

**H2020-EUJ-02-2016**  
H2020 Grant Agreement Number 723076  
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## Report

# City Stakeholder Group Workshop I

**Version V1.0**

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### ABSTRACT

The City Stakeholder Board of the CPaaS.io has been set up to get feedback on and validation of the project's results from cities in Japan and Europe, as well as to foster an exchange of experiences and thus maximize the real-world impact of the project. The first workshop of the complete City Stakeholder board was set up as a public open session at TRONSHOW 2017 in Tokyo, showing the value the project is bringing cities to wider audience. The individual presentations by representatives of each city – Amsterdam, Sapporo, Zurich, Tokyo, Murcia, Yokosuka –, the ensuing panel discussion as well as the results from a questionnaire filled out by the cities before the workshop have shown that the project is on the right track and is fulfilling real needs, both regarding platform capabilities as well as regarding concrete use cases.

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# 1 Overview

The City Stakeholder Board of the CPaaS.io has been set up to get feedback on and validation of the project's results from cities in Japan and Europe, as well as to foster an exchange of experiences and thus maximize the real-world impact of the project. Currently 3 Japanese and 3 European cities are participating in this board, as shown in Table 1.

**Table 1: City participants of the first workshop**

City	Name	Title
Amsterdam	Joshua Serrão	Innovation Officer, Chief Technology Office of Amsterdam
Murcia	José Guillén Parra	Deputy Mayor for Modernization of the Administration, Urban Quality and Participation, City of Murcia
	Antonio Skarmeta	Technical Coordinator Murcia Smart City project, University of Murcia
Sapporo	Motoi Ichihashi	Director, ICT Strategy Promotion, City of Sapporo
Tokyo	Kyoko Kubara	Senior Director, Information and Communications Planning Division, Bureau of General Affairs, Tokyo Metropolitan Government
Yokosuka	Isao Uenodan	Director, Business Attraction and Industrial Promotion Division, Economic Department, City of Yokosuka
Zurich	Michael Gruebler	Head of Services at the Statistical Office of the City of Zurich

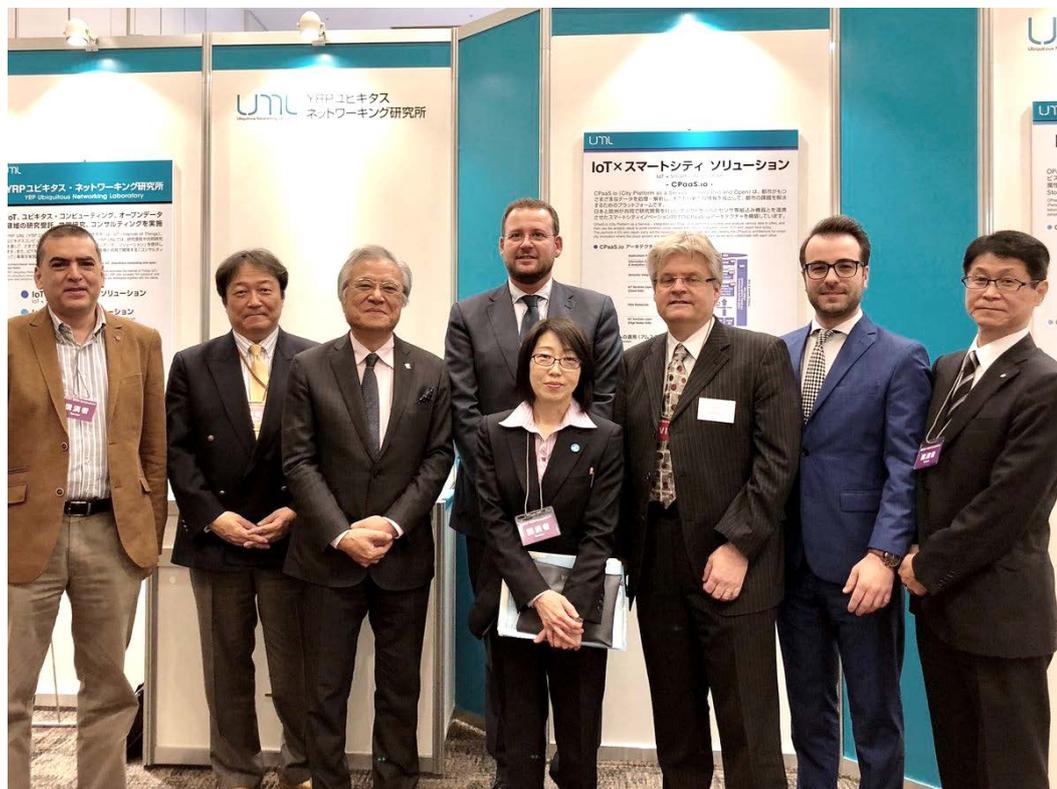
The workshop was held on the afternoon of December 14, 2017 on the second day of the annual TRON Symposium<sup>1</sup> in Tokyo. The TRON Symposium, with technical co-sponsorship of the IEEE Consumer Electronics Society, is a – particularly in Japan – well-known conference and exhibition on IoT and Ubiquitous Computing technologies and applications, organized for more than 30 years by Ken Sakamura. This year's TRON Symposium, held at Tokyo Midtown Hall, attracted 8,500 visitors.

All city stakeholders except Michael Gruebler from Zurich were present in Zurich. While he had planned to participate, he had to cancel his trip on a short notice as some other urgent business had come up. Still, he presented Zurich's Smart City and Open Data activities via a 10-minute video recording.

Before the official reception on the first day, the present city stakeholders had the opportunity to shortly meet with Tokyo Governor Yuriko Koike. Getting visibility at this high political level is certainly a boost to the project and its potential impact. Ms. Koike also held a short speech at the reception, highlighting that Tokyo's strategy entails to become 3 types of a city: A safe city (セーフ. シティ) that prevents crimes and manages disasters well, a diverse city (ダイバーシティ) with equal opportunities for women and a good work-life balance for all, and a smart city (スマート シティ), that is open, internationally minded and saves natural resources.

The main reason to hold the City Stakeholder Workshop at the TRON Symposium was the availability of simultaneous translators (Japanese/English) to enable communication and discussion on equal terms between the different city representatives. Furthermore, by making the workshop an open session entitled "International Session: Stakeholder Summit on Future Cities Created by the IoT; EU-Japan CPaaS.io Project", we could disseminate the project and its results to a larger audience.

<sup>1</sup> See <http://www.tronshow.org/index-e.html>



**Figure 1: The participants of the City Stakeholder Workshop. From left to right: Antonio Skarmeta (Murcia), Motoi Ichihashi (Sapporo), Ken Sakamura (Coordinator, YRP), José Guillén (Murcia), Kyoko Kubara (Tokyo), Stephan Haller (Coordinator, BFH), Joshua Serrão (Amsterdam), Isao Uenodan (Yokosuka).**

## 2 Agenda

What	Who	Length
<b>Opening</b> Welcome message, goals of the workshop, short overview of CPaaS.io from an adopter's perspective	K.Sakamura / S.Haller	30 Min
<b>City Presentations</b> Each city (Amsterdam, Sapporo, Zürich, Tokyo, Murcia, Yokozuka) <sup>2</sup> presents shortly what they are doing in regards to Smart City and Open Data in general, as well as regarding CPaaS.io use cases	City Representatives	105 Min (6 x 15 Min)
<b>Short Break</b>		15 Min
<b>Panel Discussion and Open Q&amp;A</b> <ul style="list-style-type: none"> <li>• Common issues and approaches</li> <li>• Platform and use case relevance</li> </ul>	City Representatives Moderators: K.Sakamura / S.Haller	60 Min

<sup>2</sup> Presentations were held in alphabetical order of the city name according to the Japanese lexical order.

## 3 Summary of Presentations

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The session was attended by approximately 160-200 people in the audience, who had the opportunity to ask some questions during the panel discussion. Below we give a short summary of all city presentations; the slides presentations are available via the project's and the TRON Symposium's web sites.<sup>3</sup>

### 3.1 Amsterdam

Amsterdam's vision for the future of the city is not only to be a Smart City with efficient infrastructures minimized use of resources, but also a "Just(ice) City" with improved equality and government transparency, a Healthy City increasing the quality of life for its population, and a Creative City supporting increased levels of technological innovations and urban dynamics. The role of the city authorities is mainly the one an enabler and facilitator – be it with an Open Data policy on top of which others can create innovations, be it with the Amsterdam Smart City platform that can be seen as an accelerator, bringing together different partners from industry, academia, government and residents, or be it with the Startup in Residence program. Joshua Serrão presented all these initiatives, showing how co-creation and bottom-up, user-centric approaches foster an innovative environment leading to change. The whole city thus becomes a living lab, where ideas are tested ("Stop talking the talk and start walking the walk"), identifying needs and wishes of residents and users, and implemented using a pragmatic approach adapted to particular situations. The waterproof Amsterdam application implemented within the CPaaS.io project is an example of how such innovation takes place.

### 3.2 Sapporo

In its ICT and city development policy, Sapporo is clearly taking a platform-based approach. Three types of data need to be available in such a cloud-based platform: Governmental data, data coming from sensors, as well as privately-owned data. Regarding governmental data, this includes for example data on the population, data on public transportation as well as data regarding disaster prevention. For sensor data, data quality is important and some data cleansing is necessary. Privately owned data includes information about business facilities, hotels etc. Such a platform with an openly accessible API – like CPaaS.io is providing – is a good basis for innovation, as many kinds of useful applications can be built on top of it, ranging from tourist and public transportation information to health care applications. And finally, it serves the development towards a Smart City, which according to Motoi Ichihashi is characterized by three factors: A smart city is geared towards the quality of life of its residents, it stimulates the economy, and it leads to increased government transparency and trust in the government.

### 3.3 Zürich

Zurich is one of the leading cities within Switzerland regarding Open Data, but it only recently started its Smart City activities. The main goals are to ensure a high quality of life, to foster Zürich as an attractive business location and to use resources in the growing city in a sustainable way. While several individual strategies to support these goals have been in place for some years (e.g., City Traffic 2025, Health Network 2025, Day School 2025, 2000-Watt Society), "Smart City Zurich" is now seen as a horizontal enabling strategy for these other strategies, tackling topics like mobility, health, education, environment and energy. Zurich follows four guiding principles: Citizen First, meaning that technology needs to satisfy people's needs and is not an end in itself; Connectivity and Collaboration, i.e., networking different stakeholders and fostering sharing models; Data as a Resource, with Open Government Data and data platforms to

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<sup>33</sup> See <https://www.cpaas.io/?p=778> or <http://www.tronshow.org/2017-tron-symposium/session-pdf/ja/data.html>

foster innovation and transparency; and finally, Space for Experiments, fostering the early testing of innovative approaches and technologies. Michael Grüber presented also one example of how Zurich is enabling co-creation and collaboration by organizing a hackathon called "MakeZurich". Many interesting applications were prototyped during this event, but even more importantly, it opened up the eyes of the political city authorities, showing them clearly the potential of bottom-up co-creation approaches.

### 3.4 Tokyo

Tokyo is currently revising its ICT strategy; Kyoko Kubara presented the current but preliminary view on that strategy. The important keywords in the development of the strategy were openness, data and citizen participation. This includes the use of an open IoT infrastructure that can be used for multiple purposes, as well as the use of open government and big data. Going for an open government data approach however will take some time, as it meets some internal resistance, and data governance and security aspects need to be addressed as well. The current thinking is based on four pillars: (1) Using ICT to enhance urban functions, (2) leveraging data, (3) use ICT to build a mechanism to solve administrative issues in public and private partnerships, and (4), promoting ICT utilization in the private sector, improving productivity and creating new value for the growth of Tokyo and Japan.

On the way towards the 2020 Olympics, when the technology needs to be ready to be also showcased to the world, Tokyo is taking a Citizen First approach. ICT, and in particular IoT infrastructure and Open Data platforms, are supporting the creation of a new Tokyo, which will be a safe, a diverse and a smart city. Safeness addresses environmental health as well as the prevention and response to natural disasters and man-made disasters, in particular regarding the management of big events in the face of global terrorism. Diversity addresses issues like the improvement of the quality of life for all, including dependents, the elderly, but also foreigners, but also issues like work-life-balance, telework and education in the digital society. And smartness addresses environmental issues like energy and resource usage, supporting industry, helping tourists and building test beds for innovative technologies. Building novel applications and services for the city residents based on open data and the principle of an electronic public administration are further important issues for the smart city.

### 3.5 Murcia

The Smart City project of Murcia is called "MiMurcia" and envisions a city that is open (i.e., uses open data and data marketplaces), that is sustainable (i.e., improving urban quality regarding resource usage, CO<sub>2</sub> footprint, parks and gardens management as well as smart and multimodal public transportation), that communicates using appropriate channels and makes contextualized and customized information available, and that solves citizens' problems, with a modernized, paperless public administration that is close to the citizens, transparent and enables a participatory democracy. At the heart of the MiMurcia initiative is CEUS<sup>4</sup>, which captures the intelligence of the city, coordinating actuators and areas of the city council as well serving as the main interaction point with the citizens. CEUS consists of a Smart City Platform that integrates a variety of data sources, several proactive CRM applications, as well as a Business Intelligence component.

The main objectives of the Smart City Platform are to integrate data from sensors, open data sources and internal databases using a common data model (i.e., NGS), to provide facilities for orchestrating new services. To create new channels of communication with citizens based, and to increase the efficiency of services and reaction time based on the real-time information of the city. Technically it is built on FIWARE and CPaaS.io components. The platform has allowed Murcia to set up an innovation ecosystem in the form

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<sup>4</sup> CEUS stands for "Centro Único de Seguimiento", or single monitoring center.

of the MiMurcia Open Innovation Smart City Lab (MiOS), an IoT-based living lab promoting business innovation and fostering co-creation using open APIs.

### 3.6 Yokosuka

One of the main challenges Yokosuka is facing the ageing of the society. While the overall population is decreasing, and life expectancy is slightly shorter compared to other municipalities, the percentage of elderly people (above 65) is increasing, expecting to increase to around 40% by 2060, compared to 28% today. Additionally, the number of elderly living alone is rising, many of which live in areas difficult to access, due to the hilly terrain of Yokosuka. Health services supported by ICT are thus important, as exemplified by the Emergency Health Care use case developed as part of the CPaaS.io project. With this system sharing medical information, the time to treatment is significantly shortened and care quality increased. Still it is a simple system, both regarding cost and regarding the usage by medical personnel, and it respects the privacy of the patients. Therefore, also neighbouring Miura city is adopting the system.

Isao Uenodan is expecting that ICT will offer additional benefits to the elderly in the future, for example through more common use of communication robots or new mobility concepts. Furthermore, he believes that because many social issues are hitting Yokosuka earlier than the rest of the country, it could serve as role model how best to deal with such issues, providing a good work-life-balance and relying on a large ICT sector. Yokosuka is also looking for additional opportunities for Smart City and IoT field tests.

### 3.7 Panel Discussion

The panel discussion following the individual city presentations allowed to discuss some points in more detail. As it turned out, there are a lot of similarities between the different cities even though they are at quite different stages in their development.

The important points of the whole city stakeholder session can be summarized as follows:

- Smart City is not just about instrumenting the city with IoT. Rather, technology is an enabler and Smart City initiatives and strategies should be seen as a part of the overall development plan of a city.
- City platforms – like the one developed by CPaaS.io – are important and useful, as they provide the technological basis on top of which solutions and applications can be built and innovation can be fostered.
- A spirit of openness, and the availability of city and open data platforms also empowers citizens and start-ups to come up with, build and test new ideas. As this is still a relatively young field, experimentation is necessary to find out what works and what not. As one participant pointed out, "the journey is more important than the destination."
- Digitalization of government services for its citizens and businesses, but also for internal processes, is an integral part of a smart city. Several cities are pushing for the "Only-Once Principle" in their administrations.
- The handling of personal data is a crucial aspect – for legal reasons (like the GDPR in Europe) as well as acceptance reasons. The use of Personal Data Stores (PDS) is likely to increase.

## 4 Stakeholder Questionnaire Results

In preparation for the workshop, we asked the cities to fill out a short questionnaire (see Appendix). 5 of the 6 cities responded. While the number of responses is too low for statistical relevance, we still provide in the following the main results.

### 4.1 Questions regarding City, Ecosystem and Strategy

As shown in Figure 2, the main pain points the cities are facing are diverse, but infrastructure, economy and demography top the list. Regarding the motivation, quality of life for the city residents is clearly named as the main motivation. This enforces what had been said also in the panel discussion: Smart City is not a technology issue; technology is merely used to achieve overarching goals.

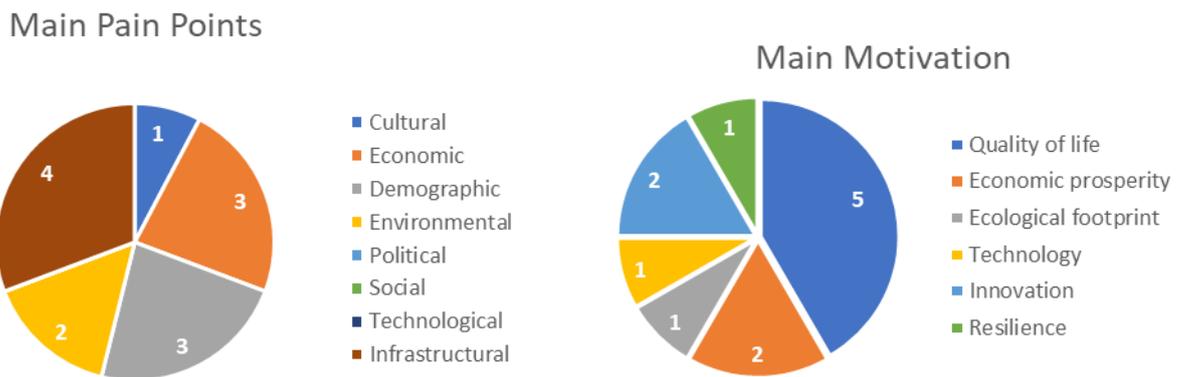


Figure 2: Main pain points of the cities and their motivation to become a smart city

Regarding the actors in the city, Figure 3 shows that Smart City requires a cooperation of different stakeholders, in particular the city administration and private companies. Academia also plays an important role. Somewhat surprisingly private citizens are not seen as important actors, even though many cities in the panel discussion talked about the importance of co-creation and bottom-up approaches. One possible reason is that cities may believe that NGOs, organized rather than individual citizens and start-ups are more important for this. The role the city should play in Smart City initiatives is according to the respondents mainly one of initiator and facilitator. Only one city sees itself as facilitator and sometimes also in the role of a "launching customer", i.e., having an initiating function. Only one city sees itself solely in the customer role.

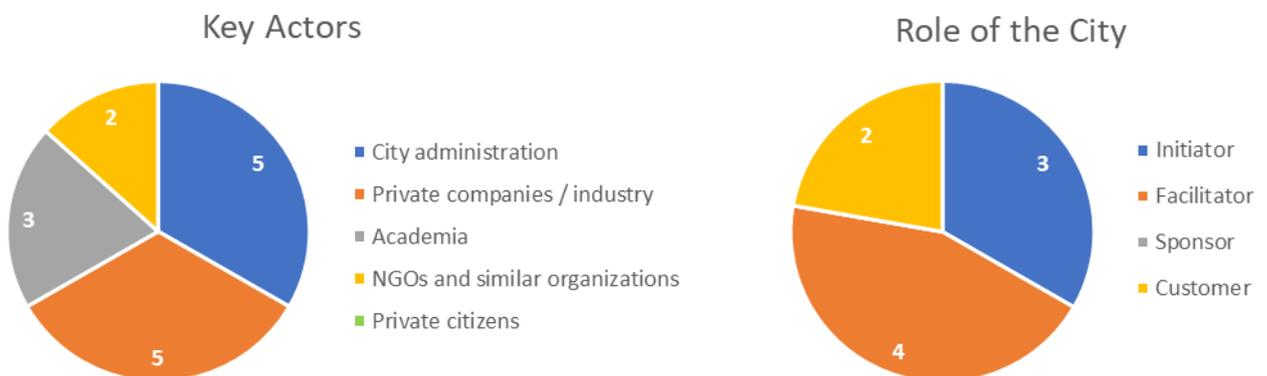
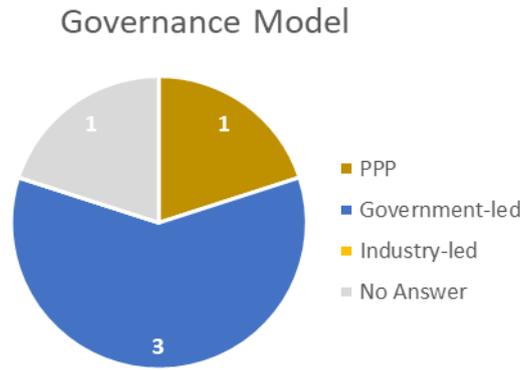


Figure 3: Key Smart City actors and role of the city

This answers somewhat contradicts the answers regarding the governance model. While a PPP model is often proposed for cooperations with multiple stakeholders, only one city uses this governance model, while three cities claim that their Smart City efforts are led by the government. This may have something

to do with the Smart City maturity level of the respondent cities; a second city for example indicated that they plan to move to a PPP model in the future.



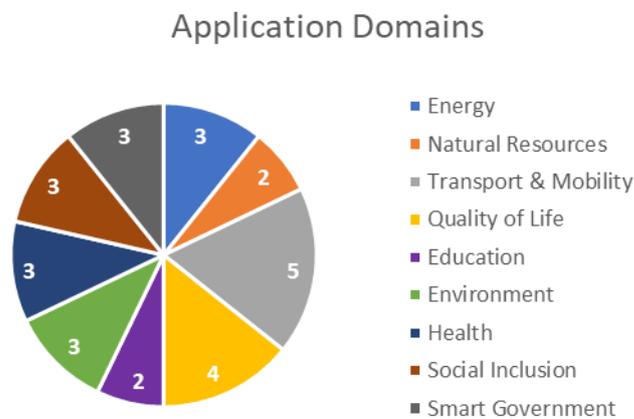
**Figure 4: Governance model**

Regarding strategy, the picture is less clear. All but one city have a strategy regarding Open Data, but only one city has a Smart City strategy. Some cities are still in the process of developing a Smart City strategy, while one city claims that they have abandoned their efforts for such a strategy because the field changes to rapidly and any strategy would quickly be outdated.

The last two questions in this section asked about challenges for establishing a smart city strategy and requirements for a functioning smart city infrastructure. The challenges are mainly regarding cultural change, political will, coordinating stakeholders and financial and personnel resources. Technology itself is less of an issue – even though integration and data protection do pose some challenges. As requirements for a Smart City infrastructure, data sharing, a common data model and integration were named.

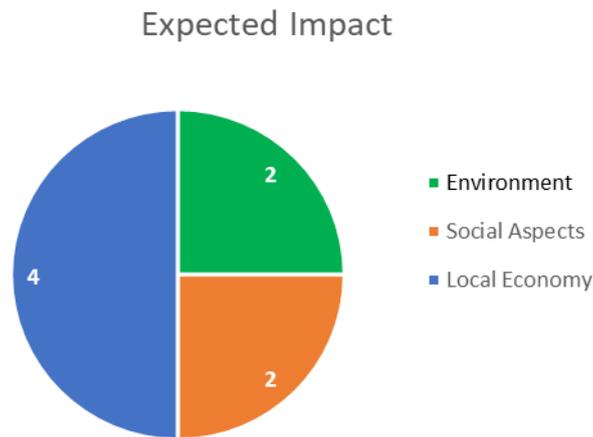
#### 4.2 Questions regarding Public Value Creation

The term Smart City encompasses many possibly applications. This is also shown in the answer to the question which application domains the city currently addresses in its activities. Even though some cities are at an early development stage, each possible answer was at least checked twice. Transport and mobility as well as, again, quality of life topped the list. One city added industrial promotion and tourism as additional areas of activity.



**Figure 5: Application Domains**

The cities also expect a positive impact of their Smart City activities on environment, social aspects, and, in particular, the local economy. Hence the expected impact on the local economy matches on of the largest challenges the cities face.

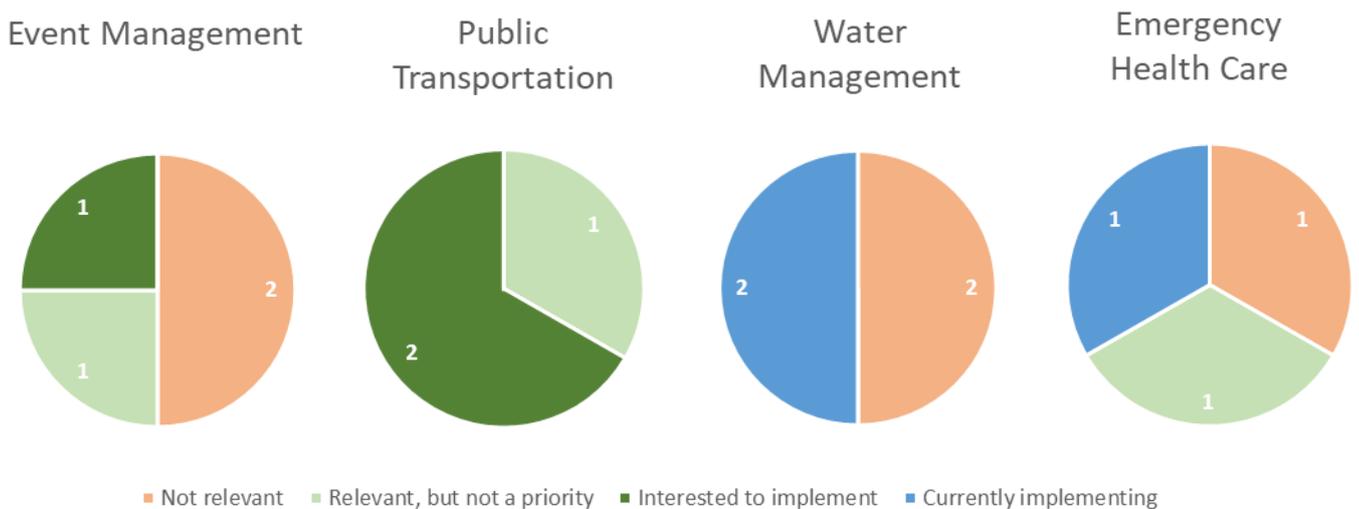


**Figure 6: Expected Impact**

The European cities are trying to involve citizens in their activities through communities (e.g., Smart Citizen, The Things Network), start-up support programs (e.g., Startup in Residence), labs (e.g., MiMurcia Open Innovation Smart City Lab, MiOS) and hackathons (e.g., MakeZurich).

### 4.3 Questions regarding the CPaaS.io Use Cases

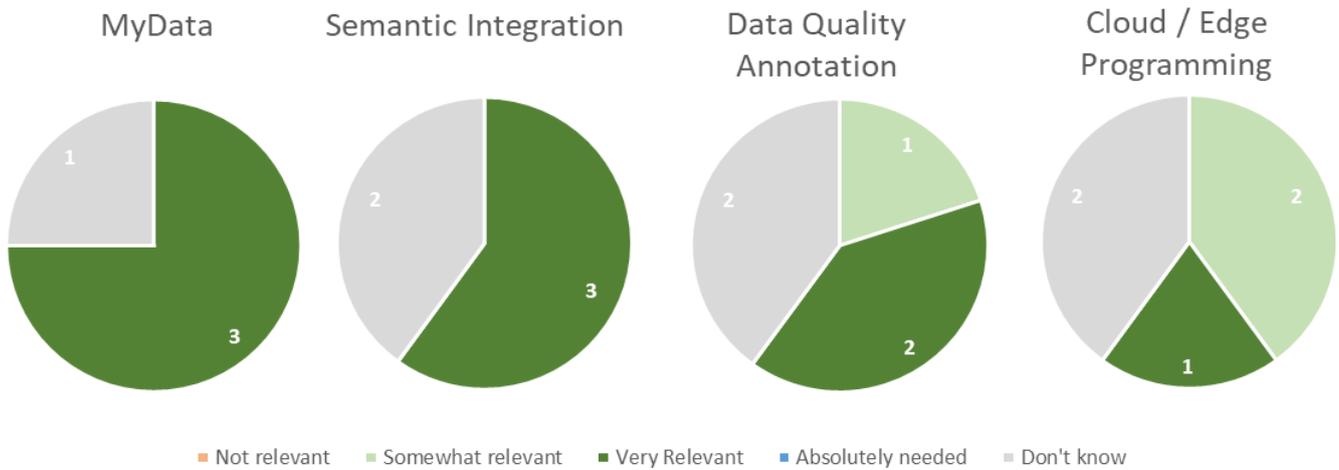
Figure 7 shows the relevance the cities attribute to the CPaaS.io use cases. None of the use cases is just relevant to a single city.



**Figure 7: Relevance of CPaaS.io use cases**

Also, the capabilities that the CPaaS.io platform offers is seen as relevant to the cities, as depicted in Figure 8. However, the figure also shows that some of the capabilities are not yet fully known or understood by

the cities. The project needs to better show the value that these capabilities could have for the city in the last year of the project.



**Figure 8: Relevance of CPaaS.io capabilities**

## 5 Conclusions

This first city stakeholder workshop was a successful event. As shown in sections 3.7 and 4.3, the CPaaS.io project is providing results that are useful to the stakeholder cities, both regarding the platform and its capabilities as well as the implemented use cases. While the involved cities are at different stages regarding Smart City maturity, the discussions revealed many similarities in their approaches and the way of thinking – Smart City is not about technology, but about processes, innovation, openness and citizen participation in order to create public value. Technology is a mere enabler.

Furthermore, this event gave the cities the opportunity the exchange experiences and ideas. Without the availability of simultaneous translation services bridging the language barrier this would not have been possible or at least much more difficult.

Lastly, having held the workshop as a public open session enabled us to make the project and the value it brings to cities in Europe and Japan better known to a large audience.

## **Appendix: Stakeholder Questionnaire**

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The following pages show the questionnaire that was given to the city representatives (English and Japanese).

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# City Stakeholder Group Workshop I

The Horizon 2020 EU-Japan joint research project CPaaS.io (“City Platform as a Service – Integrated and Open”) is creating an open and cloud-based smart city data platform. One of the main objectives of the project is to create a lasting impact in cities beyond the project’s lifetime. Hence a City Stakeholder Board has been established in the project, with representatives from the following cities: Amsterdam, Murcia, Sapporo, Tokyo, Yokosuka and Zurich.

With this questionnaire, we’d like to collect input from the city stakeholders to help us reach this objective. Your feedback helps us to guide the project work in a direction that is useful to the cities and also to validate where we currently stand. Furthermore, the results serve as input for the preparation of the first city stakeholder workshop in Tokyo in December 2017, in order to structure and focus the panel discussion.

This short questionnaire is structured into 4 parts: After some basic information about the respondent, there are sections devoted to the ecosystem and smart city strategy of the respective city, the way smart city activities are used to create public value, and finally the relevance of the concrete use cases in the CPaaS.io project.

We very much appreciate you taking the time to fill out this questionnaire and your continued support of the CPaaS.io project. The answers are treated confidentially within the project consortium.

## 1 Respondent, Affiliation, and Role

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1.1 Name of your city

1.2 Your name

1.3 Your e-mail address

1.4 Your role in the city

## 2 City, Ecosystem and Strategy

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2.1 What are the *main “pain points”* your city is facing in general? Multiple answers possible.

- Cultural
- Economic
- Demographic
- Environmental
- Political
- Social
- Technological
- Infrastructural
- Other:

Can you give any specifics the checked answers?

2.2 What is the *main motivation* behind the smart city activities? Multiple answers possible.

- Quality of life
- Economic prosperity
- Ecological footprint
- Technology
- Innovation
- Resilience
- Other:

2.3 Who are the key actors in the smart city activities? Multiple answers possible.

- City administration
- Private companies / industry
- Academia
- NGOs and similar organizations
- Private citizens
- Other:

2.4 What role does the *city administration* play in the smart city activities? Multiple answers possible.

- Initiator
- Facilitator
- Sponsor
- Customer
- Other:

2.5 Does the city have an *official smart city strategy*?

- Yes
- No

Who pushed the drafting of such a strategy?

2.6 Does the city have an *official open data strategy*?

Yes

No

Are there any other relevant data strategies in the city? Please list:

2.7 What *governance model* does your city follow in its smart city activities? Multiple answers possible.

PPP

Government-led

Industry-led

Other:

2.8 What are - from your experience - the main challenges when establishing a smart city strategy (e.g., when formulating it and/or when implementing)? Please explain:

2.9 In your opinion, what is required for a functioning smart city infrastructure? Please explain how your city addresses these aspects that could be regarded as best practice:

### 3 Public Value Creation

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The concept of public value describes the value that a (public or private) organization contributes to society. The idea behind this concept is that it is not just about efficiency and effectiveness. It is about

contributing to the common good, about increasing the quality of life, about creating a value for citizens and a wide range of other stakeholders. Especially, when market mechanisms are unable to guarantee the service production, as, for example but not limited to, for a public transportation or a public health infrastructure, or in the education system.<sup>5</sup>

3.1 Regarding the smart city activities in your city, what application domains are currently addressed? Multiple answers possible.

- |   |   |
|---|---|
| <input type="checkbox"/> Energy               | <input type="checkbox"/> Environment      |
| <input type="checkbox"/> Natural Resources    | <input type="checkbox"/> Health           |
| <input type="checkbox"/> Transport & Mobility | <input type="checkbox"/> Social Inclusion |
| <input type="checkbox"/> Quality of Life      | <input type="checkbox"/> Smart Government |
| <input type="checkbox"/> Education            |   |
| <input type="checkbox"/> Other:               |   |

3.2 When thinking about the goals of your city's smart city activities; where do you expect the most impact? Multiple answers possible.

- Environment
- Social Aspects
- Local Economy
- Other:

3.3 What types of impact have you seen so far?

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<sup>5</sup> There is a large body on the concept of public value in scientific literature, see for example Harrison et al (2011), *Open government and e-government: democratic challenges from a public value perspective*, Meynhardt (2009), *Public value inside: What is public value creation?*, Moore (1995) *Creating Public Value: Strategic Management in Government*, or Neuroni et al. (upcoming), *Increasing Public Value Creation for Smart Cities Using an Ecosystem Approach*.

- 3.3 How – if at all – are citizens directly involved in your smart city activities, i.e., do co-creation aspects play a role?

## 4 CPaaS.io Use Cases

- 4.1 Within the CPaaS.io project, several use cases are implemented as proof-of-concept for an open smart city platform. These are currently:

- *Event Management*: Better experience for visitors, participants and better management for the event organizers, e.g. in the context of city festivals or popular sports as exemplified in Amsterdam
- *Public Transportation*: Realtime traffic information, flexible scheduling and multi-modal transportation, currently conceptualized in Tokyo.
- *Water Management*: Prevention of floods, better resource usage and greening of the city, exemplified in the implementation in Amsterdam.
- *Emergency Health Care*: Realtime information exchange of all involved service providers resulting in better care, currently being implemented in Yokosuka.

Please rate how relevant these use cases are for the challenges in your city:

Use Case	Not relevant	Relevant, but not a priority	Interested to implement	Currently implementing
Event Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Public Transportation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Water Management	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emergency Health Care	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4.2 The CPaaS.io platform offers several capabilities/services that can be of interest for smart city applications These are currently:

- *MyData*: Let the citizen control who can access which personal data under what circumstances. The project develops the necessary citizen dashboards that a citizen can not only find out what data about her is accessible through the platform, but then also can define the data access policies for other service providers.
- *Semantic Integration*: The data stored in the platform is annotated with machine-understandable semantic descriptions. In contrast to simple data APIs, this allows to find related data based on the description, and to easily link to other data sources, e.g., data from Open Government Data (OGD) portals.
- *Data Quality Annotation*: Data sets are annotated with attributes that allow an application to determine if the data quality suffices for the intended use.
- *Cloud/Edge-Programming*: Analytics and processing tasks can be deployed to the platform; and they can also be adaptively moved from the cloud to edge devices and back, allowing to make use of free resources at the edge and to execute processing tasks where it makes most sense.

Please rate how relevant/useful these are for your city:

Use Case	Not relevant	Somewhat relevant	Very relevant	Absolutely needed	Don't know
MyData	<input type="radio"/>				
Semantic Integration	<input type="radio"/>				
Data Quality Annotation	<input type="radio"/>				
Cloud/Edge Programming	<input type="radio"/>				

4.3 Please list any other use cases very relevant to your city, where an open city platform such as CPaaS.io would provide clear benefits:

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# 市関係者向けアンケート

Horizon 2020 EU 共同研究プロジェクト CPaaS.io (City Platform as a Service, open and integrated) はオープンでクラウドベースのスマートシティ向けのデータプラットフォームを作成するプロジェクトです。プロジェクトの主な目的の 1 つは、プロジェクト期間の後も継続する影響を都市にもたらすことです。このため、プロジェクトでは都市関係者を募り、そこには次の都市からの代表が参加しています。：アムステルダム (Amsterdam)、ムルシア (Murcia, Spain)、札幌、東京、横須賀、チューリッヒ (Zurich)。

このアンケートは、上記のプロジェクトの目的をするための参考となるように都市の関係者からの意見、コメントを集める目的で行ないます。いただくフィードバックはプロジェクトが各都市に役立つ成果をもたらせるような方向に研究開発を進めるためと、我々の現状の成果の有効性の検証に役立つ予定です。さらに、このアンケート結果は、2017 年 12 月に東京で開催される最初の市関係者ワークショップ（トロンシンポジウム中のセッション）でのパネル討論の進め方と内容を決めるために使われます。

このアンケートは 4 つの分野の質問で構成されます：回答者に関する基本的な情報記入の後、都市のエコシステム、各都市のスマートシティ戦略プラン、スマートシティ活動をどのように遂行して公共に役立つ価値を生み出しているか、CPaaS.io プロジェクトでのユースケースの重要性について質問します。

今回は、アンケートの回答に時間を割いていただきありがとうございます。アンケートの回答は、プロジェクトを構成するコンソーシアム内で機密情報として扱われます。

今後ともこれまでと同様に CPaaS.io プロジェクトへのご協力をよろしくお願いいたします。

## 1 回答者・所属・役割

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1.1 都市の名称

1.2 お名前

1.3 あなたの電子メールアドレス

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1.4 市におけるあなたの役割

## 2 エコシステムと戦略プラン

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2.1 今あなたの都市で困っていること（pain point）は何ですか？複数回答可能です。

- 文化的な問題
- 経済的な問題
- 人口構成の問題
- 環境問題
- 政治
- 社会
- 技術
- インフラ
- その他：

上記でチェックした問題についての詳細を記述いただけますか？

2.2 スマートシティ活動をすすめる主な動機は何ですか。複数回答可能です。

- 生活の質
- 経済的繁栄
- エコロジカル ・ フットプリント（環境負荷を小さくしたいというような観点）
- 技術
- 技術革新
- 都市の頑強さ（Resilience）
- その他：

2.3 スマートシティ活動の主体となっているのは誰ですか。複数回答可能です。

- 市の行政部門
- 民間企業/業界
- 大学をはじめとする学術団体（いわゆるアカデミア）
- NGO ないしは類似の組織
- 一般市民
- その他：

2.4 市の行政部門はスマートシティ活動でどのような役割を果たしていますか。複数回答可能です。

- イニシエーター（最初に手を付ける役割）
- ファシリテーター（進行を助ける役割）
- スポンサー
- ユーザ（利用する役割）
- その他:

2.5 あなたの市には公式のスマートシティ戦略プランがありますか？

- はい
- いいえ

そのような戦略プラン（存在する場合）の起草を推進したのは誰ですか？

2.6 あなたの市には公式のオープンデータ戦略プランがありますか？

- はい
- いええ

あなたの市にはオープンデータ以外にも重要なデータ戦略プランがありますか？あればリストしてください。

2.7 あなたの市ではどのようなガバナンス モデルをスマートシティ活動につかっていますか？複数回答可能です。

- PPP (Public Private Partnership)
- 行政・政府主導
- 民間業界主導
- その他:

2.8 あなたの体験に基づいて伺いたいのですが、スマートシティ戦略プランを遂行するとき（プランを決めるときあるいは実際に実行していくとき）むつかしいのはどんなことですか？ 説明いただけますか？

2.9 あなたの意見では、実際に動作して使えるスマートシティインフラストラクチャに必要なものは何ですか。あなたの市でこれらの必要要件に取り組む際に、もし他の都市にもベスト プラクティスとして推薦できるようなアプローチをしている事例があれば教えてください。

### 3 公共の価値創造

公共的価値の概念は、(パブリックまたはプライベート) 組織が社会に貢献する価値を評価する際にかえります。この概念の背後にある考え方は単に効率および有効性だけに注目するものではありません。公益への貢献、生活の質の向上、市民や市の他の関係者のための価値を作成する方法などにも注目します。たとえば以下の例に限定されませんが、公共交通機関、公衆衛生インフラ、あるいは教育システムといったサービスは市場原理だけでは存在を保証できない公共的価値を生み出すサービスの実例です。

3.1 あなたの市でのスマートシティ活動はどのような応用分野を対象としていますか？ 複数回答可能です。

- |                                   |   |
|-----------------------------------|---|
| <input type="checkbox"/> エネルギー    | <input type="checkbox"/> 環境   |
| <input type="checkbox"/> 天然資源     | <input type="checkbox"/> 健康   |
| <input type="checkbox"/> 交通・モビリティ | <input type="checkbox"/> 社会活動に様々な人達を取り込むこと<br>(Social inclusion: 身障者、お年寄り、<br>他地域からの流入人口など) |
| <input type="checkbox"/> 生活の質     | <input type="checkbox"/> スマート政府   |
| <input type="checkbox"/> 教育       |   |
| <input type="checkbox"/> その他:     |   |

3.2 あなたの市のスマートシティ活動の目標について考えるとき、どういった分野に最も影響があるとおもいますか？ 複数回答可能です。

- 環境  
 社会的側面  
 地域経済  
 その他:

3.3 これまでに、あなたの市のスマートシティの活動の成果・影響としてどのようなものがありましたか？ 具体例があればおしえてください。

3.4 あなたの市のスマートシティの活動に市民は関わっていますか？ 関わっている場合にどのように関わっていますか？ 市民の関与に当たっては行政との共同での創生(co-creation)の観点はあるのかの影響がありましたか？

## 4 CPaaS.io のユースケース

4.1 CPaaS.io プロジェクトで、プロジェクトのアイデアがオープンスマートシティプラットフォームに役立つことをしめすためにいくつかのユースケースを実装し研究開発の参考にしていきます。これらは現在、以下のようなものです：

- イベント管理： 都市の祭りや人気のあるスポーツイベントで、観光客や参加者のより楽しい体験、またイベントの主催者のためのよりよい運営をもたらす。事例としてアムステルダムがあります。
- 公共交通機関： リアルタイム交通情報、移動スケジューリングとマルチ モーダルな移動方法（複数の異なる移動手段を組み合わせる移動方法）を上手に利用することについては現在東京の公共交通機関を対象にアイデアを出して検討しています。
- 水の管理： 洪水の防止、水資源のより良い利用、市の緑化はアムステルダムのユースケースで実装されています。
- 救急医療： 現在横須賀市で実施しているように、関与するサービス提供者の間でのリアルタイム情報交換により患者へのよりよい医療提供を行うことができます。

こういったユースケースがあなたの市で解決しなければならない課題にどれだけ役立ちそうかを評価してください。

ユース ケース	関連性がない	関連性は高い、 しかし、優先度 は低い	実装したいと思 っている	現在、実装中
イベント管理	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
公共交通機関	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
水の管理	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
救急医療	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

4.2 CPaaS.io プラットフォームは、スマートシティのアプリケーションに役立ついくつかの機能やサービスを提供します：

- MyData（日本国内ではOmotenashi Platform as a Service, OPaaS が同様のサービスを提供します。）： 個人のプライベートなデータに対するアクセスを、どのように、またどのような状況で可能にするかを個々の市民が制御できるようにします。プロジェクトでは、市民が CPaaS.io プラットフォームを通じてアクセスできるプライベートなデータにはどんなものがあるかを知るのみならず、さらにその情報を他のサービス提供者がどうアクセスできるかのポリシーを自分で決めることができるようにするためのダッシュボードを作っています。
- 意味的統合： プラットフォームに格納されているデータには、コンピューターが理解できる意味記述が付いています。これにより単純なデータ API では不可能な操作、たとえば 記述に基づく関連データを検索したり、簡単に他のデータソースのデータ、例えばオープン政府データ（OGD）ウェブポータルサイトからのデータにリンクすることができます。

- データ品質注釈:提供されるデータの品質が使用目的に十分であるかどうかをアプリケーションが知ることができるような属性をデータセットに付けることができます。
- クラウド/エッジプログラミング: データ分析および処理のタスクを CPaaS.io プラットフォーム上のいろいろなところで実行できます。クラウドからエッジデバイスにタスクを移す、またはその逆方向に移動できます。こうすることでエッジデバイスである時点で利用されていなかったリソースを分析や処理の目的に使うことができます。また、処理タスクを一番適した場所で実行することができます。

これらの機能があなたの都市にどのように関連するか、または役に立つか、評価してください。

ユース ケース	関連性がな い	やや関連	非常に関連 性が高い	絶対に必要	わからない
MyData・OPaaS	<input type="radio"/>				
意味的統合	<input type="radio"/>				
データ品質注釈	<input type="radio"/>				
クラウド/エッジプログラ ミング	<input type="radio"/>				

- 4.3 あなたの市にとって重要なユースケースが他にもあればご記入ください。とくに CPaaS.io のような「オープンなシティプラットフォーム」が明確な利点を有するユースケースがあればそれをご記入ください。