

Debate on the Digitalization process of Metropolitan Spaces

**metro
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world association
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metropolises

city managers
community

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CONTEXT

The “**City Managers Community**” annual gathering was framed within the 4th edition of the City Managers Days organized by **Metropolis** with the support of the **Metropolitan Area of Barcelona (AMB)** in Barcelona.

The session took place at the **Metropolis headquarters** on **Thursday 21st November** after a previous day **of knowledge and practice exchange on the digitalization of metropolitan spaces** amongst different experts, city managers and directors of data and digitalization areas of local and metropolitan governments at the venue of the Smart City Expo World Congress. This first block open to the public has provided the framework for the debate to be held **behind closed doors** the day after during the City Managers Community, mainly with **Metropolis’ members**.

The content of the sessions was decided based on the feedback and results obtained from a survey (the Digital Fact Sheets CMD19 annexed below) conducted by **Metropolis** with the collaboration of the **European Institute of Public Administration (EIPA)**. In addition to this, the presentation and content of the **8th Issue Paper** of the Metropolis Observatory collection “[The digital transformation of metropolises](#)” was also used to introduce the topic as well as to frame the debate.

This aforementioned paper, presented by its author **Dr. Luis Bettencourt** – Director at the Mansueto Institute for Urban Innovation at the University of Chicago – exposed several dimensions of what this transformation process entails. From how urban ecosystems have become a focal point of mega data generation, to how strategies such as that of ‘Smart Cities’ have failed to deliver the new transformative solution for urban challenges they promised. The paper reasons that automated engineering is not enough in itself to ensure human development in such complex realities. Hence, the need to go beyond concepts like ‘smart cities’ arises. The integration of ICTs in urban areas must go hand-in-hand with the key factor that enables metropolis to function: an effective coordination of multi-stakeholders and agents. Without that, the challenges and opportunities that digitalization brings – the gender digital gap, digital literacy, security, privacy and digital rights issues, amongst others – will be hard to face.

CONCLUSIONS OF THE DEBATE

Participants: government representatives from AMB, Barcelona, Bologna, Brussels, Dallas*, La Paz, Lisbon, Montevideo, Montreal, Quito, Rammallah and São Paulo.*

*(*not Metropolis' members)*

The objective of the session was to **establish a dialogue** following the content outlined the previous day and **to identify and share potential solutions** based on realities and challenges of the different metropolitan areas.

The method/technique applied was a **problem-driven and solution-oriented one**, so that participants could exchange best practices while also practicing with innovative and creative problem-solving.

This event counted with the active participation of more than **12 Managers and Directors of digitalization areas from local and metropolitan governments throughout the globe.**

The session was introduced and steered by **Mr. Alexander Heichlinger** – Expert in city management and on digitalization from EIPA – who posed the **three challenges** the digital transformation brings and encouraged the participants to brainstorm in 3 different groups (one per challenge) solutions to face them. The challenges presented were:

1. *Change management, cultural change and new ways of working*
2. *Infrastructure: quality, connectivity, interoperability, security*
3. *Digital divide, lack of digital skills, risk of social (digital) inequalities*

At the end of the session, the managers and directors have been familiarized with **key digital innovations** in the three different contexts based on the Metropolis survey results and brainstormed on the different ways in which these problems can be solved and replicated through digital innovations for their own sphere.

Challenge 1

One of the key elements during the discussion on internal change management was the fact that every change made must not lose sight of the main objective: **improving the quality of life of citizens**. Participants vouched that we must not be afraid to change obsolete systems of management, nor should we be afraid of involving different stakeholders, such as the private sector. Furthermore, it was pointed out that not all local governments have the same resources to develop large scale or whole-of-government change and digitalization projects. Thus, **public-private alliances and collaborations often not only are recommended but a necessity**.

Besides, it was pointed out that due to a lack of governmental resources and capacities in some cases the public sector has entered an unequal partnership with the private sector. It is obvious that the public administration needs and thus is in search of expertise from the private sector on certain dimensions. However simultaneously, the private sector needs the framework the public sector offers, i.e. one of legitimacy

connected to the citizenry. Whatever the case may be, the public sector must protect its citizenry in exchange of the power they bestow in them and one must never lose sight of this in collaboration.

In addition, and before entering any relation with the private sector, the public sector must do its own homework in advance, like the private counterpart does. A case-by-case approach shall be envisaged, i.e. outsource when necessary and avoid it when not. In other words, it must be clear from the beginning which services are wise to provide one self, which in collaboration and which should be (completely) outsourced.

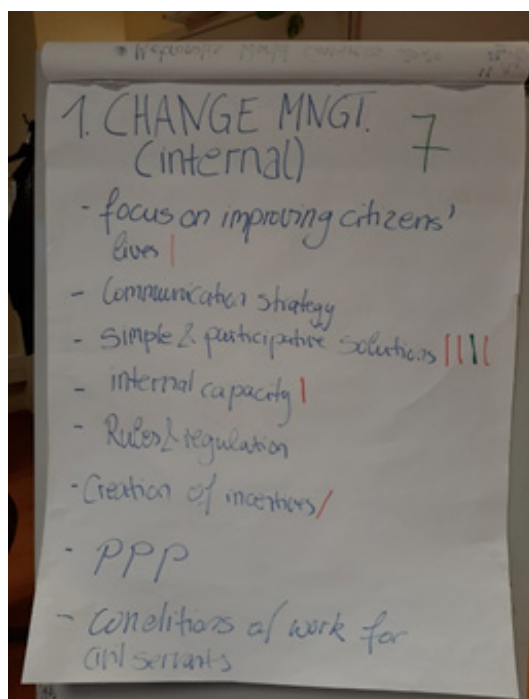


Image of the flip-chart during the City Managers Community debate / Source: Metropolis

Beyond these issues the factor identified as most crucial for successful change in internal city management is the elaboration of **simple and participative solutions**. Any reform has to take into account needs and perspectives of all actors involved. Keeping strategies as simple as possible and embed participatory approaches is perceived as promising.

Further elements put forth during the discussion in order to successfully implement internal management changes are and adequate respond to the digital revolution, an **improvement of the communication strategy** at hand, building of **internal capacities** as well as **improving the working conditions of the civil servants**.

Challenge 2

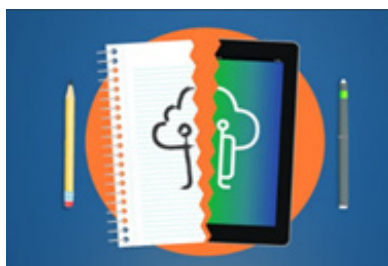
An “Intelligent Management Platform” as the one developed by the City of Lisbon has been identified in the discussions as a successful example of how to adapt infrastructure to thrust **interoperability and cooperation** through digitalization. This platform was created so that individual platforms could work horizontally by communicating in real time (interoperability) amongst different sectors. This involved a thorough **standardization process**, hence, the use of resources and time. The platform was bi-directional: it received and shared the information in a secure way throughout the entire municipality of 30 different systems. It also guaranteed cooperation between very different agencies, such as amongst others fire department, finance, municipal police, mobility, civil projection, environment, urban cleaning, and urbanism. Although time and resource consuming, it had proven to be very rewarding

due to time savings by using common knowledge produced.

To conclude, the platform was able to increase the service quality and efficiency by **connecting various stakeholders** (connectivity). As illustrated by this example the discussion on improving infrastructure revealed the **connection of local government departments and agencies** as crucial actions. A so called **whole-of-government approach** is capable of increasing efficiency by encouraging joint activities of various stakeholders and coordinating services. Successful projects of cooperation in turn are likely to facilitate further coordination allowing municipalities to benefit from so called **snowball effects**.



Challenge 3



Participants facing the challenge of a relevant digital divide discussed about how a lack of digital skills, training or digital illiteracy gives way to increasing social inequalities, mainly affecting already vulnerable communities.

A decision to focus on **digital literacy** as the key to close this divide was jointly taken. The importance of investing

in education to train “autonomous” citizens on technological developments and applications remain key to overcome this challenge. This requires allocating previously (enough) time to know the need of the citizens. Managers cannot assume what the citizens need, but build on the conversation jointly with them to know what their immediate necessities in relation to technology are. The fact that technology advances at a vertiginous speed is not new, to **develop or co-create services with the citizens** is the fastest way to tackle how this affects them.

As an example of this work that fights against the digital divide, the project “One student, one computer” of the city of Montevideo was shown. It highlighted how the benefits of this began to be visible 15 years later, which one of the reasons why this type of policy should be maintained over time, regardless of the (possible) change

of government.

In addition, the group concluded on the relevance of how **technology must serve to create a sense of community**, rather than an asset to be used individually, i.e. divide. In order to achieve this, the participation of the citizenry has been identified as crucial. As a good example the “Urban Foundation for Innovation” project by the Bologna municipal government in collaboration with the local university was put forward. It consisted in creating labs available for use in several neighborhoods which resulted in 20.000 citizens per year using it. A show-case of how tech can be used as an innovative tool to boost participatory dynamics.

All in all, it has been concluded that cities need to adopt their way of delivering services to changes going along with digitalization.

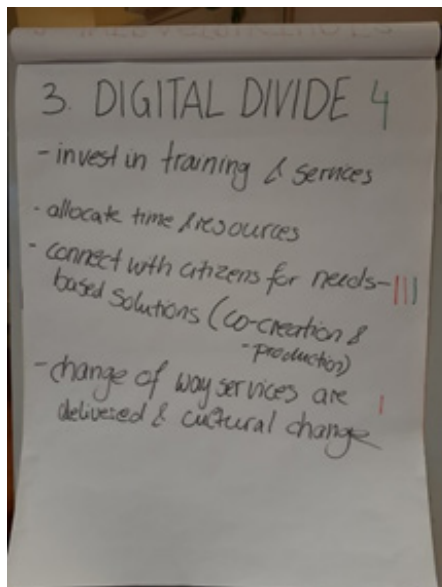


Image of the flip-chart during the City Managers Community debate
Source: Metropolis

BACKGROUND PAPER

DIGITALIZATION OF METROPOLITAN SPACES

Introduction

This background document introduces and deals with digitalization of urban and metropolitan spaces in view of the forthcoming CMD'19 to be held in November in Barcelona.

Needless to stress or repeat, the world is getting increasingly urbanised. In 1990, less than 40% of the total human population lived in a city. Today, 55% of the world's population lives in urban areas, a proportion that is expected to increase to 68% by 2050, says UN (United Nations, 2018). This highlights the **relevance of metropolitan areas**; local and regional authorities play an important role in tackling global issues such as the achievement of the global Sustainable Development Goals (SDGs) for a better and more sustainable future for all. At the same time metropolitan growth and prosperity critically depends on the way evolving challenges are managed within and among the city administrations.

Considering this general trend, one key question arises: "How can global issues be tackled without losing sight of local ones and without affecting people's daily lives, while respecting the autonomy of each neighbourhood, town and city that makes up the metropolis" (Tomàs, 2016)?

In addition, **digitalization** is changing many aspects of the world, which promises (and in many areas has already delivered) huge benefits. For urban and metropolitan spaces, digitalization creates a huge field of new opportunities related to the management and monitoring of our metropolises. However, it also faces big challenges in terms of management and impact on already existent dynamics. One thing is certain: **it requires new ways of thinking** (Collins, 2019).

In the context of the **public sector, digital transformation** refers to the integration of digital technology into government, usually in the context of improving services. It consists of making the public sector more efficient and effective, and the citizenry at large more able to affect public bodies. This requires interoperability, that is, ensuring public entities can easily communicate and exchange information to save time and resources. Because Digital Transformation accompanies an increased ability to process information, it must be balanced by an increase in transparency. The drive for increased public sector transparency, sometimes referred to as Open Government, has become an era-defining paradigm. Greater government receptivity to its citizenry represents a means for addressing the erosion of trust in public officials that seems so prevalent in current discourse, as well as to increase efficiency and alleviate the effects of financial constraints. No instrument is better fitted to this task than that of digital technology, providing as it does a simple means for facilitating quick and direct communication between citizen and public administrator. Apart from greater citizen

oversight, the incorporation of **digital technology** into the public sector promises to save time and increase access to services by consolidating citizen interface with government functions, for example into a single web portal, which may be termed **Digitalization**; allow public employees and even policy makers to adapt service delivery to the needs of the user, perhaps by adapting these to widely available and commonly accessed instruments such as social media and mobile phone Apps., designated **eGovernment**, and; at its further reaches, by actually creating new public services based on citizen demand, such as by allowing access to a country's residency to individuals not living there or using emitting chips and antennas to diagnose a city's water flow, referred to as **Digital Government**.

It is essentially the definition of Open Government and, concretely as far as technical implementation, Digital Government. This is **both politically and financially expedient**, increasing public trust and focusing resources on real demands and needs.

Current state-of-affairs

Looking at the local level, the latest **United Nations e-government survey** (2018) "Gearing e-government to support transformation towards sustainable and resilient societies" contains a pilot study on the "**Current Status of Local Online Services**". This is only a partial aspect of the big(ger) digitalization issue, but it is of great interest regarding the international comparison and can be seen exemplary for the performances of municipalities.

A Local Online Service Index (LOSI) assessment has been applied in 40 municipalities worldwide, among the cities were for example: Moscow, Mumbai, Shanghai, Sydney, Cape Town, Buenos Aires, New York City, Toronto, Istanbul, Madrid, Paris, London, and Tallinn. The study reveals the main characteristics for a local e-Government assessment, incl. four main criteria: Technology, Content Provision, Service Provision and Participation/ Engagement.

Based on this analysis, some interesting lessons can be extracted:

- Despite municipalities' solid performance in webpage content provision to citizens and meeting most of the technical indicators, they are lagging behind in terms of what could be expected and achieved, with the universal participation and engagement of all citizens and particularly in services provision;
- There are already many cities that provide information about services, as well as downloadable forms for their requests, but that still requires in-person submission and process triggering;
- The responsiveness and quality of email usage by municipalities, when interacting with citizens, are far from anticipated levels;

- E-Government systems can become a useful tool for local administration in line with achievement of the SDGs (United Nations, 2018).

Many municipalities focus their attention more on providing websites with adequate content and satisfactory usability, and less on making life easier for citizens insofar as such things as service request and execution or promoting citizen participation.

Table 7.4 Percentage of indicators per criteria that scored by percentage of cities.

Indicators		Percentage of cities			
Criterion	Total Number	0%-25%	25%-50%	50%-75%	75%-100%
Technology	13	0	15%	39%	46%
Content Provision	26	0	4%	46%	50%
Service Provision	13	15%	54%	31%	0
Participation and Engagement	9	12%	44%	22%	22%

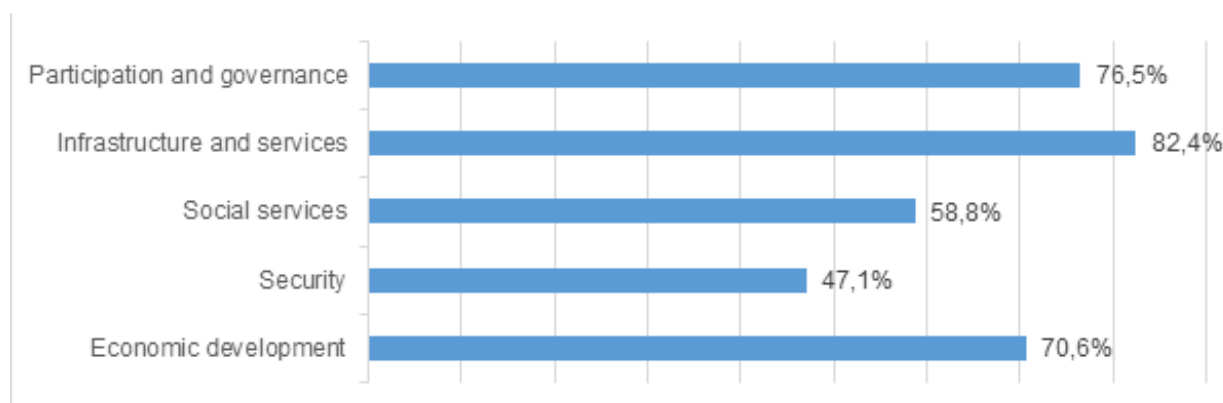
The CMD'19 - Digital City Factsheet – First results

This year's municipal and metropolitan managers meeting, the "City Managers Days 2019" (CMD'19) in Barcelona in November 2019 will be focused on "**Digitalisation of metropolitan spaces**". This focus comes from the conclusions obtained at the "City Managers Community" meeting during last year's edition.

In order to approach this issue in the best possible way Metropolis with the support of the European Institute of Public Administration (EIPA) set up a **survey on digitalization of metropolitan spaces**, named **Digital City Factsheet**. It contains questions seeking to analyse certain indicators, working areas, development projects and challenges around digitalization in cities. It was sent to all 137 metropolis members worldwide - 17 cities answered the survey until middle of July; 11 answers are incoming/pending. The participating cities are geographical well spread, with members from Europe (5), North America (1), South America (6), Africa (2) and Asia (3).

Some first insights from the Metropolis' CMD Digital Survey (dated end June 2019) are shown below:

Sectors in which the local governments run digitalisation projects



The survey shows that **infrastructure & service, participation & governance and economic development** are the three most important sectors in which local governments run digitalization projects. This is followed by social service and security projects which are also named by a substantial part of respondents.

12 out of the 17 cities work in projects in a minimum of three thematic areas. It can thus be concluded that most of the cities have a **cross-sectoral approach**. Regarding the European cities, almost all of them work in all of the five thematic areas, which underlines their cross-sectoral perspective.

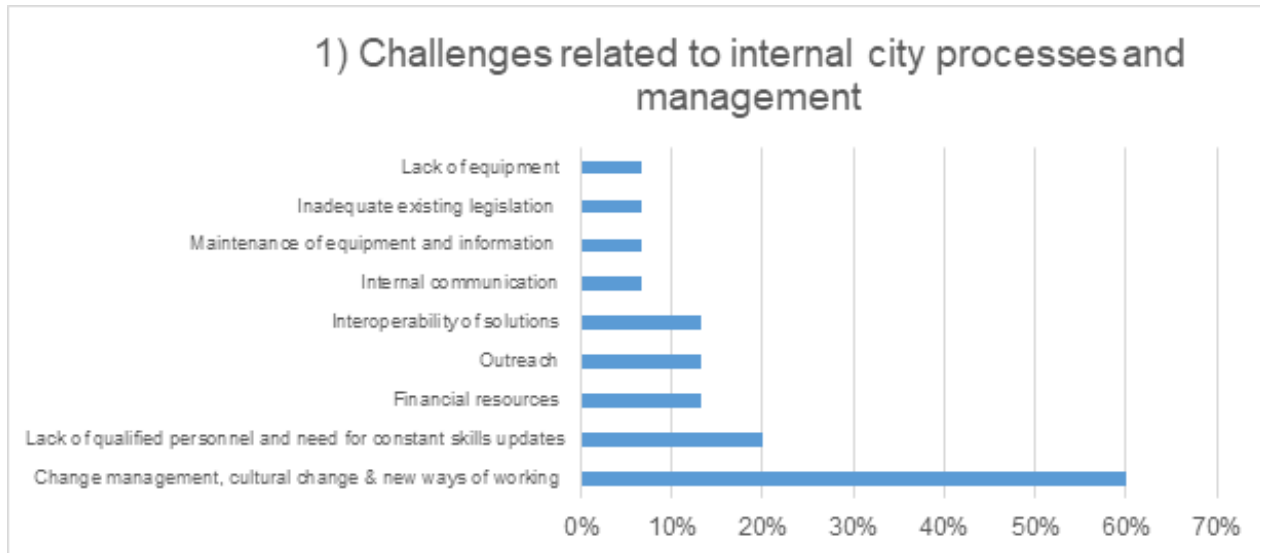
A **partnership with the private sector** regarding digitalization projects exists in **38,6%** of the mentioned projects by the cities.

Digital transformation challenges

Participating City Managers and their team were also asked about (existing or upcoming) challenges they see regarding three main areas of attention in digitalization processes.

- 1) *Internal city processes and management*
- 2) *Local service provision*
- 3) *Citizens/civil society*

The responses have been clustered and summarized as follows



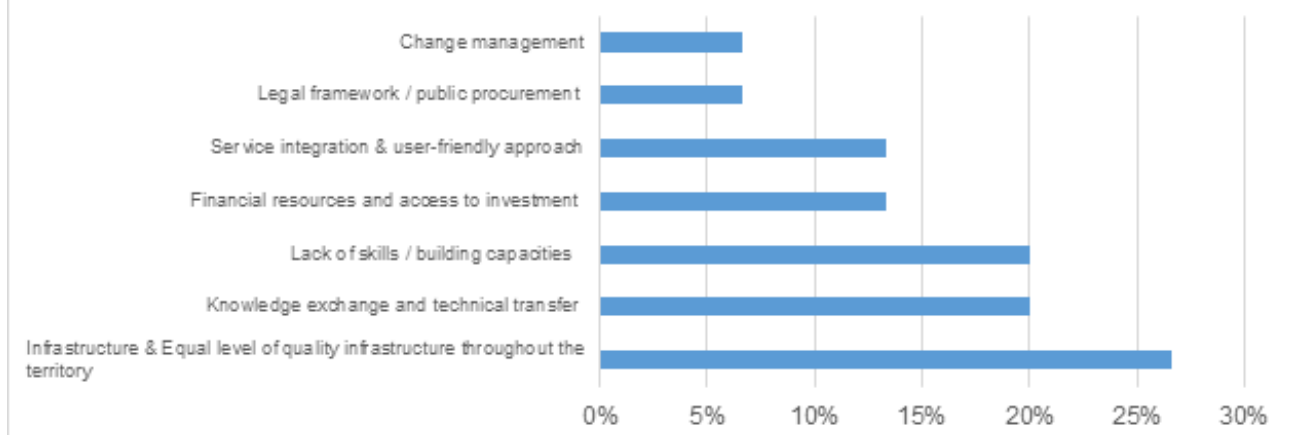
Change management, cultural change and new ways of working is by far the main digital transformation challenge related to internal city processes and management. It is followed by the lack of qualified personnel & need for constant skills updates.

“ When it comes to digital transformation, the biggest challenge is not technological but human. Change management is very difficult when you have civil servants that are used to a system and need to change all their habits. Another challenge is the interoperability between technological solutions and integration of datasets between different city Departments

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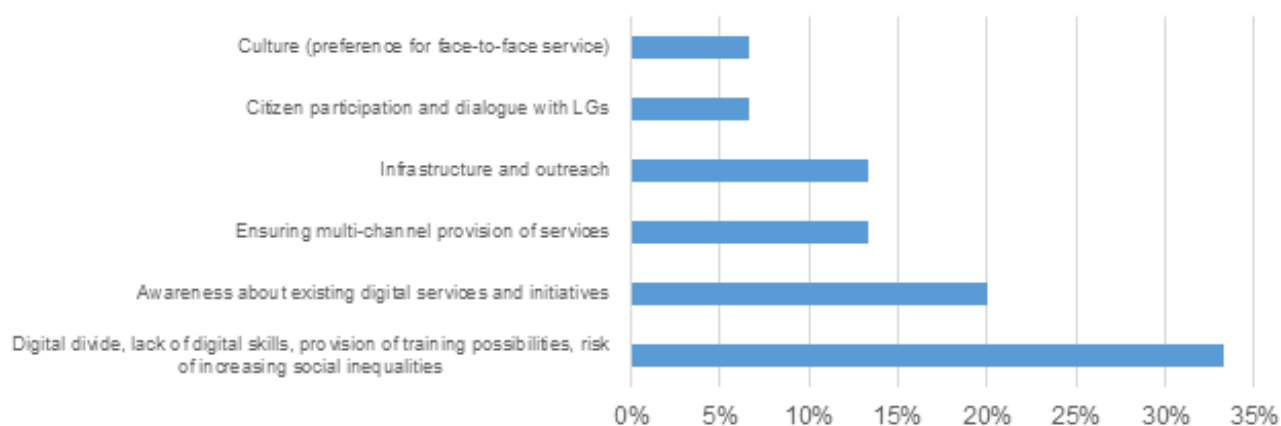
- One City Manager

2) Challenges related to local service provision



Regarding digital transformation challenge related to local service provision the most crucial aspect is the **infrastructure & an equal level of quality infrastructure throughout the territory** followed by knowledge exchange & technical transfer and lack of skills / building capacities.

3) Challenges related to LG's citizens/ civil society



The most important challenges regarding local government's citizens or the civil society are the **digital divide, the lack of digital skills, the provision of training possibilities and the risk of increasing social inequalities**.

To preliminary conclude, it appears that there are three major challenges as derived from the survey for the City Managers currently at stake in the their digitalization journey and as such invite to a more details discussion and search of solutions in the framework of the **CMD'19**:

1. *Internal processes and management: **Change management, cultural change and new ways of working***
2. *Local service provision: **Infrastructure** (e.g. quality, interoperability, security)*
3. *Citizens and civil society: **Digital divide, lack of digital skills, provision of training possibilities, risk of increasing social inequalities***

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