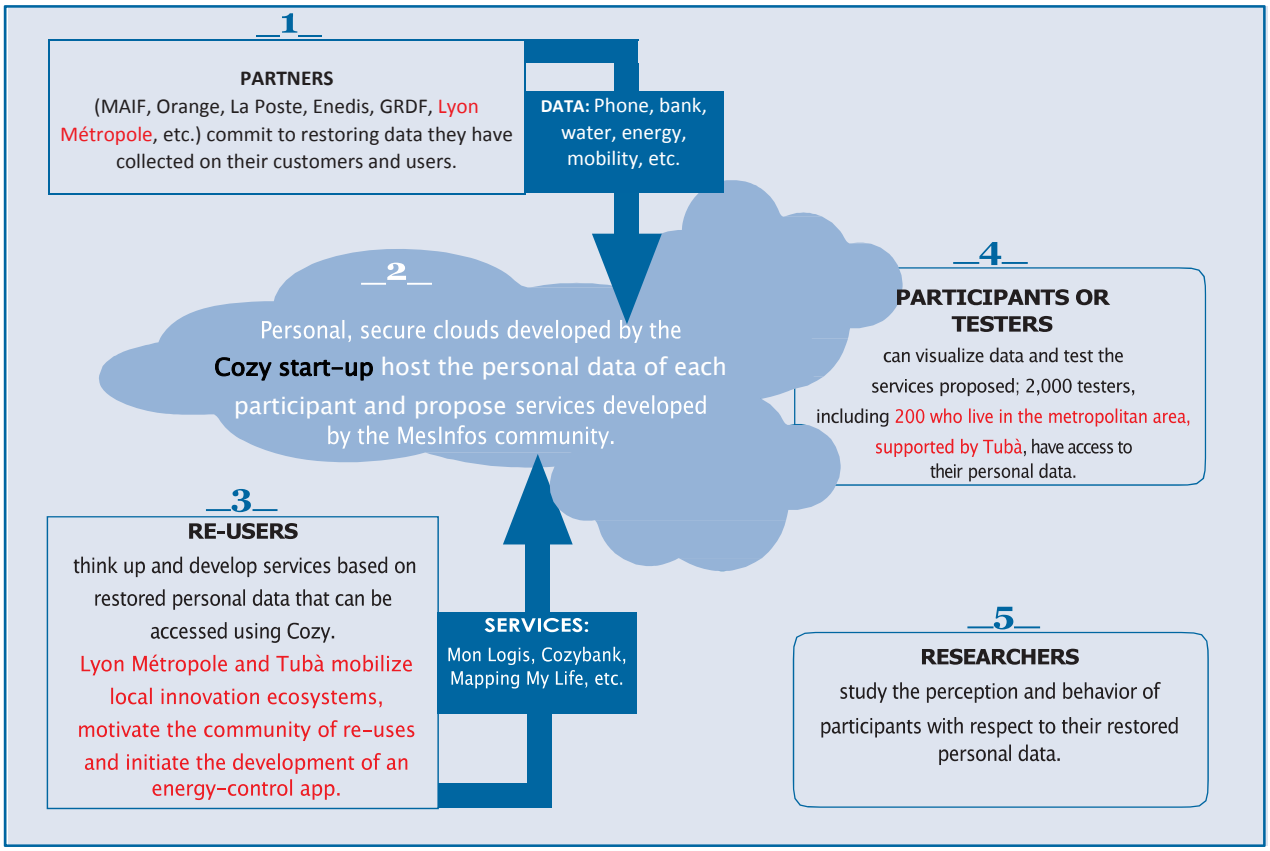
Our goal is in line with the recurrent requests of patient associations and the debate on sharing medical information that focus on putting this data in the hands of the individuals it concerns. This project was concretized through various workshops and a trip to the U.S. to learn about American experience with Blue Button.

This system enables over 150 million Americans to download their health data from the sites or portals of hospitals, laboratories, insurers, etc., and even to send it to third-party services. The MesInfos Health workgroup also drew up a shared charter to formalize the goals, principles, and requirements associated to returning health data to individuals and laid the groundwork for an experiment with the MGEN, known as "My Data, My Health". This experiment was carried out by Cap Digital in 2017 with a pool of thirty testers. Uses for health data, its value and possible services resulting from its restoration were some of the topics studied with the testers.

Sarah Medjek, Research Coordinator and MesInfos Experiment Leader, FING

2016-2017: Put Self Data in action through a unique pilot

This pilot project brought together data-collecting organizations, platforms, a territory and an entire innovation ecosystem to concretely explore the potential of Self Data for individuals and organizations. In this context, Lyon Métropole joined MesInfos through a participation agreement sponsored by Sandrine Frih, Vice President of Lyon Métropole for Consultation Policy, Citizen Participation and Associational Activity, and approved by the Metropolitan Permanent Commission on September 12, 2016. Pilot project goals are in line with the project: "in 2017, partner organizations shared the data they had collected on over 3,000 users with them, so that these users could do something meaningful with it!" (FING). The MesInfos principle is based on five families of stakeholders and is organized in the following way (see diagram below).



How Lyon Métropole acts in the context of the MesInfos pilot project

The Department of Digital Innovation and IT Systems (DINSI) implemented various actions directed internally:

- Internal awareness of Self Data: meetings with various departments, articles in internal communication materials
- Communication on the MesInfos project and its goals: workshops with various departments
- Mobilization of the Water Department and support for the restitution of consumption data
- Work with metropolitan digital project managers to find links between Self Data and metropolitan digital projects
- Mobilization of some twenty metropolitan agents as testers
- Foresight workshops
- Carrying out of various studies in coordination with the Department of Planning and Public Dialog

With the support of Tubà (metropolitan Living Lab and partner), Lyon Métropole carried out several externally oriented actions:

- Design and implementation of a co-creation cycle for innovative services with participants with varied profiles
- Organization of two hackathons: mobilization of participants from higher education, creative communities, etc.; accultruation of re-users; co-design of service projects based on personal data
- Mobilization of around 200 local testers living in the metropolitan area
- Organization of workshops with these testers; support for learning how to use the Cozy tool; collection of their feedback
- First Self Data morning session in September 2017: heightening awareness of Smart City players
- Meetings with academic entities, such as the LIRIS lab and LabEx Urban World Intelligence

LYON METROPOLE: A METROPOLIS AND A TERRITORY COMMITTED TO OPEN ACCESS DATA AND THE USE OF PERSONAL DATA

Why did Lyon Métropole join the MesInfos pilot project ? As a pioneering local government in considering the implementation of public data for services, Lyon Métropole seized the opportunity to experiment with personal data, a new field for its Smart City policy.

Enriching data expertise by exploring the field of personal data

Lyon Métropole is a pioneering local government in data access and the support of digital exploitation. Lyon Métropole has defined a policy for diffusing data by using it for the elaboration of a true "public service for data". By proposing over 1,000 data sets on the data.grandlyon.com platform, it offers broad access for everyone to metropolitan data. This includes public data (e.g., Lyon Métropole, City of Lyon, City of Chassieu, etc.), as well as data from the private sector through its local partners (e.g., LPA, JCDecaux, etc.).

This process of opening data and the "diffusivity tests" (A. Courmont) successfully carried out by DINSI were accompanied by studies of the reuse of data made available, such as the political science thesis of Antoine Courmont[7].

In parallel, a number of actions to provide support and facilitate adoption of data were carried out, in particular by Tubà, a center of innovation and experimentation for the city of the future. These actions targeted the general public, as well as creative communities and economic players.

To ensure coherence among these actions, Lyon Métropole entrusted general data administration to Nathalie Vernus Prost – an original initiative for a local government. Her main missions were to accelerate access to public and private data from the territory and to identify the sources of value creation for this data.

On the strength of this data expertise, Lyon Métropole chose to go even further by exploring the field of personal data.

7. Antoine Courmont, *Politiques des données urbaines: de l'open data au gouvernement des données*, 2017, *https://www.millenaire3.com/articles/politiques-des-donnees-urbaines*

General data administration in practice

We focus on three main areas for our daily work. The first involves ensuring that metropolitan goals are adapted to the infrastructures that allow collecting, properly managing, ensuring quality and distributing and exploiting data, as well as managing talent. It's necessary for the local government to build skills and turn to emerging professions, such as "data scientist". Lyon Métropole was one of the first local governments to recruit a data scientist. We are reinforcing both our technique and our human resources.

The second area consists in looking for the proper contacts, who are able to reveal the value of data and promote innovation. Tubà is one of my main contacts in this respect. We also work with Erasme, Lyon Métropole's internal laboratory, on new digital uses and with all the players in the economic ecosystem, research networks, schools, competitive hubs, clusters and associations.

The third area concerns heightening awareness of data potential, driving the networks and participating in national networks like Open Data France, which Karine Dognin-Sauze has been Vice President of since last fall. In this way, we are in continuous contact with the local governments invested in access to data, as well as with the State, through the DINSIC EtaLab mission. We are also present in Europe through projects like bIoTope[8] and *Smarter Together*[9]*. Their project managers, like the Director of DINSI, are the ambassadors of our data strategy at the European level. My role is to find the proper contacts, create links between stakeholders and look for data to implement the projects and dynamics that will enable us to move forward together. This is how we create collective intelligence for the common good.*

Nathalie Vernus-Prost, Chief Data Officer, Lyon Métropole

Meeting the goals of the Smart City policy

Making data available, encouraging its reuse, supporting digital services and creating value are some of the public policy goals for the Smart (and digital) City that have been implemented by Lyon Métropole. The data strategy focuses more specifically on three areas: "Develop access to the metropolitan data heritage, deploy a strategy for acquiring and distributing data and support data adoption and assimilation. The MesInfos pilot project provides an opportunity to meet these objectives". (Participation agreement for the MesInfos project between Lyon Métropole and the FING).

With MesInfos, Lyon Métropole rounds out the means implemented for assimilating data by extending them to the area of personal data. This intention affects both internal services and city stakeholders. MesInfos also provides an opportunity to explore ways to profit from this data: "We think first of all of building digital services that have the potential to create jobs in the territory and attract new talents that will, in turn, create better-performing services and provide tax income that will be reinjected into local development. We will thus be feeding a virtuous circle based on data" (Nathalie Vernus-Prost, Chief Data Officer, Lyon Métropole).

The MesInfos project is also in line with Smart City methods, in particular the ambition to co-build with all stakeholders: companies, local residents, and academic and institutional partners. The hundred or so projects being carried out under the Smart City policy have convincingly demonstrated that an open innovation approach provides better answers to new urban practices. Why ? Because "doing things together" looks at complex topics in a decompartmentalized, transversal, agile way that takes uses more fully into consideration.

Lyon Métropole: experimental territory

As the only French local government that is a project partner, Lyon Métropole provided a territorial anchoring that the FING needed to obtain territorial data from a public player, as well as from local project partners. Providing citizen-testers with a substantial amount of personal data is more advantageous to them. They have a more complete idea of their personal data that is collected by third parties and have more opportunities in terms of digital services. "Self Data aims to give individuals more control and to share data value and crossed data with the principal stakeholders. Sharing is possible only if there is sufficient data, if there are enough players who accept to share data with individuals and if there is a creation of pertinent services for users.... Lyon Métropole and its service providers have a large amount of data on individuals, such as data of water consumption or mobility, and could contribute to this diversity" (Sarah Medjek, FING Research Coordinator).

8. Program to facilitate the creation of new services based on smart connected objects.
9. European project aiming to provide smart solutions that can be duplicated on a worldwide scale to improve the quality of life for residents. Lyon Confluence is a pilot area.

This anchoring enabled mobilizing 200 citizen-testers living in the metropolitan area, who were committed to the idea and motivated to experiment; they were supported by Tubà.

Lyon Métropole's participation also enabled considering possible connections with other metropolitan projects aiming to implement digital services and potentially involving personal data, such as the metropolitan digital reception desk[10] or the urban pass[11].

Restoring personal data

By participating in this experiment, Lyon Métropole wanted to give civil testers the possibility of having access to additional data sets and to see what it was like to restore data managed by the local government. The Metropolitan Water Department took up the challenge of developing skills and began a restoration process (see the interview with Pierre Helle).

Pierre Helle
Drinking Water IT System Manager,
Department of Water and Waste, Lyon Métropole

"HAVING A DYNAMIC LOCAL GOVERNMENT AND THE CNIL AS PROJECT PARTNERS GIVES USERS MORE CONFIDENCE THAN IF THEY WORKED WITH PRIVATE PARTNERS ONLY"

Before the MesInfos experiment, the Water Department, and in particular the drinking water services, were already working on the data question. Can you tell us more?

As far as drinking water is concerned, our approach is based on the framework of the new public service delegation contract (DSP) signed in 2015 with Eau du Grand Lyon, a subsidiary of Véolia that operates the drinking water service for the metropolitan area. From the beginning of this agreement, we took into account the importance of data, from use to protection, and paid particular attention to the types of IT systems, security and data transmission. This approach mainly concerns operational data that has nothing to do with personal data and user data for invoicing. Until now, information on consumption was sent to users on paper. In the context of the remote reading that is part of the new DSP contract, the consumption index is used for actual invoicing and to provide services to users, such as making them aware of a leak or excessive consumption. The remote reading is currently being implemented in a gradual way over the territory. Users receive their codes for accessing a customer account, where they can connect, access their data and observe their consumption over several days or weeks.

Is this data part of the MesInfos experiment?

Yes, and if civil testers ask for it, we can even send them their consumption data through the Cozy platform. Technically, it's not complicated; the databases exist. The difficulty comes from accepting whether or not to transmit this information.

Lyon Métropole has a variety of data. Why has water data been targeted?

The Water Department's experience with data and the fact that these databases already exist probably led Nathalie Vernus-Prost to ask us to join MesInfos. The Water and Waste Department was aware of the innovative aspects of this project, which is in phase with future trends. The Department accepted making consumption data available for tests, on the condition that this would not interfere with our delegate's missions in terms of time and cost because this request was not originally planned and was added to the contract.

In addition, the GDPR makes it mandatory for us to supply data to users when they request it. The Water and Waste Department and Eau du Grand Lyon follow this regulation and work with the DINSI (Department of Digital Innovation and IT Systems) and the DAJCP (Department of Legal Affairs and Public Procurement) to ensure this.

10. Interface for simplifying the relation between users and the administration and its partners to take greater advantage of services offered in the area.
11. One-stop gateway to accessing public and private services in Lyon Métropole.

This project also provides a good way to learn how to restore data to users. And the fact that the CNIL participates in the MesInfos project is an important factor and very reassuring for the Water Department and all partners.

When water consumption data becomes part of the MesInfos experiment, in what ways can it be used?

Uses remain to be invented, but remotely collected data has already revealed that water consumption is a good indicator of personal activity. For example, consumer data in a rental residence was used at the request of certain municipalities in the Alps to get an idea of the number of rental units in the municipality. Water is a good indicator of tourist activity. In the healthcare sector, and, once again, at the request of users, we can imagine following water consumption by the elderly who are very isolated or in poor health to get an idea of how they live and to know whether they are taking care of themselves. Changing scale – that is, considering this indicator on the district level, for instance – can be interesting. This is what was done for the project led by Confluence, a Local Public Company (SPL).

There are sure to be other uses stemming from the combination of water data with other data.

At term, can we envisage changing behavior with respect to our "relationship to water"?

It's still too early to know. People will probably become more aware of conserving the resource. Data that indicates excess consumption or a leak generally leads to a response. Another example: this winter we chose to include service data on the temperature of the water meter. Four thousand individuals were warned that their meter, which is their responsibility, was about to freeze and needed to be protected from the cold. This data helped preserve installations and ensure continued user comfort.

What do you think about a local government that commits to this approach?

Restoring the data that directly concerns them to users and giving them the possibility to use it however they decide to counteracts the abusive use of personal data in the business world. We are very pleased that Lyon Métropole is an active player and committed to this initiative.

Naturally, transparency is very important. We process data that concerns you, but we can also restore it to you. Lyon Métropole is part of this game, part of this civic approach that depends on the wishes of users.

Of course, this goes hand-in-hand with securing the platform. This technical aspect is unavoidable, especially since Lyon Métropole has social data that is particularly sensitive and highly protected.

Acting as a "trusted third party" is perhaps Lyon Métropole's most important role. The MesInfos partners are undoubtedly aware of the importance of having a public player on the project team. Having a dynamic community and the CNIL as project partners gives users more confidence than if they worked with private partners only.

This type of approach can also contribute to the local economic dynamic by encouraging the players to think up services and by attracting other players to our territory. Lyon Métropole currently drives a number of innovative projects in the digital technology and data sectors. Digital technology is a major development pathway. ■

SOME LESSONS FROM THE MesInfos PILOT

The research part of the MesInfos pilot was implemented to answer the main questions asked by project partners about the interest of restoring personal data to testers, the impact of this restoration on the way they trust organizations and the ways in which they could adopt and use the Cozy platform (a personal, secure cloud). Here are the main findings.

Citizen-testers expected a safe platform and the centralization of their data

In the current context of a crisis of confidence, citizen-testers were concerned about the lack of transparency in organizations with respect to the processing of their personal data. In the participatory workshops led by Tubà, they evoked a feeling of being tracked. This raises the issues of threats to individual freedoms, the abusive use of data (as highlighted by current events) and the commercial use of this data.

These testers recognized the interest of data restoration offered in the context of the pilot program. The possibility of centralizing and visualizing their personal data from various collection sources in a secure, personal cloud named "Cozy" was very much appreciated. "Above all, Cozy is a system for collecting and saving personal data. It has a dashboard that sorts and summarizes information" (Tubà internal document).

However, certain testers had doubts and reservations about the Cozy area. The fear of intrusion was real ("What would happen if someone broke into my cloud?").

Testers recognized the benefits but were blocked by the technique and the limited number of services proposed

In addition to being able to centralize their personal data, testers appreciated the fact that they could "try their hand at a new digital technique, get a quick and concrete idea of the multitude of personal data collected by companies" and "see the data they generated by using services delivered by companies" (Tubà internal document).

Longer-term benefits noted by testers were "being able to benefit from services that use their personal data, being able to establish a different type of relationship with the companies that collect their data, and the perspective of being able to increase their ability to act through better control of their personal data" (Tubà internal document).

The testers were also aware of collective possibilities. They would like to situate themselves with respect to others and compare their personal data to that of similar anonymous users.

But this value perceived by testers was diminished by their difficulties in using the Cozy platform. Some testers were concerned about security; others felt that Cozy was "complex and time-consuming". The available data sets and, consequently, the services proposed were also felt to be limited. "We are currently running up against the limits of experimentation, which, by definition, can only be carried out with those few partners who restore data. The more data and services we have, the more Self Data will seem important to individuals" (Sara Medjek, Research Coordinator, FING). The gap between experimental goals and services that can actually be used by testers can also explain certain deceptions.

Sarah Medjek
Research Coordinator and MesInfos
Experiment Leader, FING

"A TERRITORY CAN ENRICH DATA DIVERSITY AND DEVELOP SERVICES THAT WILL INTEREST INDIVIDUALS"

What are the main objectives of the research part of the MesInfos experiment?

The research program was put in place to observe how testers reacted when faced with their personal data, the Cozy platform and the services made available to them. It's a very important program because the partners are counting on it to provide answers to their questions. Are the testers interested in their data? In the services? Which services? Does restoring data have an impact on trust with respect to companies or structures? And so on. This year, we paid particular attention to the issue of how users adapt to the Cozy platform and the services (....)

Lyon Métropole joined the experiment in 2016. Did this modify the research program>?

Like the other partners, Lyon Métropole is important for all aspects of the MesInfos pilot, not only for the research part. As of today, we have observed that individuals are not necessarily aware of their data. It's not the data that interests them; it's the services we make available to them. And the more types of data we have, the more the services will be pertinent, because they are based on unexpected cross-tabulations that bring added-value information to users. This could include, for example, cross-tabulating energy consumption data, bank data and sales receipts. This is why it's important to have a territory as part of MesInfos! By providing new data, a territory can enrich data diversity and develop services that will interest individuals.

In addition, the participation of Lyon Métropole has enabled MesInfos to become solidly anchored in the area. Working with Lyon Métropole and Tubà enabled us to build a pool of metropolitan "super testers" that we frequently rely on through workshops for testing, services and feedback on Cozy. This user feedback is very important for the project.

Can you tell us more about the main lessons learned from this research?

Our panel revealed that individuals are very concerned about the ways their personal data is collected, stored and used. They feel that companies are not transparent enough with respect to these various processes, and this lack of transparency worries them a lot. This concern leads them to imagine diverse procedures or systems that are not secure enough, where companies transfer their data to third parties without their consent, and so on. This opacity generates mistrust and creates anxiety.

After observing this, we formulated various hypotheses tied to mastering data, on the one hand, and to user trust, on the other. Making tools available for users to "take back" their data might make individuals feel more secure and encourage them to use their data, test these tools and perhaps adopt them. Given the high level of worry, the use of "self data" tools that give greater control could be extensive. And the fact that companies are committed to restoring data and allowing individuals to have better control of it could lead these individuals to have more trust in the companies.

Did these hypotheses turn out to be valid?

Preliminary results have shown that this is not exactly the case. We have not yet seen an impact on trust, but we must take into consideration the fact that this process takes a very long time to build. The six months of experimentation are not enough and must be continued.

As for adoption, the process is more complex. Personal data is still somewhat abstract for individuals. Services are what will make a difference. However, these services have been used only since late January and it's still too early to arrive at conclusions. But we have already noted that the retention rate – that is, the percentage of individuals who use the Cozy platform on a regular basis – is similar to the rate observed for new technological applications: 10-15%. We have also noted that regular users spend an increasing amount of time on the platform and use more services, even though the platform is still being developed. Up to now, users have paid particular attention to the storage function, which is a prerequisite for potentially using services and perhaps adopting the tool. ■

A creative, motivated and imaginative local community that runs up against data availability

As a MesInfos project leader for the territory, Tubà relies on its expertise to identify, federate and guide a local community of data re-users. These are the people who will invent services based on personal data. In collaboration with the FING, several creative sessions were organized:

"In October 2016, Tubà and FING launched a cycle of a dozen co-creation workshops for innovative services based on personal data and organized the first MesInfos hackathon on November 25-27, 2016. We also asked several schools and universities to include this project in their curriculum and participate in thinking up services or studies that would be useful to the project. In 2016, the Condé design school worked on scenarios for four innovative services and the Ynov campus focused on connected objects that could be developed...." (Martin Cahen, Experimentation Officer for Tubà).

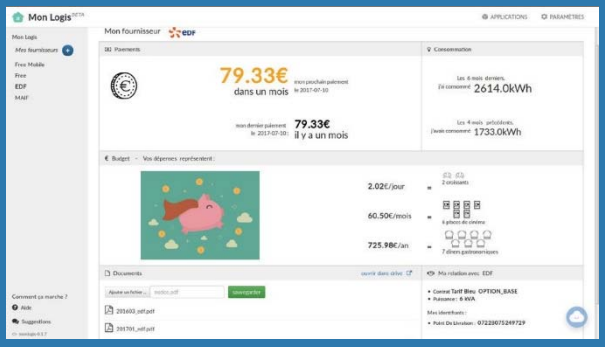
First of all, these creative periods showed "a strong attraction by participants – whether associate members, employees, students or ordinary residents – to the project and to thinking up services" and gave rise to a local dynamic centered on Self Data. A diverse selection of re-users made individuals from various backgrounds (design, digital technology, the humanities and social sciences, engineering, etc.) aware of the Self Data strategy and most certainly contributed to the impact of services imagined.

A number of services were thought up locally, such as an app to control energy that takes into consideration gas, water and electricity consumption data and provides an instructive and amusing display of this data. This app is currently being developed by Tubà in partnership with Lyon Métropole (June-August 2017). These services were added to the list of services designed by other project partners (see the insert for a few examples). Some were proposed to testers; others are still being developed or could be developed once the indispensable data to make them operational has been restored.

Creating services based on personal data

Here are a few examples of digital services based on personal data that were thought up and/or developed in the context of MesInfos.

"Monlogis" portal: this dashboard gathers all data concerning a home – insurance, telephone, energy, etc. – and displays it in a simple way so that residents can better understand their housing expenses.



"Cozy Bank": this app offers an overall view of an individual's bank accounts, even simultaneously from different banks. With just one click, Cozy Bank can link to invoices or provide information on healthcare reimbursements by Social Security or a complementary health plan. This makes it easy and effective for account owners to check their accounts.

"My Films Music" by Orange Labs: this app makes it possible to create a playlist of music from various films that the user has seen through the VOD and IPTV replay services on the Orange Livebox and/or a computer.

"Mapping My Life" by Orange Labs: this tool transforms an individual's itinerary into an interactive map. The idea is to use Orange geolocation data to display daily itineraries and identify in a totally controlled way the places the user most frequently visits. This functionality is proposed on platforms like Google, which exploits data without the user's being able to control it or know how it is used.

"Optime" by "The Machinery", a start-up. This "coach" helps people control the time they spend in front of a screen by specifying how long communication lasts (using Orange data) and suggesting new, amusing and alternative activities; this is designed to increase awareness and give users the means to control their "connectivity".

"Island and Co." by the "Ergreen" start-up: A serious game – online and in the real world – that transforms actions that save on energy into points for moving ahead in the game, with regular challenges based on consumption data.

"Who Am I?": This personal dashboard gives users a better idea of their profile and the ability to visualize it so that they can choose better, make financial decisions, decide what to do with respect to consumption, etc.This app concept won first prize at the first MesInfos Hackathon.

"Ecospend": an app for budget optimization, comparing services and costs (insurance, bank, phone, etc.) and easily changing a contract. This concept won first prize at the second MesInfos Hackathon.

Marie-Amandine Vermillon
Social Psychologist, Head of Mediation and Experimentation, Tubà

Martin Cahen
Designer of Services, Head of Experimentation, Tubà

"THE VARIOUS CO-CREATION INITIATIVES GAVE IMPETUS TO THE SELF DATA CONCEPT AND BROUGHT TOGETHER A GROUP OF MESINFOS ENTHUSIASTS"

What has impressed you about the various actions leading to the creation of services?

M.C.: In October 2016, Tubà launched a co-creation cycle for innovative services that enabled participants to imagine what could be built with their personal data. The idea was to bring together participants from different backgrounds for half-day sessions. Participants included associations, companies, Open Street Map and SCOP La Péniche (Grenoble).

The first MesInfos Hackathon, held on November 25, 26 and 27, 2016, counted around forty participants (Epitech, Master's Program in Applied Social Psychology, the Condé School, etc.), divided into seven teams. The services they thought up were unable to be fully developed because of a lack of time and because the teams no longer existed after the event. One team, however, is still mobilized on the MesInfos project.

These various approaches showed the eagerness of participants – whether they belonged to an association or were employees, students or ordinary citizens – for the project to design services.

M.-A.V.: In addition to stimulating creation, these sessions were an invaluable learning experience. They made young adults from the Humanities and Social Sciences, design, digital technology and engineering areas aware of the importance of Self Data and personal data for developing services for users and the public at large.

M.C.: The various co-creation initiatives gave impetus to the Self Data concept and brought together a group of MesInfos enthusiasts. They include makers, thinkers and experimenters.

What about the services they imagined?

M.C.: The development of services ran into several obstacles. They included the complexity of the Cozy platform, which was still being developed, and the different Cozy versions that required re-developing services. Let's not forget that this was both an experiment and a first: it was a real technical, economic and social challenge for the Cozy company.

The services imagined need data that has not yet been or cannot be restored. For the partners, it's not so easy to make their databases and personal clouds communicate in an ultra-secure way.

There's also the fact that re-users are not always able to commit to the long term (they may continue their studies, for instance, or find other centers of interest).

M.-A.V.: For all these reasons, real use of available services is relatively limited. In addition, the services imagined did not necessarily meet the expectations and needs of users.

Can you explain the gap that was shown to exist by the tests made with citizen-testers?

M.-A.V.: There is a discontinuity between the MesInfos message and the idea people have when they sign up and find themselves in the actual situation of using the Cozy platform. For example, a number of services aim to provide better management of time, energy or budget. However, when people join the project, what they are most interested in is having access in a centralized way to personal data that concerns them and that is collected by third parties (companies or others): "Who has what on me?" Getting an answer to this question through a sole entry point is the main goal of testers. The services proposed are secondary, in particular because some of them are not yet well established or have already been offered by other platforms (for instance, in a personal account on an energy supplier's website). Being able to visualize in a clear way the data that Orange, the MAIF, EdF, and so on, have on individuals gives them a picture of what is known about them. And they can act on this knowledge by using their data, demanding a service or changing a subscription. Visualizing this data becomes a tool for emancipation.

Who are these citizen-testers and how did you work with them?

M.C.: The group of citizen-testers included 2,000 individuals, 200 of whom live in the metropolitan area. They were recruited by the MAIF from customers using the MAIF's digital services and interested in Self Data, as well as by the FING and Tubà from people who visit our living lab and even through the Lyon Métropole intranet.

M.-A.V. : Our approach is qualitative. We work with small groups and seek gender parity; people are from 25 to 74 years old and from various socioprofessional categories. We organize participatory workshops to get an idea of user motivation for participating in MesInfos, evaluate their ability to use the Cozy platform and services, and collect feedback from them. We want to understand how they test a new digital approach (access information concerning them) and whether this would increase their power to act. ■

In the future, do you plan to re-establish a relationship of trust and a genuine reclaiming of personal data?

This goal, which has been the basis of the MesInfos project since the beginning, is one of the aspects being examined by the FING and its partners (see interview with Sarah Medjek). Re-establishing trust is a complex process. It's not surprising that after six months of experimentation, the confidence of testers in organization doesn't seem to have improved, especially since the testers have a different perception of the project and different expectations concerning it. Some see it as a way to access their personal information in a centralized way and do not (or not yet) see themselves using services through a new relationship with organizations that collect their data. Those who see MesInfos as a system for centralizing and a tool that offers services for better management of daily living currently have only a limited use of the system for the reasons mentioned by Tubà.

With respect to mastering personal data, here again we must be patient. The topic is still vague and abstract for many people. Once again, being able to offer a broad palette of services would most probably make a difference to testers because they would more fully appreciate the value of their data. In spite of these difficulties, the percentage of regular Cozy platform users and their increasingly longer user time are encouraging signs for future adoption of the tool.

Is there a strong need for mediation as far as the general public is concerned?

The media coverage of certain "affairs", such as the revelations by Edward Snowden, the suspicion of Russian interference in the American elections through the social media or, more recently, the Facebook and Cambridge Analytica affair, have contributed to making the general public aware of data and how it is processed and used by third parties. The implementation of the GDPR on May 25, 2018, refocused attention on this topic. But understanding how personal data is collected, processed and used is in the very early stages, even for regular users of digital services: “our subjects often said they knew which information they shared (raw data), such as their identity and their address, without being aware of the analyses and suggestions that this data gives rise to” (report from the study made by students in the Applied Social Psychology Master's Degree program at Lyon2, in collaboration with Tubà and the FING[12].

Although people are becoming more aware, they don't seem to have changed their digital habits in a significant way. “There is a great need for mediation for the general public with respect to personal data, sharing it and its possible uses. Many players are already present in the digital sector, such as the DPAs (Digital Public Areas), particularly in the context of dematerializing public services, because not everyone has the capacity to use these services. Lyon Métropole is also developing lots of innovation projects to provide access to dematerialized services (such as Grand Lyon Connect). We must continue to think up appropriate formats for all ages that will enable them to handle the transformations taking place. Personal data is still an abstract and difficult topic for many people to grasp”. (Marie-Amandine Vermillon, Head of Mediation and Experimentation, Tubà).

12. Master 2 program in Applied Social Psychology at Université Lumière Lyon 2, FING, Tubà, Study on Personal Data and Self Data, 2018.

Karine Dognin-Sauze
Vice President of Lyon Métropole for Innovation, the Smart City and Digital Technology

"WE SHOULD WORK TOWARD AN ENVIRONMENT THAT MEETS ASPIRATIONS, GIVING EACH OF US GREATER POWER AND ENSURING THAT DATA RESOURCES SERVE ALL PUBLIC POLICIES"

Lyon Métropole has been committed to data access for a number of years. Why did Lyon Métropole become interested in the field of personal data?

Lyon Métropole was one of the first local governments to realize the importance of data and of the fact that it was necessary to act quickly and stake out a place within an environment made up of private players who were designing services and developing new economic models. However, data must not be used for economic reasons only; above all, it is tied to information and knowledge. This new era of data can serve public policy just as well as it serves private innovation.

This is why Lyon Métropole wanted to acquire increasingly sophisticated expertise on data. Lyon Métropole named Nathalie Vernus-Prost as Chief Data Officer to implement a specific strategy for data and built a team around a data scientist. It was important for us to have new types of expertise internally and to be able to develop skills in our local administrations to meet the challenges and ensure the success of our policies.

We have carried out major projects, such as the "Grand Lyon Data" platform that made public data available. This platform follows the European "Inspire" directive that aims to facilitate the spread, availability, use and reuse of geographical information in Europe. This directive, along with other texts like the one concerning the reuse of public data, have since been adapted to the French legislative and regulatory context, and their scope has been extended with the Law for a Digital Republic that promotes a society that is digitally oriented, open, reliable and protects citizen's rights. The protection of citizen's rights has been affirmed and reinforced by the General Data Protection Regulation (GDPR), which covers all types of structures and concerns personal data. This platform for making data available also responds to Lyon Métropole's ambition to occupy the place that corresponds to its nature, to be the player that ensures neutrality and guarantees interoperability, a trusted third party.

Personal data is an issue that has strongly emerged in more than a hundred experiments carried out over the past eight years on various topics (mobility, energy, daily services, etc.). One observation was constant: these services must be designed hand-in-hand with users. We have responded to this fact with systems such as Tubà. But there was also a concern about privacy, the fact of giving out personal information without really knowing to whom and for what purposes. These obstacles, along with a reflection on the community's role and responsibility, led us to commit to programs that educate people on data to make sure that local residents are enlightened citizens who are able to participate in co-building the city of the future.

Did affirming its stance as a trusted third party and committing to helping private citizens master their data lead Lyon Métropole to join the MesInfos experiment late in 2016?

This experiment is in line with our vision of renewing the ways of building the city and the role of stakeholders in making our living area coincide with our aspirations. For private citizens to become players in the city, they must be able to do so; they must have the keys for deciphering what is at stake. And to co-build the Smart City, there must be strong interaction among all city players, economic players as well as social and academic players and ordinary residents.

Lyon Métropole is also a stakeholder with the Water Department in restoring personal data to citizens. The Water Department has committed to this experimentation by starting to restore consumption data to individuals.

We must not only explain the goals; we must make them tangible. This is why the MesInfos program is interesting. It offers testers the opportunity to manipulate their personal data, if they wish to do so, and take advantage of it.

For all these reasons, we were led to invest in the personal data field and join the MesInfos program. Support from the FING (New-Generation Internet Foundation) is invaluable because this foundation is a leader in deciphering the goals, while knowing how to carry out explorations within a very concrete project and federate players who are faced with the same issues.

MesInfos drastically changes the relationship that users can have with their personal data and how much they trust the players who collect it.

The world view that is meant to be imposed on us is that of the major digital natives, who would like you to think there is only one model: "Give us your information and we'll offer you services." However, this is just one point of view among others, and we would like to emphasize this.

It's very interesting to note that certain countries, such as China and South Korea, resisted the American models and created their own companies, approaches and platforms. They show clearly that an alternative is possible, that public players can take a stance and propose high-quality services. In China, for instance, it's very surprising for us to see that there is a file on everyone, since we are very sensitive to the notion of privacy. For the Chinese, however, the State is a legitimate trusted third party, and this enables the State to make great strides in innovating services.

This way of doing things frightens us because we don't have absolute faith in the State. But is it more acceptable to give all our information to American companies, which are subject to the Patriot Act and to a jurisdiction and ethic that are not the same for French and European society?

In spite of our very strong awareness of personal freedom and privacy, we have let private players take charge of our data. On the European, French and local levels, it is important for public administrations to reclaim their place. We must re-create a relationship of trust with users and encourage them to reclaim their data. We must make it possible for users to be able to say "yes" or "no" differently.

How does this experiment fit with the "Smart City" approach?

MesInfos follows the "Smart City" policy, which aims to seize the opportunities offered by digital technology, but also wants to call on collective intelligence to respond to complexity and co-build the future of our city. The term "Smart City" might repel some, but for us the idea is to work toward an environment that meets aspirations, gives power back to the individual and puts data resources at the service of public policy.

Will Lyon Métropole therefore continue its commitment to data access?

Our commitment is total. Our action in the OpenData France association follows the same reasoning. What is important for us also is that Lyon remains a laboratory where we explore ways of doing things and social, partnership and economic opportunities.

I'd like for us to continue the MesInfos experiment because it should be carried out over the long term. At the start of the project, personal data was a topic for the initiated only. Now, personal data is on everyone's mind, in particular because of the GDPR. We move forward step by step. We explore complex questions together; we make progress. Little by little, people will become aware of the importance of self data and its benefits and will be able to freely and consciously choose how their personal data is used. ■

LOCAL GOVERNMENT FACED WITH THE CHALLENGES OF SELF DATA

The Lyon Métropole experience with data and its participation in the MesInfos pilot project have made data restoration a tangible fact and have made it possible to appreciate the strategies and issues involved. How can these skills be further developed? What are the challenges that must be met to take advantage of the opportunities presented by Self Data? What roles can Lyon Métropole play in this dynamic?

THE TECHNICAL CHALLENGE: GUARANTEE PERSONAL DATA SECURITY

Committing to the concrete implementation of Self Data means being able to ensure data protection and guarantee users safe, reliable and simple tools for consulting data and using services. Guaranteeing security is an essential prerequisite for creating a relationship of trust between users and the local government.

Another question must also be answered: Are IT systems able to restore data in a user-friendly format? Information systems were not meant to ensure total portability of personal data; rather, they were designed to deliver high-quality public service, while guaranteeing data protection.

Security is the essential condition for creating a relationship of trust between users and the local government

The Department of Digital Innovation and IT Systems (DINSI) has also been working along these lines with the Department of Legal Affairs and Public Procurement (DAJCP) to be able to technically and legally respond to the various GDPR principles. The Water Department's experience in the context of the MesInfos project shows that technical solutions exist and can be implemented to achieve true informational symmetry. But what about other departments, in particular those that work daily with sensitive data or have a "paper-based culture" anchored in their professional practices? How can they confront the imperatives of reliability, rapidity and diversity expected by users and re-users ?

In addition, the evolution of IT systems must include the possibility of sharing by numerous metropolitan agents and must adapt to their professional practices. These aspects are not to be underestimated!

Finally, as a public player, Lyon Métropole must keep abreast of the technical innovation opportunities of Self Data and search for technical solutions that guarantee total data portability for users, and even interoperability, without creating new monopolies. Since portability remains a major concern, will it be possible to provide local users with a technical solution for data hosting, or even automatically equip them with a personal cloud, to encourage a solid empowerment dynamic?

THE LEGAL CHALLENGE: BE EXEMPLARY IN IMPLEMENTING THE GDPR

Properly applying the GDPR starting in May 2018 is a concern shared by all organizations. This change in approach will impact local governments: “Although the major principles of the French Data Protection Act have not changed, a veritable change of culture is taking place. We are evolving from an a priori control based on administrative formalities to an approach based on the responsibility of private and public players. This change in stance should be reflected in an on-going and dynamic compliance by local authorities. They must adopt and update the technical and operational means that will allow them to ensure and demonstrate at any time that they offer optimal data protection” (CNIL).

Change from an approach based on control to an approach based on responsibility

Lyon Métropole anticipated these principles. Since 2016, the Lyon Métropole Department of Legal Affairs and Public Procurement (DAJCP) has been working on ways to ensure the right of users to access the personal data that has been collected from them and provide increased data protection, as well as on the new responsibilities of data holders. This legal department, which has gradually increased the awareness of other metropolitan services and provided them with tools, now supports metropolitan digital projects (see the interview with T-R. Hannouche-Yonis). When it came time to draw up a data strategy in 2015, Lyon Métropole affirmed its wish to be able to work with all types of data. “I noted that Lyon Métropole could have a singular position on public service based on data, that we couldn't process public data in an isolated manner and that we needed to adopt an overall approach with respect to data of general interest in the broadest sense. Lyon Métropole had anticipated this, because we are now able to process data from the private sector. Several partners have entrusted their data to us, including Sytral, JC Decaux and most of the parking lot operators. I felt it was necessary to quickly address the entire scope of data, including the personal data that affects local citizens most directly” (Nathalie Vernus-Prost, Chief Data Officer).

Currently, this progress and expertise are being used to continue spreading and promoting Self Data internally, to ensure the full adhesion and exemplarity of the various departments, well beyond mere compliance with the GDPR.

Five questions about the GDPR

What is it exactly?

In effect since May 25, 2018, the General Data Protection Regulation is the new frame of reference for the European Union with respect to personal data. It replaces the 1995 Directive and takes into account factors such as the growth of digital technology and the appearance of new uses. The Regulation also aims to unify the European legal framework for personal data protection.

It is important to note that the GDPR does not recommend technical solutions; rather, it provides a framework. It is up to organizations to find ways to comply by continuing work on both human (increasing awareness, adapting practices, etc.) and technical aspects.

Who is affected?

Any organization that collects the personal data of Europeans must comply with the GDPR, whether it is a company, a public player or an association, even if the organization is located outside the European Union member countries.

What does the GDPR aim to accomplish?

The CNIL summarizes the major objectives of the data protection reform as follows:

- *Reinforce individual rights, in particular through the creation of a right to personal data portability , and provide provisions for minors;*
- *Ensure the responsibility of data processors (primary and subcontracted data processors);*
- *Make the regulation credible through reinforced cooperation among data protection authorities, who could adopt shared decisions, for example on transnational data processing and reinforced sanctions.*

What are the benefits for users?

The notion of consent now has greater value because users must agree explicitly to the collection and exploitation of their data. The GDPR reinforces the rights of users and makes it easier to use these rights. Users are able to recover their data and transmit it if they so desire (data portability). They benefit from greater transparency on how their data is used and can easily exercise their right to rectify it (Art. 16), limit processing (Art. 18) or oppose its use (Art. 21).

User protection is reinforced: minors under 16 cannot sign up for online services without the consent of their parents, and users may request that information be removed if it violates their privacy (consecration of the "right to be forgotten", Art. 17). If user rights are violated, the organization is subject to sanctions.

Concretely, what does this mean for a local government?

By default, local governments must adopt a new principle of data protection as far upstream as possible; that is, when the processing procedure is in the design stage. In particular, the idea is to minimize data processing from all points of view. Local administrations may organize the governance of personal data: keep a record of their processing activities, supervise operations subcontracted to service providers, formalize data confidentiality policies and procedures used to manage requests for exercising rights, adhere to codes of conduct and certify processing. In cases of at-risk processing, they must analyze its impact on privacy and notify the CNIL and the individuals concerned of any personal data violations (CNIL).

Co- and sub-contractors are subject to the same principle and must participate in the local government's approach to compliance.

Local governments must name a Data Protection Delegate to implement the GDPR principles and ensure that they are followed (see interview with T-R. Hannouche Yonis).

For more information:
www.cnil.fr

Tamam-Rose Hannouche-Yonis
Head of the Department of Legal Affairs, Data Protection Delegate for Lyon Métropole

"I MUST GUARANTEE BOTH DATA PROTECTION AND THE DEFENSE OF MUNICIPAL INTERESTS"

The GDPR (General Data Protection Regulation) is the new European framework for the processing and circulation of personal data. How did Lyon Métropole prepare for implementing these principles?

The GDPR is part of the approach found in the Digital Republic Law, which came into force on October 7, 2016, and is known as the "Lemaire Law". In 2016, as part of my functions, I was named "digital technology and freedom correspondent" by the President of Lyon Métropole. We started to work in 2016 on a bill that aimed to increase the protection of personal data and to open it. We needed to very quickly analyze this duality and move forward on these topics. This was very timely, because a few months later, in 2017, the GDPR and its implementation on May 25, 2018, was announced. The second "Digital Technology and Freedom" bill, which adapts the original bill passed in 1978 and specifies certain aspects of the GDPR, is currently being debated in the National Assembly.

In light of this adaptation, the Department of Legal Affairs has helped the various metropolitan departments become aware of the need for rapid compliance. They contact us in the project planning phase, and we explain what the new measures listed in the GDPR involve in the context of an IT project.

How did you work with the metropolitan departments?

We carried out awareness and information actions for the MOIs (IT management and organization managers), the AIs (IT assistants) and the IT project heads. We also gave external presentations where we presented digital administration and the GDPR and what it involves to metropolitan jurists and jurists from local municipalities and to the Rhône and Metropolitan Management Center. Finally, we were also called on by the Public Housing Office, the SYTRAL and the City of Lyon.

The general directorate validated the nomination of a Data Protection Delegate (DPD), a function I have assumed as a continuation of my function as the Digital Technology and Freedom Correspondent. It also approved mobilizing the departments to make a survey of how personal data is processed for Lyon Métropole and continuing the awareness actions on responsibility with various stakeholders, including the MOI/AIs. They included Lyon Métropole purchasers (because our subcontractors are affected by the GDPR), IT project heads; the DDSHE (delegation for development solidarity, housing and education), which works daily with personal data; and the mission that manages public service franchises (Eau du Grand Lyon, for example) and distributors (GrDF, Enedis, etc.). In parallel, we continue internal communication actions for municipal agents via internet, the internal magazine and our newsletter.

How has the GDPR affected metropolitan services?

The regulation implies being able to measure the impact on privacy of each process that requires collecting personal data and therefore of being able to give a precise answer to the following questions: Which data is this? Who is responsible for it? What is the purpose of collecting and processing this data? Where is the data stored? For how long? How? These studies of impact will most probably lengthen the internal processes for carrying out IT projects. We could compare this with studies associated to an urban planning project. Carrying out these studies depends on technical studies of project impact in terms of development, environment, etc. For effective implementation of the MesInfos experiment, we must analyze the impact of this project on privacy. This is an indispensable prerequisite.

The regulation has gradually been included in the Grand Lyon Connect project that aims to give users a single account for accessing several municipal online services. If service providers evolve technically, we measure the impact of each new type of processing. This leads to requesting only the data necessary for carrying out a project, working with the notion of consent and so on. Improving a tool while simultaneously studying the impact of this improvement makes it easier to find the appropriate IT solutions. For example, it's not worthwhile to ask users for their date of birth if this data serves no purpose. Proceeding in this way also enables writing tailored legal information and anticipating future changes. Grand Lyon Connect plans on the possibility of notifying when the user's family situation changes because certain services are

based on this data (e.g., school lunch rates). The study of impact is often seen as a constraint, but it enables improving the tool and guarantees users that online services are compliant with current regulations.

The compliance of our services (sites, applications, etc.) with the GDPR lets us meet the goals of transparency, trust and security that tie us to users.

The Data Protection Delegate (DPD) is described by the CNIL as the "orchestra conductor" of data protection compliance. What are your main missions?

A DPD has three roles. First of all, as an advisor to the agents and co- or sub-contractors responsible for personal data processing, and this must be done as far upstream as possible. I plan to stress this point when I work with MOI networks, IT project heads and jurists. For example, I recently participated in a broad meeting on cybersecurity for the managers of Fourvière Tunnel IT system security, water installations, traffic lights and the Boulevard Périphérique Nord roadway.

Next comes the role of ensuring that regulations and French data protection law are followed. I do this through regular discussions with and reminders to the MOIs and various departments to get an idea of how personal data is processed, make studies of impact on privacy and inform about the risks and sanctions that will be incurred if they are not followed. This can lead to refusing non-compliant processing and reworking the element that is an issue, such as obtaining user consent.

Finally, as the interface between the CNIL and Lyon Métropole, I must simultaneously guarantee data protection and defend municipal interests.

Once the MOIs have been fully mobilized, I am sure I will be able to carry out these three missions. We are ahead of other local governments, having worked on this for two years already, and we are familiar with the texts. We are able to meet our various obligations with respect to security and data protection. ■

THE CULTURAL CHALLENGE: PROMOTE DIGITAL EMPOWERMENT AND INCLUSION

"How can Self Data be made readable, desirable and credible for all stakeholders?" asks FING13. "Personal data is still an abstract and difficult topic for many people to grasp. This is why we should be able to visualize the data that third parties collect from us, understand it and think of ways it can be useful to us. A local authority, such as Lyon Métropole, can reaffirm its position as a mediator to promote this awareness, guarantee access to public services and enable individuals to recover their power to act and exercise their citizenship. Digital technology must not deepen the social divide" (Marie-Amandine Vermillon, Head of Experimentation, Tubà).

The development of services in the context of MesInfos reveals a certain number of contradictions: users acquire greater transparency on what is done with their data, but they also become aware of the information that third parties have about them.

With the support of Tubà, Lyon Métropole has committed to increasing awareness of Self Data. This is even one of the major aspects of its data strategy: "support data ownership". A number of actions have been carried out for a diverse audience (economic players, creative community, academic world, higher education, etc.), but this is still limited.

See personal data as a tool for emancipation

Now, we must ensure the adhesion of the general public and provide opportunities to take advantage of the potential benefits of Self Data and develop the individual's power to act. "If users understand and master their personal data, they will be better able to manage it and even to co-produce services that will be able to use it. And this goes even further. More enlightened connectedness can strengthen the capacity to act (for instance, to better manage energy and water consumption, personal travel or even time spent in front of a screen). By exploring the way users reclaim their personal data, Lyon Métropole makes sure that the digital dynamic profits citizens first of all" (Sandrine Frih, Vice President of Lyon Métropole for Consultation Policy, Citizen Participation and Associational Activity). Here different goals are possible: "In the future, Lyon Métropole will probably have to make a choice between counting on Self Data to contribute to the implementation of services for users and seeing personal data as a tool for emancipation and carrying out civic activities. These goals are not the same" (Marie-Amandine Vermillon, Head of Experimentation, Tubà). A broad selection of ways of doing things can be offered. Will it involve giving users the possibility to experiment with Self Data or concretely supporting them in this process? Wouldn't it be better to build an offer of services with users, including those who are the least familiar with digital technology, so that they can think up and use services that truly meet their needs? And so on.

13. *Cahier d'exploration MesInfos, Second Edition*, FING, 2015, *http://doc.openfi*

The various workshops organized internally for Lyon Métropole give an indication of the awareness of this topic. “Realizing that third parties use your personal data feels like a loss of intimacy. Some people don't want to hear about it. There is a form of denial because it’s more comfortable to trust blindly. We can't deny that the worldwide digital platforms bring us high-quality services!” (Nathalie Vernus-Prost, Chief Data Officer, Lyon Métropole). After awareness comes action. “I have always compared the approach to data to the approach to sustainable development. Considerable effort is required to implement a sustainable approach (reduce waste, avoid using plastic, decrease consumption of water and meat, etc.). It's the same with respect to data, which we must open, ensure its high quality, distribute it in in a lasting way and act over the mid and long term”.

THE CHALLENGE OF ECONOMIC DEVELOPMENT: PUTTING SELF DATA AT THE SERVICE OF THE SMART CITY

The first goal of the metropolitan data distribution policy is economic development. The idea is to use this data to feed new services that will improve daily living for the residents of Greater Lyon. This approach, which Lyon Métropole supports with respect to open data and the Smart City approach, is also valid for MesInfos and Self Data. We must also seize the opportunities offered by digital technology, hand-in-hand with city players, and focus on co-building the future of our area. The goal of reuse of their personal data by individuals should provide an opportunity for local economic players to take advantage of the added-value that digital innovations based on this data will bring: an enhanced living environment, better services and jobs in the companies that will back the innovations stemming from Self Data. The distribution of Self Data will lead to the development of services that meet the expectations of residents, and the long-term survival of these services will depend on their economic

“On the one hand, the idea is to mobilize the players and find local contacts in the large groups (Enedis, GrDF, etc.) so that they can participate in restoring personal data and co-designing services, as well as reflecting on Self designing services, as well as reflecting on Self Data” (Nathalie Vernus-Prost). One key issue is the capacity to convince private players, who will participate if they see an interest in cross-tabulating data. Crossing this data will not be possible unless private players are involved. The opportunities created by cross-tabulating data through user initiative is at the core of Self Data: The data that private players collect can lead to services that enable users to know each other better, make their choices and help them apply these choices or even to administrate daily tasks and information? What are the conditions? Are private players ready to participate in developing these services and change their relationship with users?

The data that private players collect can lead to services that enable users to know each other better, make their choices and help them apply these choices or even to administrate daily tasks and information? What are the conditions? Are private players ready to participate in developing these services and change their relationship with users?

Mobilize the players and find economic models

“On the one hand, we must find economic models for MesInfos. If we want the solution to live, services must be pertinent and create value for users and the territory. There are already ideas. Private citizens, developers and start-ups have begun ambitious projects that will, in my opinion, find their models with daily indicators that enables optimizing the user's habitat (sustainable development, water, energy, etc.) and improve the living environment (simplification, easier decision-making, enlightened choices, etc.). We have begun to grasp the Self Data business model. We have been able to mobilize ourselves on a complex project and on an issue where what we could designate as resignation seems to predominate” (Nathalie Vernus-Prost).

THE POLITICAL CHALLENGE: AFFIRM THE ROLE OF TRUSTED THIRD PARTY AND POLITICIZE THE DEBATE

Lyon Métropole's commitment to Self Data also rests on the desire to question the current practices of the digital giants, which is dominated by a commercial approach. The idea is to enlighten users on these practices and the risk of drifts. “The platforms now have a stranglehold on a continuously growing mountain of data on human activities. Controlling data means controlling information, and this gives very powerful leverage. The data collected by intermediary operators is incredibly rich. Those who hold this data have real-time knowledge of all the interactions between players worldwide. We are heading toward a paradoxical situation where platforms, even if they are remote, tend to accumulate information on the activities and people in much more substantial areas than those administered by local governments” (Stéphane Grumbach, Director of Research, Inria)[14]. “[Platforms] do not reinvest and redistribute very little. It's easy to see that this is the real Achilles' heel of this system, and this is a real issue for society and the common good.. Current events prove we are right: there is piracy, fraudulent exploitation of personal data, the spreading of propaganda or fake news and the possibility of having to pay for certain platform services” (Nathalie Vernus-Prost).

14. Interview with Stéphane Grumbach, *Quelle régulation pour l’économie des plateformes?,* 2016, *https://www.millenaire3.com/interview/2016/quelle-regulation- pour-l-economie-des-plateformes*

We must question current operation and look for alternatives!

It is therefore up to the public player to create the conditions that will lead to an alternative.

It is therefore up to the public player to create the conditions that will lead to an alternative. On the local level, the idea is to continue development of high-quality public services (equal access, continuity of service) and to encourage individuals to recover their data. How? By affirming its role as a trusted third party, "a positioning as a neutral third party between producers and users, which create a relationship of trust instead of doubt and distrust. This is the positioning that Lyon Métropole emphasized with the Optimod'Lyon project for centralizing mobility. Midway between public and private producers and users, it guarantees producers that their data will be used correctly, and it ensures users that they will have continued access to the data" (Antoine Courmont, researcher at CEE Sciences Po)[15].

The next step, of course, is to expand the public debate on personal data regulation and Self Data to the national and European levels. "I think that we need not only an alliance of cities among themselves, but also an alliance of countries at the European level, to develop a European digital infrastructure that will enable municipalities and citizens to recover their independence" (Evgeny Morozov, researcher and writer)[16]. "It's important to work on the issue of personal data over a much broader scope, at the national and European levels, if only because international companies use personal data from European citizens, as the Facebook affair recently showed us. Other public players must mobilize on this issue" (Marie-Amandine Vermillon, Head of Experimentation Tubà).

"Private platforms already do a lot. Why go there when we still have everything to build? This may seem utopian, but if we don't ask ourselves this question, we won't find solutions. (…) There is currently a growing awareness. We must question current operation and look for alternatives! Shouldn't it be the responsibility of the public authority to think about this and associate users to this task, since the entire population is exposed on the web?" (Nathalie Vernus-Prost, Chief Data Officer, Lyon Métropole)

15. Antoine Courmont, *Politiques des données urbaines: de l'open data au gouvernement des données*, 2017, *https://www.millenaire3.com/articles/politiques-des-donnees-urbaines*
16. Interview with Evgeny Morov, L*es enjeux politiques de régulation des plateformes : quel rôle pour les Métropoles ?,* 2016, *www.millenaire3.com/interview/2016/ les-enjeux-politiques-de-la-regulation-des-plateformes-quel-role-pour-les-metropoles*

Nathalie Vernus-Prost
Chief Data Officer, Lyon Métropole

"THE STAKES ARE SUCH THAT THE STATE AND EUROPE SHOULD TAKE CHARGE; WE MUST RESPOND RAPIDLY AND COLLECTIVELY"

A trusted third party seems indispensable for making personal data available, as well as for developing services that use this data and user practices. Is Lyon Métropole ready to undertake this immense task?

Self Data can be such a revolution that it tends to freeze initiative. Private platforms already invest and do a lot. Why should we join in since we still have to build everything? This may seem utopian, but if we don't ask ourselves this question, we won't find solutions. Stéphane Grumbach (Director of Research at Inria) explains that these large platforms have all the characteristics of a State: they know the population better than the State itself, have major financial means that are practically a currency and have an influence well beyond their company. But they reinvest and redistribute relatively little. […] In addition, if we want to develop innovation and create value over the territory, we can rely on infrastructures, networks and a shared basis, such as education. These services that have a general utility need to be financed, in particular by the players who benefit from them. Self Data goes well beyond the issue of merely restoring personal data. How can we guarantee that everyone has access to digital technology? What sort of society do we want for tomorrow?

Lyon Métropole developed Optimod'Lyon, which is fed by data from the data.grandlyon.com platform. This is an example of a digital public service to optimize mobility, decrease greenhouse gases and create value (all partners acquired new skills and some of them developed a business model and found new markets). It also increased our data-handling skills, and a real collective intelligence was developed over the area. Why did we do this when certain platforms are already perfectly able to support our mobility? Because mobility is essential for territorial development and the transport of resources. It's an essential right of citizens that the local government and authorities must be able to guarantee. If it were to be ported on a worldwide platform, this platform could charge for the service. In addition to preempting value created in the territory, only those with money could travel in the area. And, I repeat, there are infrastructures, access toenergy and roads. The platforms participate very little or not at all in creating and maintaining them. This is why this project is emblematic ; it proves we can do it.

Isn't it a bit utopian to want to reshuffle the deck and change the current way of processing personal data by the digital giants, give power back to users and so on?

We can look at things in another way. What if we tried to put citizens in charge of their digital life? The role of Lyon Métropole is obvious: support private citizens. We can adopt another way of seeing the digital transformation and put all the chances on our side to develop empowerment. It's not just a question of using digital tools; it also means mastering these tools and recovering power. Lyon Métropole should be present, as well as the French State and Europe. We are well aware that we must show a way that will be fully effective only at the national, and even European, level. Personal data is part of an individual's digital identity, and individuals must be able to control it, store it and use as they like. As we speak of physical integrity, we can also speak of digital integrity.

The challenge is to make people aware that personal data is part of a user's life and that it is not public property; it's part of the individual's being, even if it's virtual!

What are the next steps?

We have lots of work to do on the culture of data in the broad sense, and this is one of our strategic focuses. With the skills it currently has, how can Lyon Métropole support this culture of data? How can it guarantee that middle school students, people in difficulty, the disabled and the elderly are part of the digital world?

In addition, Lyon Métropole has for several years aimed at co-building between the government, private players and citizens in the Smart City. Through its many projects, how can Lyon Métropole propose services that are increasingly well-adapted to users? Self Data could be one of the answers; this is why it is part of the Smart City approach.

By supporting citizens in recovering their data and encouraging them to co-build services, we provide better public service. We need to concretely explore several ways of using data to prove the concept. I think it is important to "re-read" public policies in the light of Self Data to find means of development that are in line with public service, such as equal access and public service continuity. We can compare this with sustainable development, which is an integral part of mobility policies, economic development and so on.

There is another interesting developmental axis to explore, even it it might seem contradictory. We can consider personal data as a shared asset, which is a possibility studied in particular by the jurist Alain Supiot and the essayist Evgeny Morozov. Through greater familiarity with their personal data, private citizens could share – in an independent and voluntary way – the data that they would like to make available to others with the same interests; for example, treatment of a disease or an itinerary. We can see how this would be interesting in the healthcare field. Cross tabulating a large amount of information on patients (such as the elements in their medical file) could produce macro-studies and update useful information for patients. The idea is not to share personal data but for individuals to authorize, if they so wish and in an anonymous and secure way, its use to serve the general interest, for instance public health, mobility or better energy management. At no time would the third parties that analyze this data be able to identify them. These cohort methods exist already, in particular in epidemiology. The idea is to expand them, simplify them and, once again, co-build with the interested parties.

Finally, we should be careful to avoid re-creating monopolies or dependence on a private player. We should ask ourselves collectively whether a private player should provide the backing for a technological base that will enable using personal data. Shouldn't it be up to the public authority to back Self Data, for example by giving each newborn a private, trustworthy page?

Other municipalities, such as La Rochelle, will be carrying out experiments tied to Self Data. Certain entities in Europe already use it and belong to the "MyData" movement. I hope that proof of concept will be made quickly in our metropolitan area. It was necessary to work on the territorial level, but this also has its limits. The stakes are such that the State and Europe should take charge; we must respond rapidly and collectively. ■

AN OUTSIDE VIEW

Antoine Courmont
Research Scientist at the Center for European Studies, Sciences Po

THE PLURALISM OF PERSONAL DATA POLICIES

When they use digital services, individuals produce data that continues to grow in volume and diversity. This data, which is personal data, is currently stored mainly in institutional silos that are private or public. However, regulatory changes on the European and national levels aim to introduce the principles of data self-determination through, for instance, the data portability that is described in the GDPR, which should make it easier for individuals to migrate from one service to another. Depending on how personal data is put into circulation, several policies could emerge.

The first is to consider users as the brokers of their personal data, free to use it as they wish. Although this solution is part of a perspective of empowerment, it also carries a risk of reinforcing inequality between individuals, since data valuation would be unequal, especially when we consider that personal data is an individual asset over which individuals have a right of ownership. This emphasizes a major change in the conception of privacy, which is no longer considered to be a collective asset governed by shared standards that aim to protect it; rather, it is seen as an individual freedom whose shape is defined by each individual[2]. Another possibility is to consider personal data as a common asset, managed collectively through a shared governance of this resource, which could not be appropriated. A third way would be to ensure collective regulation of personal data by public or private players who are trusted third parties between individuals and the companies that use their data.

Considered very briefly, these three policy possibilities for personal data that has been put into circulation give an idea of the many ways personal data is composed and of how arrangements between players, means of regulation and policy concepts can differ. On the urban level, although municipalities have not been core actors in protecting privacy and regulating personal data, in the future they could play a more important role by encouraging specific personal data policies.

With the MesInfos experiment, Lyon Métropole chose to try the third way and position itself as a trusted third party between individuals and the urban services that use their personal data.

The initial feedback from this deliverable points to several important lessons.

First of all, the difficulties encountered for restoring and reusing personal data are due to the fact that they are primarily relational or transactional, as indicated by Dominique Boullier[3]. They include multiple attachments and different sorts of links (legal, technical, economic, cultural, etc.) that should be broken to make the data available and re-established to ensure the development of new services. However, this is not at all obvious, as suggested by the limits to services developed in the context of the project. Data collected for a particular use are difficult to use for an alternative goal.

Next, transforming the links attached to personal data contributes to modifying the relationships between the various players associated to this data. This is the goal of the project, which aims to change relationships between administrations, companies and users by reducing informational asymmetry and creating greater trust. This goal seem to have been partially achieved because, rather than new services, the project has above all contributed to opening the black box of personal data and offering individuals the possibility of being able to better understand the information companies have about them. Paradoxically, one of the risks of this approach to transparency is that it creates a feeling of distrust when individuals realize the breadth and precision of this information and are not really able to limit its collection and processing.

Finally, in spite of good intentions, this project is modest in light of the amount of personal data collected and used by a multitude of organizations over which neither individuals nor local authorities have any control. This leads to a series of questions. What is the impact of a personal data restoration project over the Lyon Métropole territory when most of this data is in the hands of multinational companies? Is it really desirable to give individuals the power to decide on the collection and use of their data? By placing the individual at the center of regulation, are we reinforcing the lack of balance between company power and individual isolation? Or should we reinforce the social dimension of data and collective rights to the protection of privacy ? ■

1. Protection of personal data is thus seen as a fundamental right.
2. D. Cardon, *à quoi rêvent les algorithmes. Nos vies à l'heure des big data*, "La république des idées", 2015, p. 78. / The debate on ownership of personal data continues to be timely, as shown by the forums published in February in the *Le Monde* newspaper: "Nos données personnelles nous appartiennent, monétisons-les!", February 5, 2018, and "Les internautes réclament un usage moins opaque et une maîtrise de leurs données personnelles", February 7, 2018.
3. CNIL, Cahiers IP, "Vie privée à l'horizon 2020, p. 32

CONCLUSION

What is the future of personal data use?

Personal data is becoming a cause of concern for users of digital services, and the economic importance of this information has been thoroughly demonstrated. Implementation of the GDPR and the many personal data piracy scandals have created a favorable context for a public debate on the use of personal data, and several options have emerged. Personal data can be seen as a non-transferable asset, as property that can be sold or as private information that can voluntarily be made available to acquire or dispose of a service (Self Data). This document has examined this last option. Although the results of the MesInfos experiment will not lead to an immediate change of paradigm, they have raised a number of questions, on the desirable and possible ways of using data, as well as on the role of a local authority in these digital evolutions.

At first glance, personal data does not seem to be something a local authority should be involved with. However, the MesInfos experiment has shown that it is legitimate for a local authority to act as a trusted third party in the relationship between citizens and private players. This position is not without legal, technical, organizational and cultural difficulties, as we have shown. And each of its goals will be reinforced if the experiment provides proof of concept and leads to the restoring of personal data on a larger scale. Without presuming a deployment, the experiment carried out by Lyon Métropole has fulfilled its role: confront reality, enrich knowledge, grow skills and feed the public debate by sharing the promises, opportunities and demands of Self Data.

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