WORKSHOP

Take your smart city to the next level by leveraging City Data

FLORENCE

25-26 JANUARY 2018

COMUNE DI FIRENZE

BAICR
Cultura della Relazione

Workshop

Take your smart city to the next level by leveraging City Data

Florence 25-26 January

"SIMPLIFICATION IS THE ULTIMATE SOPHISTICATION"

(Leonardo da Vinci)

in collaboration with:

BAICR – Cultura della Relazione

INDEX

FOREWORD

The world is being transformed by the new technologies changing the business models, lifestyles and the way people work.

Digital transformation and a continuous generation of data originate new ideas, new opportunities and new challenges for everyone: government, industrial, citizens, travellers and consumers.

In January 2018 Major Cities of Europe organized a workshop to discuss how to leverage and enhance the City's data to achieve new strategic and operational objectives and/or implement innovative initiatives and services.

During the workshop the participants shared experiences in order to identify a common vision about digital transformation opportunities and discuss how to use data to maximize cities ability to respond to citizens needs. The target is to maximize the transformation benefits and minimize reaction time to citizens needs.

The workshop was attended by 16 people.

Our thanks to the *Speakers* who presented their experiences and to the *Exploration & Discovery Leaders* that managed the working tables discussion.

Speakers

Paolo Boscolo *– Municipality of Prato*

Martin Ferguson *– Socitm*

Hervé Groléas *- Lyon Metropolis*

Matteo Satta *– Municipality of Issy les Moulineaux*

Andrea Sbandati *and* ***Sara Naldoni*** *of Cispel and* ***Emanuele Geri*** *of the Municipality of Florence*

Gianluca Vannuccini *– Municipality of Florence*

Exploration & Discovery Leaders

Glyn Evans *– Major Cities of Europe*

Robin Heilig *– City of Vienna*

Sharon Paley *- Johns Hopkins University*

Alessandra de Seneen *and* ***Emanuele Rizzardi*** *– BAICR Cultura della Relazione*

1. INTRODUCTION

The Organisation “Major Cities of Europe – IT Users Group” (MCE) is composed of leading experts of innovation in cities. MCE brings these players to share their knowledge and experience with fellow members and to discuss challenges and opportunities in maximising the value that IT can provide to the operational and strategic ambitions of cities. It achieves this by organising an annual conference and arranging workshops, which examine a specific topic in-depth.

The idea to organize a workshop to discuss the value that cities can generate using their data came from the awareness that we can't be limited to merely collecting data and making them available. The true value comes from using data to unveil insights, prioritize them, provide value to the citizens and the local communities and move the “business model” of the public organisations forward while controlling the risks.

A few organizations were considered to be already achieving consistent and high-level results.

The workshop approach was to gather MCE members to discuss their usage, management, analysis and exploitation of data, to understand what skills are needed. The workshop output would be to analyse and the share the results and/or experiences from some projects and to synthesise conclusions.

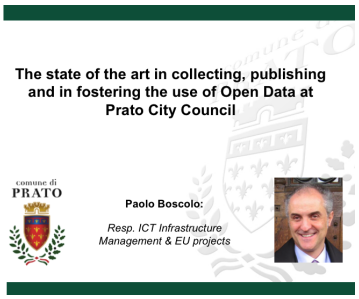
During the first working day through the 5 testimonies presented by the speakers, the working group was able to compare topics of particular interest and current events such as mobility and integration of urban services.

During the second day the same topics were taken up in four working tables. The target was to provide the participants with different complementary perspectives on how to select and bring forward their initiatives, in order to:

- Evaluate the skills needs
- Understand how to scope and analyse their data and to improve decision making
- Understand and avoid issues

2. EXPERIENCES SHARING SESSION

PRATO - *The state of the art in collecting, publishing and fostering the use of Open Data at Prato City Council*



Paolo Boscolo - Resp. ICT Infrastructure Management & EU Projects – Prato (Italy)

Abstract - Prato started its activities on Open Data, officially on 2014 with approval of a specific internal regulation. In order to implement this regulation, it was necessary to select a proper platform for a cost effecting and useful publishing of data sets produced by the administration. The identified datasets span from raw data organised in tables up to GIS data managed by geo-servers. More recently the Prato city council, in the context of the EU project Route-to-PA (www.routetopa.eu) experimented a platform aiming to make possible for citizens and enterprise to interact and discuss about published open data set in a way similar to that of Social Networks. The platform also allow users (citizens, students, enterprises,..) to produce data to be shared using another tool the so called co-creation rooms. The presentation will summarize the experience carried out by Prato City council and the state of ten art in this Open Data management activities, putting in evidence positive and negative experiences, enabling and blocking factors, technical limitations encountered, positive and negative experiences in the users' involvement.

SOCITIM - *Take your smart city to the next level by leveraging City Data*

Martin Ferguson: Director of Policy & Research, Socitm (the society for IT practitioners in the UK public sector)

Abstract **-** Shifting to smart places: outcomes for people in the places that matter to them; and redesign of services, digital infrastructure and partnerships to enable these outcomes.

What is the problem we are trying to fix? In the UK, our focus is shifting to smart places: outcomes for people in the places that matter to them; and redesign of services, digital infrastructure and partnerships to enable these outcomes. Data is the source of intelligence to enable us to design, target and evaluate our effectiveness and impact. Practical examples from across the UK will help to illustrate what is possible and to explore the conditions - leadership, standards, skills and citizen engagement - that are required.

LYON - *Urban data at the digital age: the emergence of a new territorial dimension*

Herve' Groléas – Chief digital and information officer – Lyon Metropolis (France)

Info: http://ec.europa.eu/regional_policy/en/newsroom/news/2017/01/01-12-2017-urban-agenda-for-the-eu-four-new-partnerships-on-the-economy-digital-transition-jobs-and-transport.

ISSY LES MOULINEAUX - Issy, open innovation for Big data: the case of the Grand Paris Express

Matteo Satta – EU Project Manager – Issy les Moulineaux (France)

Abstract - Located in the southwest of Paris, Issy-les-Moulineaux is part of the Grand Paris Seine Ouest urban agglomeration and the Department of "Hauts-de-Seine". Due to this location and economic vitality, this area of Paris Region must face an important transit as this leads many people from the whole Paris area to come (or transit) to Issy and GPSO for work, using very often their car.

The launch of one of the most ambitious European projects around mobility, the Grand Paris Express, will lead to the construction of an automated metro in the Paris Region up to 2030. This construction will bring more than 200 km of metro, 68 new stations and, between those, it will request to build ventilation shafts every 800m, meaning every station will represent various yards, with an impact on traffic.

The impact of these road works is hard to estimate as it will influence many areas of the urban agglomeration.

The situation makes it even more fundamental to use innovative approaches on the terrain to provide good services and information to citizens and to minimize the impact of road works.

To support the overarching Metro/Rail Travel (Grand Paris Express) Policy, and minimise negative impacts on stakeholders and the environment, Issy needs to better manage transport flows daily by:

1. Utilising its existing big data streams to estimate the impact on traffic from the forthcoming road works
2. Feeding real-time traffic flow information to citizens to change their transport behaviour

In the framework of the public-private consortium So Mobility, Issy has started increasing its open datasets with on the field collaborations with local companies, more precisely:

- Real time parking (on-street and off-street): obtained through the collaboration with Colas (sensors), Indigo (parking provider) and Parking Map (a local start-up proposing an application)
- Real time traffic data: obtained through the collaboration with Citilog (sensors) and Opendatasoft (open data specialist)

At the same time, it is clear that this data needs to be increased, but here the City has noticed that some bottleneck effects are still there:

- **Data held by public bodies**: in a metropolitan area, traffic at City level is not meaningful, it would be necessary to have a higher level (geographical extension) data. Actually, many actors work around mobility and competences are distributed, consequently data is often distributed between them and it is often not fully shared or it is not linked and then fully usable.
- **Data held by private bodies**: often public bodies have a lot of data of public interest, but they request to be paid to access it and made available on open data. This is a clear constraint for Cities that often cannot afford to pay for it. Moreover, in some cases, data supplier doesn't allow at all to open data, like in the case of Waze.
- **Usefulness of data**: data in itself is a value, but just providing data, even in the good format, is not enough. Data is not really useful to people and then to create a service if it is not visualised in a clear and easy-to-use way. It is now demonstrated that citizens, in most of cases, are not direct users of data, as they use it through reuses of data (apps, web apps, analyses…)

CISPEL - ***Smart city & Utilities: Florence Case***

Andrea Sbandati Director of Cispel and Sara Naldoni xxx of Cispel (Consortium of Utilities of Tuscany)

Emanuele Geri XXX Municipality of Florence (Italy)

Abstract - A new model of collaboration based on multi-stakeholder governance, integrated projects, new strategies for sustainability, digitalization and data sharing can reach better results for sustainable and smart European cities of the future.

In a collaborative City Model, the role of providers of public services (that manage mobility, energy, lighting, water, waste, parking etc.) became central as principal players of change, together with public administrations and local authorities.

Sharing and integrating data, but also information, instruments, competences and physical assets on the city, can create new (digital) services to improve citizens quality of life and to give benefits to all the organizations involved. And the model can be extended beyond the city scale…

The session would be an occasion to present and discuss results, benefits and possibly problems of local experience in Florence and in Tuscany.

FLORENCE - ***Safer Cycling in Florence: Open Data, Performance Analytics, Community Engagement***

Gianluca Vannuccini – Municipality of Florence & Sharon Paley - Johns Hopkins University

Abstract - Mobility, in particular, cycling are central priorities for Mayor Dario Nardella as they are catalysts of environmental and economic improvement in Florence. As the Municipality readied to launch the first free-flowing bike share in Europe, Florence leveraged its past experiences on Open Data and Data Analytics through a new challenging project with the Centre for Government Excellence at Johns Hopkins University (GovEx), with the aim to understand how cycling could be made safer through data analysis and community engagement based in evidence. The results of this first of its kind study will be discussed. Representatives from Florence and GovEx will also share how best practices applied in this project can be transformative to your city.

Link: http://www.majorcities.eu/misc/workshops/take-smart-city-next-level-leveraging-city-data/

3. WORKING TABLES

3.1 Organization

In this session the *Exploration & Discovery Leaders* managed separate working sessions to deepen, with all participants, the topics introduced by the *Speakers* through their experiences.

The four working tables were organized as follows:

WORKING TABLES – MAIN OBJECTIVES

LEVERAGING SKILLS	LEVERAGING DATA
1. Focus on internal skills ***Main objectives*** : identify the priorities and skills need in order to build a "culture change roadmap" to support the digital transformation projects / strategy	***2. Focus on data driven*** ***Main objectives*** : Analyse how to get the most value from data and digital transformation experiences
3. Focus on external skills & collaborations ***Main objectives*** : define whether a collaborative model has been used in the experiences and how the city uses a collaboration model to make digital transformation possible	***4. Focus on relationship & value creation*** ***Main objectives*** : Identify the relationships among a constellation of citizens, suppliers, partners or others organizations capable to expanding the value of experience or co-create new value

3.2 Outcome

3.2.1 EXPLORATION & DISCOVERY GROUP 1

There are many factors that contribute to a smart city Project being success. Group 1 analysed two key areas that are not always highlighted as a priority, but that we believe to have a great impact: internal skills and roles.

Over the past few years central and city governments have generally not invested enough on skills. One of the key problems is lacking the skills in-house to be able to evaluate a Smart City project; without these skills is difficult to implement successfully the projects and it's very difficult to make progress in the digital transformation.

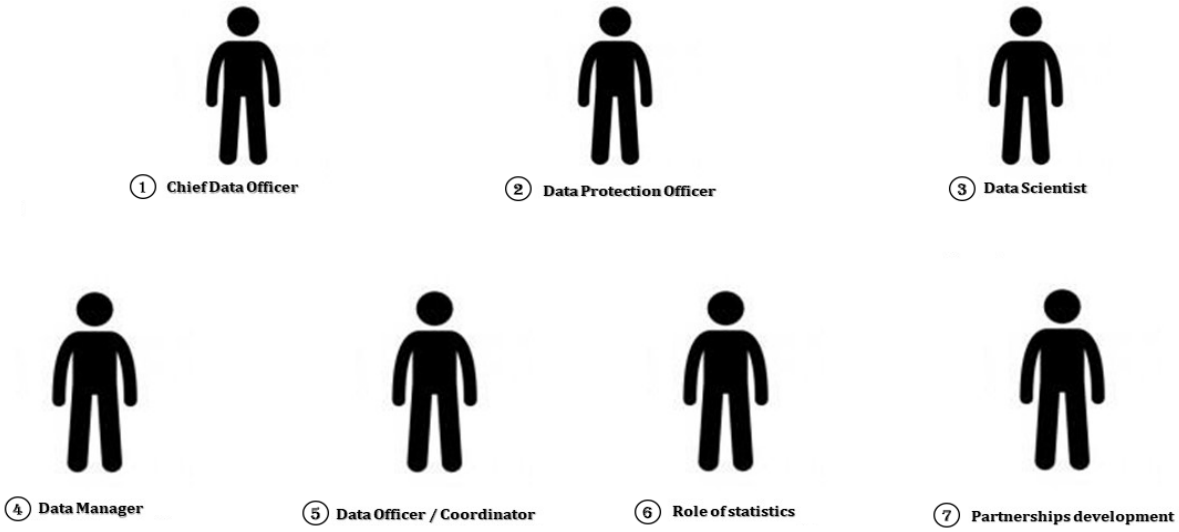
Hard & Soft Skills

The working group has identified the following skills that should be developed in order to understand city data and how that should be used to generate value.

- Statistics expertise
- Analytics expertise
- Social analytics expertise
- Cartography expertise to join data and geodata
- Data integration expertise to standardize the data collection
- Data visualization and presentation
- Machine learning
- Data protections
- Netnography expertise for online research to understanding social interaction
- Citizens intelligence
- Business model expertise
- Change management
- Collaboration (within and outside organizational boundaries)
- Leadership in the city council
- Vision in politics and city management

Concerning the roles many factors have to be taken into consideration: first of all, where new professional figures could better play their role and what has to be change in the current organization.

These are the thoughts from participants regardless of the size of the city:



1. ***Chief Data Officer***: pivotal figure that should be inserted
   - Where: Mayors office or office of general director.
2. ***Data Protection Officer***: new figure for GDPR and data conservation.
3. ***Data Scientist****:* specialist able to use data to provide answers or suggest strategies to top management.
   - Where: In IT/HR dept. Or General Director office.
4. ***Data Manager*****:** needed in all IT organisations no matter which size.
5. **Data Officer / Coordinator:** in each department in order to know which data it o be collected, what it value is. Should know data formats and understand the potential of the data.
6. ***Role of statistics***: should change from on demand to real time.
7. ***Partnerships development***: under the umbrella of digitalization (Office of general director or IT/HR department).

Critical success factors

Some critical factors emerged during the discussion:

- The IT department could be the driver for digital transformation with new skills.
- To implement the digital transformation process, it is essential to design an organization that is suitable to support future activities.
- Changes requires empowerment and commitment directly from the General Director.
- The creation of or a digital transformation department could easily lead to conflict with office of organisation.
- Top management needs to be convinced that any change in this direction is required
- We need to change the HR mind-set in order to hire experts able to design in an innovative way.

3.2.2 EXPLORATION & DISCOVERY GROUP 2

Analyze how to get the most value from data and digital transformation experiences

During the session dedicated to the value of a city's data, visions and common problems came to light.

Below a brief summary of the critical issues addressed, and the challenges and questions still to be addressed.

Let's start with a reflection / provocation that we consider key:

"Is Open Data a religion in which some people are believers and they just want to see more data for more data's sake? Is there value beyond that?"

It's always difficult to define "value" but when it comes to *Open Data* it gets even more complicated.

During the working session the participants tried to answer this question and, starting from their experiences, they highlighted the results, obstacles, lights and shadows on the long road to digital transformation process.

Open Data - Key goals:

- *Develop services and not just publish data*
  It is a shared opinion that citizens are not interested in having simple access to data but expect to receive services and to easily access experts and specialists able to answer to their needs.

- *Improve quantity, quality and accessibility of the services available to citizens and companies* -
  To do this we need stable infrastructures and make data that are vulnerable by their nature secure. Thanks to the use of increasingly advanced technological platforms, today it is possible to transform complex data processing into simple, effective and easy-to-understand visualizations for users; we can integrate the different data sources and collaborate with the communities that populate the city; we want to mitigate the risks to improve the quality of services etc.

Open Data – Key issues:

- ***Projects' Return on Investment***

  Among the difficulties indicated by the CIOs, central is the difficulty of calculating the projects ROI.

  The city governments and managers must have the understanding and the belief that smart cities are going to projects that are committed to providing the kind of ROI expected from that investment but, in Open Data development projects, this is very difficult to the

impossibility of having information regarding the population that downloads and uses the data productively.

Moreover, the duplicative publication increases the "blindness" with respect to the value and / or potential impact generated by Open Data. For example, when a city publishes data and these are republished by a second city, the first one has no evidence of the downloads generated by republication. So no-one can calculate this part of the generation of value that could instead contribute to the calculation of the actual ROI of the project. Measuring the results obtained is essential to justify to the administration the expenditure and the request for new investments in infrastructures.
Is important to proceed by steps:

- Define a clear problem to be solved
- Involve multiple government levels
- Adopt an agile approach
- Evaluate outcomes against the original objectives

- ***Give continuity to projects***

  Despite the many positive experiences, there is the impression that no city is experiencing a large-scale digital transformation; we can say that all the Smart Cities are still stuck in the development of pilot experiences and not involved in transformation programs linked to strategic visions.

- ***Increase the use of data by citizens***

  Is Open Data just for branding and image? Potentially they can impact on small companies, start-ups, and developers. But there are two major inhibitors to the use City data:

  - Lack of data standards confines the use of Open Data to a local context
  - There is no process improvement until people/companies understand the importance of data and then get the skills to use it.

- ***Digital transformation and the power of data***

  The cities wonder how open data is improving local internal processes, but we also need to see a wider impact and how there is an impact in a national/EU context.

  Defining a problem is the first step to digital transformation. It's impossible make the business case for data until you know the needs. *Benefits realization* should not be limited to the problem you are intending to solve; it is important to identify the overall impact and measure other outcomes.

  Exit the organization boundaries

  It is important to start with achievable transformation targets. It is also important develop awareness that organizational boundaries do not match with the places impacted by the projects; using only political boundaries is limiting.

- ***Key questions to address***

  Are we honestly data driven?

  We have data, but is it enough? Are we telling ourselves we are making decisions this way when in fact they are driven by political interests or short-term thinking? Does anyone have the stomach or resources for a long-term strategy to actually realise data-driven transformation?

  Is data truly a public good if it isn't being used?

  What could happen if we fail? What is the potential for cities if we don't transform? If we aren't data driven? If we don't build internal skills? Will you have cities which are run by Google and Amazon and the like? Would this necessarily be a bad thing?

  What does a sustainable organizational model for cities look like? Top level management is necessary, but should CDOs, CIOs, CAOs be beholden to a mayor with a short-term mandate and repeated political change? Should we embed data usage, so that there is not a vision of data being apart from everything else? Or will analytics, data, and innovation be silos like other aspects of local government? If someone isn't assigned to be responsible for data, analytics, etc. will no one be responsible for it.

3.2.3 EXPLORATION & DISCOVERY GROUP 3

The topic of external skills and collaborations is a wide one; external parties include:

- Other cities, which may be at a regional, national or international level;
- Other public sector bodies;
- Academia;
- The private sector, which itself be subdivided into
    - Established technology companies;
    - Local existing SMEs; and
    - Start-ups
- The third (voluntary/NGO) sector
- Citizens and communities

The discussion did not really address the topic of 'provider' skills, i.e. the ability to extract, merge and analyse data, as it was generally felt that these were readily available. (This is distinct from the internal skills discussed by Group 1.) With the benefit of hindsight, perhaps this was a little short sighted; it would have been beneficial for example, to explore issues such as assumptions around causality (rather than merely correlation) that can be inferred from apparently linked data sets.

Another area for further exploration concerns the three very different types of data sets that were mentioned.

The first of these is that related to individuals and the privacy and morality issues that are raised; the example from one speaker of utilising data sets for predictive purposes about individuals particularly springs to mind.

The second data type is concerned with the transparency of the public sector, in the UK for example the publication of expenditure data. This is less contentious than the first but has the potential to be politically challenging; for example, though it is available, crime data is not published to the public on maps in Italy, although it is in the UK.

The third type of data is concerned with, broadly speaking, 'environmental' information; mobility, pollution, etc. This is the possibly the least contentious, but it too can be politically challenging.

Overall, the level of collaboration with all the actors identified above was thought to be relatively sparse. Unless it was part of an EU-funded project, there was virtually no collaboration with other cities, nor with academia. What makes this particularly noteworthy is that in unrelated areas, cities do collaborate; an example was given in Italy of a new regulation that allows communities to 'adopt' public assets such as open spaces. Here, there has been much sharing between cities, whereas there is little or no collaboration on the exploitation of city data.

This is generally equally true when it comes to collaboration with the wider public sector. One notable exception to this is Data Mill North, established by Leeds in the UK. Further exploration is

necessary to establish the nature and depth of the collaboration and whether it is a model that can be replicated elsewhere.

With respect to the private sector, whilst there is collaboration with established technology companies, the examples provided were all of the client-contractor type; there were no radical partnerships, nor did it seem to be an area where the private sector was investing significantly in the hope of future returns. Regarding SMEs and start-ups, more than one speaker reflected on the difficulty of establishing any meaningful level of engagement.

Finally, with regard to citizens the level of collaboration – indeed, generally the level of citizen engagement – was low. This was even true when engagement had been incentivised. Where collaboration was perceived to have been successful, for example, in Florence and their engagement with students, success was perceived to be due to aligning the requirements of the data project with the existing aims of the participants, in this case the curriculum objectives of the school.

It would perhaps be fair to say that, whilst there are exceptions, the promises made by the evangelists of the data revolution have yet to be realised; "build it and they will come" was envisaged but what has been built to date has more generally been ignored. If this situation is to change, there are two critically important constituencies that have to be engaged.

The first of these was not the focus of this group and that is the internal city actors. Several speakers stated that city politicians and senior managers were not particularly interested in the potential offered by the increased exploitation of data. It is possible to speculate why this might be the case – is it not seen to offer sufficient value to what they do? is it seen as a geeky distraction? – it would be useful to see more research to determine the underpinning issues.

The second key constituency is, of course, the citizen. If they become engaged, it will automatically result in greater engagement by the actors mentioned at the start of this report. And if they do not, arguably whatever the merits that data exploitation in the public sector may offer in principle, they will never be realised in practice.

Whilst some research would again be worthwhile, the fundamental issue may be that data we are making available to the public is not perceived to be of sufficient value to them. The fragmented nature of what is an offer – with each city doing its own thing – may be a compounding factor as few citizens outside the largest conurbations have lives that are bounded conterminously with those of the city. Nor can the relative inaccessibility of the data help; most city data initiatives are accessed through the city's website and, whilst that might be the obvious place to go to report a faulty streetlight, it is not necessarily what most people would consider if looking for a parking place. It would be interesting to find out if any major city has worked with Google maps to make its data more accessible.

3.2.4 EXPLORATION & DISCOVERY GROUP 4

Is it possible to extract new value from realized projects?

Is it possible to co-create value thanks to the network of citizens, suppliers and other partner organizations?

If it's true that new technologies are becoming a powerful driving force (increasing by generating competitive advantage for many companies) is it also true that the ability to use the network of organisations, people and talents with we can easily get in contact, can produce *"extra value"* and further competitive advantage?

According to the theory of R. Normann and R. Ramirez (1) in today's competitive environment rapidly evolving strategy is no longer a matter of positioning a fixed set of activities along that old industrial model – value chain. The key strategic task is to reconfigure the roles and relationships among a constellation of suppliers, partners and customers, in order to create value from new combinations of players. Today the strategic task of a company becomes the reconfiguration and integration within its competence and its customers (…).

Does this concept also apply to cities?

In order to identify the *extra value potential* within the experience, the speakers were compared with a basic *Value Constellation* model.

In particular, the potential of the proposed approach for the following experiences has been explored:

1. Safer cycling in Florence
2. Grand Paris Express (Issy le Moulineax case)
3. The use of Open Data at Prato City Council

Starting from the macro-representation (Figure 1 – 2- 3) the working group identified three potential areas where IT can discover new value.

a. ***Value co-creation***

Leveraging on projects network could help to:

- improve the ability to "understand data" at the constellation level in order to increase the perceived the value of project's outcomes for users and city;
- use, in the digital transformation projects, new relational models in order to accelerate the development of "data and digital culture " inside of the constellation and overcome the closure attitudes towards data sharing approach
- etc.

b. ***Data access***

As shown in the figures, the analysis in progress does not use all the data generated by the project; greater integration would allow a broader analytical performance and possible fallout in other areas; here are some identified suggestions:

- better reading of the phenomena linked to the cyclists' safety or …;
- additional mobility services development offered at constellation level
- positive impact on other services

c. ***Use open data*** new dimensions of analysis could increase open data made available to citizens and businesses. For example, in mobility, having more data can increase the understanding of the phenomena and improve conditions for citizens (bicycle, safety, pollution, etc.)

(1) Note : Designing Interactive Strategy - from value chain to value constellation –Richard Normann and Rafael Ramirez

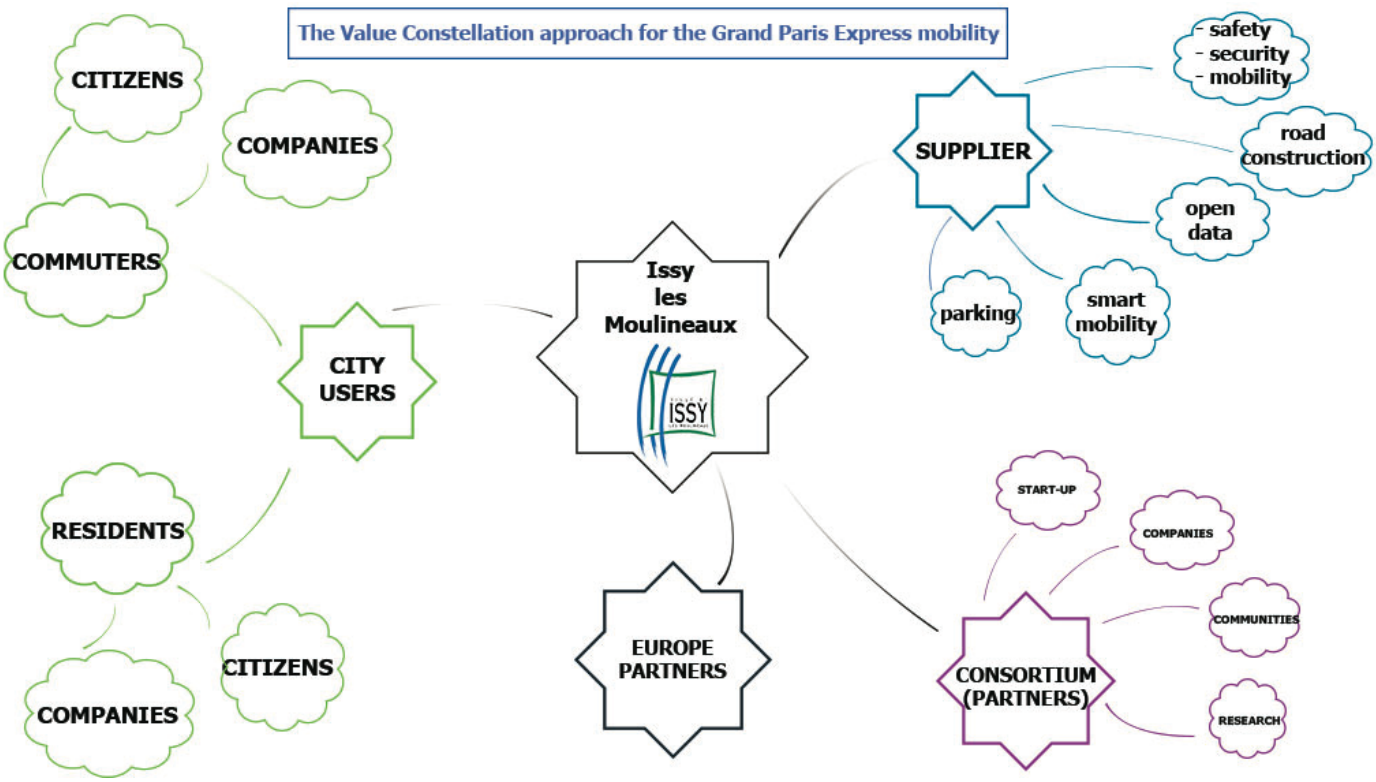


Figure 1

Who owns the data related to these event?

- Municipality
- Road construction
- Other public and private partners
- …

In case of major public works, the integration of data from the municipality and contractors could help in making a more accurate impact assessment and set a more effective information flow. The outcome is a better experience for citizens, city users, retailers, etc. during the transition period.

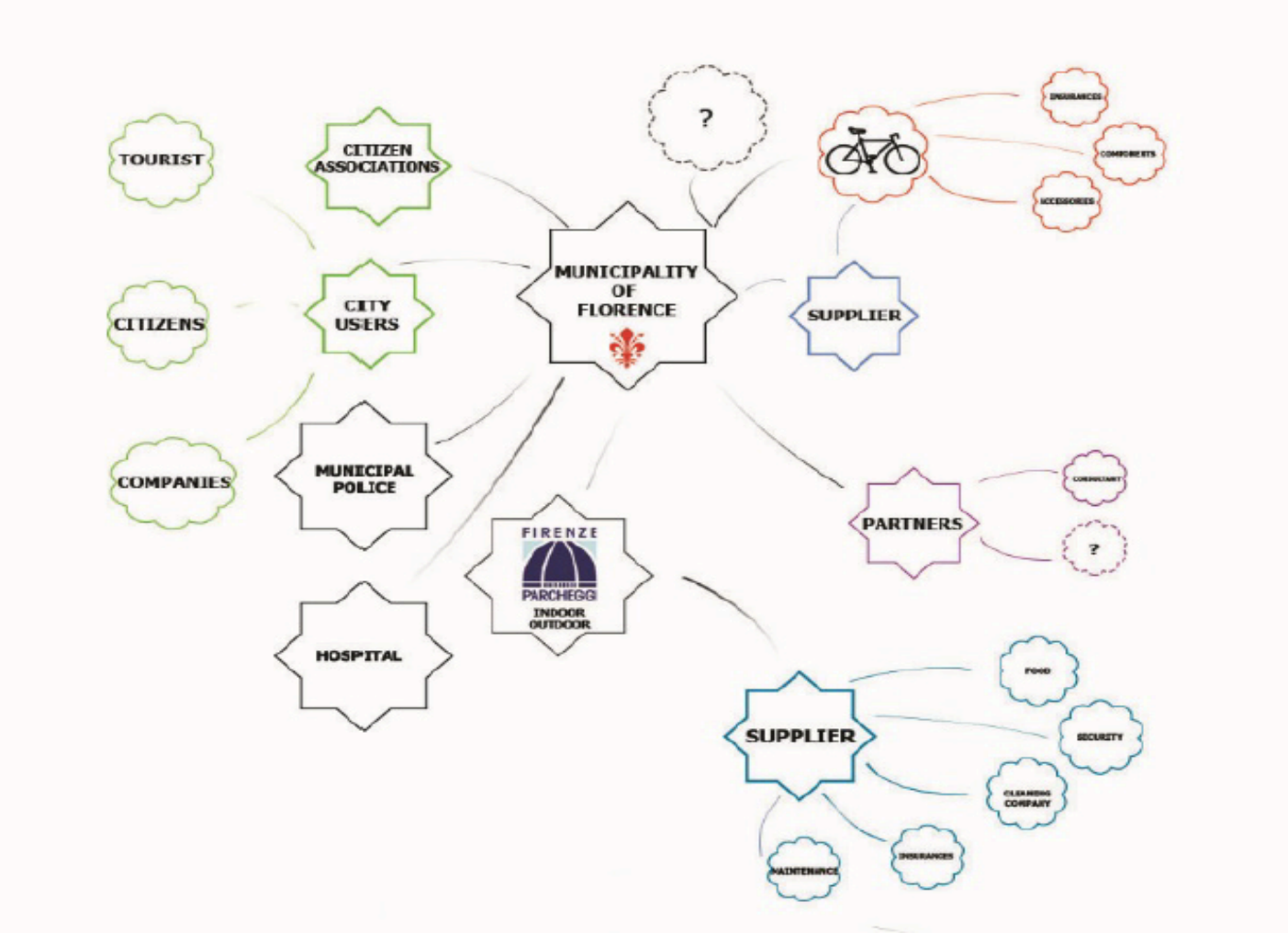


Figure 2

Who collect data of this events ?

- *Municipality*
- *Police*
- *Hospitals*
- *Bicycle suppliers*
- *Private Insurance*
- *…*

Sharing and integrating the data owned by public administrations and private companies of incidents and events, enables the Constellation in a better understanding of what happens during the use of the bike sharing, the creation of more effective prevention actions and the improvement of the services in place.

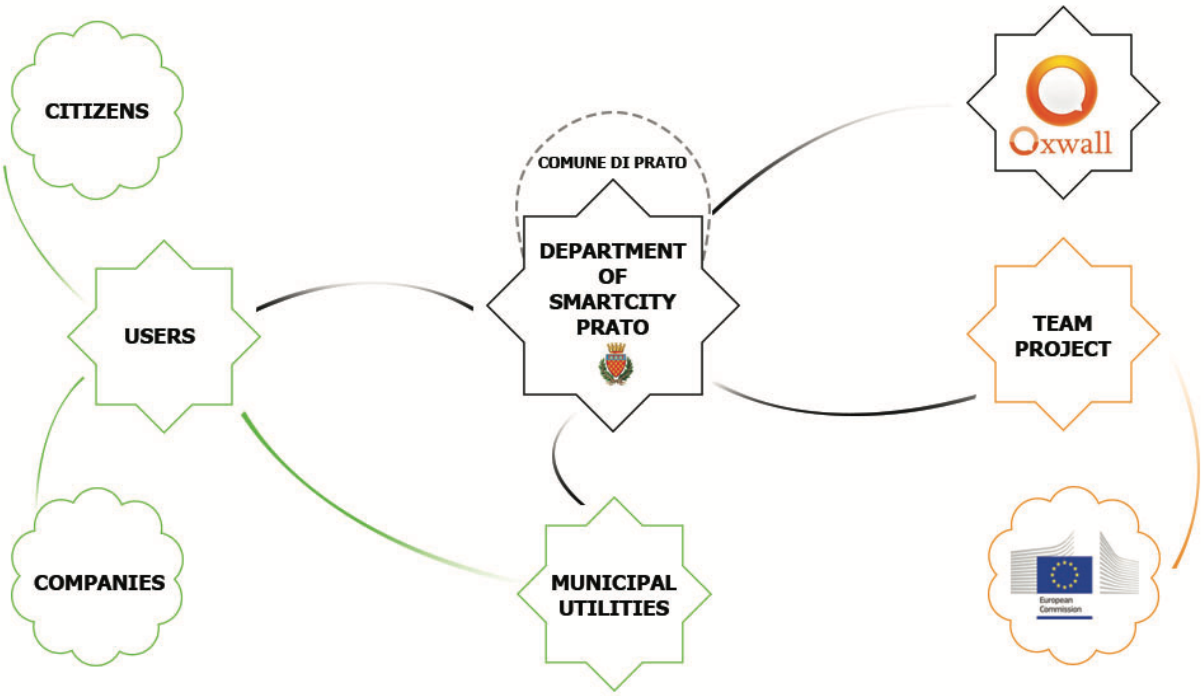


Figure 3

The Municipality is increasingly the enabler of the relationships that generate value for the City Constellation: for this reason the ability to stimulate the citizens-Municipality collaboration and to give back the value generated is more and more fundamental.

4. *CONCLUSIONS*

We started our report starting from the relationship between new technologies and new lifestyles being aware that people are everywhere using social networks in order to find jobs and restaurants, friends and partners. In other hands citizens, expect to have access 24-hours a day to efficient and integrated high quality services.

During the workshop we asked ourselves what do we need more in order to support and accelerate the Cities transformation process. Moreover what do we need to make the best use of digital transformation opportunity; we think that the discussion has helped us to reflect on key topics that we have summarised in the previous paragraphs.

In conclusion we wish to highlight the open questions and the topics that we want to address in the next meetings.

We mainly want to start our conclusions from two key messages:

- *The workshop showed that leveraging data is not yet widespread, although some pilots show that it is valuable.*

- *We asked ourselves if we should change the focus from smart city to smart citizens and we agree that to do this we need to give much more thought than we did so far.*

- *Start with little problem and not starting with personal data.*

4.1 Key topics to address

- Proceed in our mission with some key words in mind:
  - simplify
  - standardise
  - share
  - value of data that's mean
    - hackaton for new city services
    - studies on business model data based, infonomics
    - detach data from where they are created

- Identify the role of the AI

- Develop projects consider the city as a platform. Platform to let the private sector create urban services:
  - data platform
  - IoT platform
  - personal data and personal clouds

- Involving citizens and companies in co-creation of services. Engaging citizens is not simple, it's necessary to guarantee anonymity, ethical use, etc. Also are citizens interested in data?

- Working in order to change city's mind-set: create training, best practice, events, webinars, etc.

- Force private companies to give data to the cities for they services

- Multi-stakeholder, multi-sector, multi-discipline, multi-skills whole is greater than the sum of the parts; the complexity increases and must be managed with the right skills, right organization and continuity.

4.2 Key Open Questions

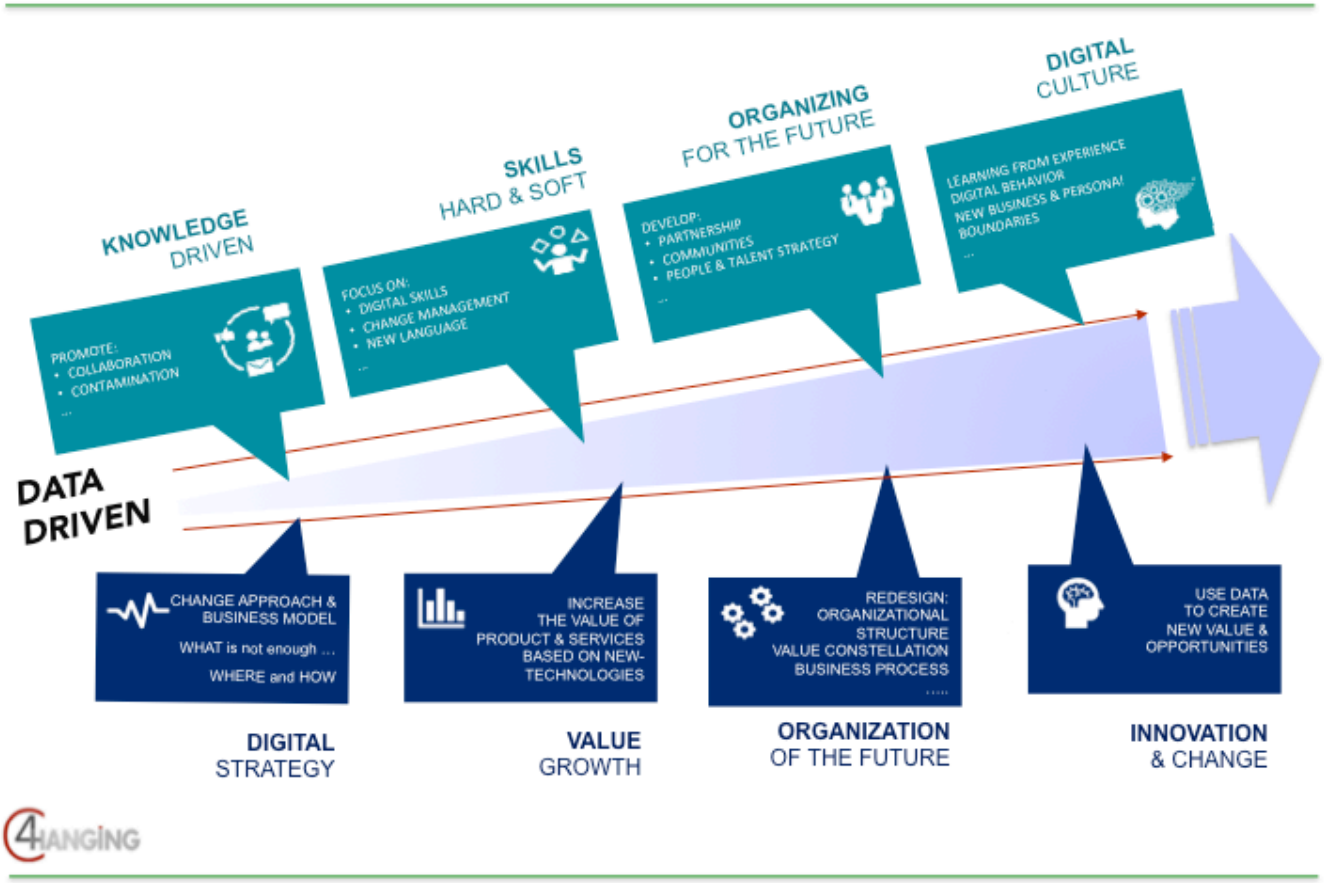
- How to demonstrate to policy makers and city managers that investing in leveraging data (skills, platforms, tools ..) is a key step towards digital transformation and make the city become really smart for their citizens
- It is difficult to convince decision makers to invest because the visibility of the return on investment is not easy to "sell" inside the administration and to citizens. It looks good for techies but not for politicians in the short term
- It is difficult to sell the value of such an investment to citizens… isn't it better to invest in schools, or transportation or in something more immediately visible?
- How can we engage and encourage citizens to take an active?
- Isn't it also relevant to extend the concept of data also to text and media. Isn't it more interesting to explore sentiments through social media and media in general?

We think that to discuss and find answers to such questions could help a lot in expanding the value of data and get it understood by policy makers, city managers and citizens as a key investment for innovation in cities.

5. ANNEXES

5.1 Digital Transformation Roadmap

The workshop layout was underpinned by the following roadmap



Main characteristics of the roadmap

First of all the roadmap highlights the centrality of data and identifies two levels of attention for the organizations when they implement digital transformation strategy.

Some key elements to highlight are:

- It is a change approach which means changing the setting, the focus or reference models
- Innovation: use new technologies to develop new services
- Redesign the organizational structure and business process
- Identify new organizational positions and/or new responsibilities

The objective is the improvement of our decision-making model. We can use the data to improve our experiences or create new value and we will have an organization able to extract new ideas from experiences.

To support a digital transformation process we need to develop, in parallel, an evolutionary strategy of internal and external competences that are consistent with the strategic vision.

At the top of the roadmap are described the evolutionary steps we need for achieving a "digital culture" capable of sustaining the change and seizing the opportunities generated by the digital transformation process

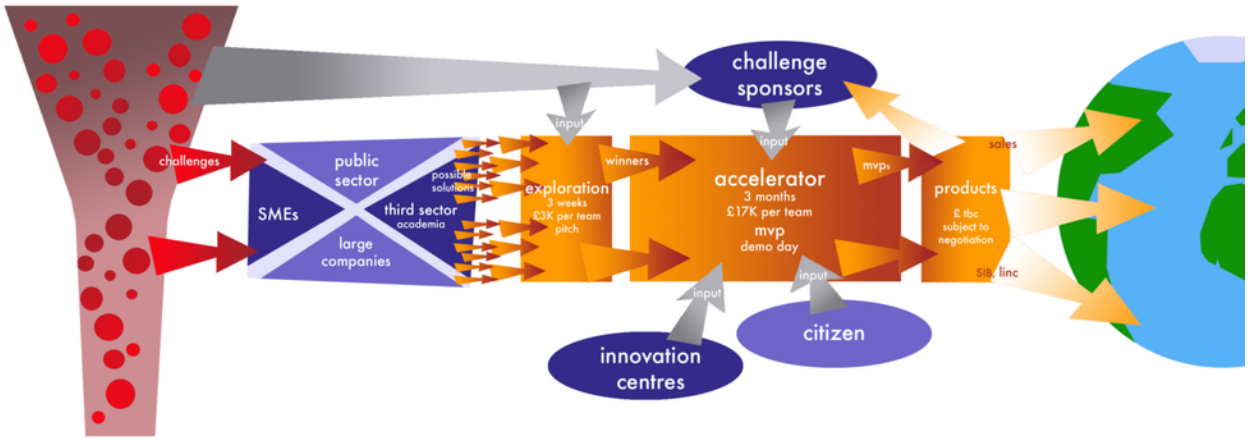
- First: promoting new organizational behaviour, supporting the people to exchange experiences and information, increasing personal networks etc.
- Second: identify and develop the required skills
- Third: it's very important to get out of the organisation's borders and develop new networks, key relationships
- At the end we will work with people able to generate and drive the transformation and able to surf the "data lake".

During the first working day through the 5 testimonies presented by the speakers, the working group was able to compare topics of particular interest and current events such as mobility and integration of urban services.

5.2 Other contributions

Entrepreneur/innovation mindsets/skillsets: stimulating the market - CivTech accelerator programme in Scotland:

https://civtech.atlassian.net/wiki/spaces/CIV/overview?mode=global



Smart citizens : perspective from Gavin Beckett of

https://medium.com/perform-green/from-smart-cities-and-smart-citizens-to-smart-societies-the-story-so-far-f6dc984e6e20

Leveraging data and ethical issues:

https://www.nesta.org.uk/search?search_api_views_fulltext=hilary simpson


COMUNE
DI FIRENZE
BAICR
Cultura della relazione