

# Sharing Cities Consortium Meeting

1 – 2 February 2017

Milan, Italy

## Record of meeting

### Attendance

Name	Organisation
Giovanni Accetta	A2a
Paolo de Guardi	A2a
Alberto Ventura	A2a
Telma Mota	Altice Labs
Mario Berrini	AMAT
Veronica Gaiani	AMAT
Oliver Mauret	Bordeaux
Christophe Colinet	Bordeaux
Daniela Alexieva	Burgas
Jana Koleva	Burgas
Ruska Boyadzhieva	Burgas
Emilio Verga	Cefriel
Maurilio Zuccalà	Cefriel
André Dias	CEiiA
João Jesus Caetano	CEiiA
Marta Bugay	City of Warsaw
Fabio Silvestrin	Comune SIAD
Veronica Skiba	Concirus
Marek Brand	Danfloss
Vera Nunes	EDP Distribuição
Nuno Sardinha	Empresa Municipal de Mobilidade e Estacionamento de Lisboa
Vasco Mora	Empresa Municipal de Mobilidade e Estacionamento de Lisboa
Bernadett Degrendele	Eurocities
Nathalie Guri	Eurocities
Gabriel Jacqmin	Eurocities
Bruno Marasa	European Parliament
Sophia Taborda	Future Cities Catapult
Francesco Marchet	Future Cities Catapult
Jarmo Eskelinen	Future Cities Catapult
Rick Curtis	Greater London Authority
Trevor Dorling	Greenwich
Joel de Mowbray	Greenwich
Sarah Butler	Greenwich
Sizwe James	Greenwich

Jemma Hoare	Greenwich
Lola Fernandez	Greenwich
William Holden	Greenwich
John Polak	Imperial College London
Kosta Zavitassas	Imperial College London
Carolina Barco	Interamerican Bank
Paola Ponticelli	Kiunsys
Caterina Benvenuto	Legambiente
Damiano Disimine	Legambiente
Miguel Águas	Lisboa E-Nova
Francisco Gonçalves	Lisboa E-Nova
Pedro Machado	Lisboa E-Nova
Rui Franco	Lisbon Municipality
Maria João Caneiras	Lisbon Municipality
Piero Pelizzaro	Milan Municipality
Susanna Molteni	Milan Municipality
Renato Galliano	Milan Municipality
Lucia Scopelliti	Milan Municipality
Laura Tavecchio	Milan Municipality
Mario Cullo Conforti	NHP
Valerio Siniscalco	NHP
Julia Seixas	Nova University Lisbon
Andrew Collinge	PMO
Nathan Pierce	PMO
Matt Clifton	PMO
Sandeep Duggal	PMO
Federico Lia	Poliedra
Roberto Nocerino	Poliedra (IT)
Eugenio Morello	POLIMI
Caregnato Elisabetta	POLIMI
Causone Francesco	POLIMI
Barbara Piga	POLIMI
Anita Tatti	POLIMI
Demis Lorenzi	POLIMI
Roberto Nocerino	POLIMI
Madelana Seabra	Reabilita
Filipe Santos	Reabilita
Andrea Temporelli	RSE-web
Sara Filipponi	Siemens
Dorota Chwieduk	Technical University of Warsaw
Andre Pina	Tecnico Lisboa
Cecilia Hugony	Teicos
Valeria Mondatore	Teicos
Marta Peloso	Teicos
Valentina Lacitignola	Teicos
Monica Ferrari	Teicos
Federica Roseano	Teicos
Maria Elena Hugony	Teicos
Iain Macbeth	Transport for London
Antimo Barbato	Una Reti
Marco Boffi	UNIMI
Nicola Rainisio	UNIMI

Jason Warwick	UrbanDNA
Graham Colclough	UrbanDNA
Leszek Drogosz	Warsaw
Marcin Wróblewski	Warsaw

**Outline of Agenda**

*Day 1*

1. Welcome
2. Work Package updates
3. Feedback from Advisory Board
4. World Café sessions

*Day 2*

5. World Café sessions
6. Study Tour
7. World Café feedback
8. INEA Periodic Review & Returns
9. Wrap up & Conclusions



## Summary

This was the second Consortium Meeting of the Sharing Cities programme, and was hosted by the Municipality of Milan, one of our Lighthouse cities.

The consortium meeting took place in BASE Milano, a former industrial facility located in Tortona, which is now a creative hub of innovation and design.

The content of the event was developed in discussion between the transversal PMO, Milan, Eurocities and members of the Design Forum.

Heading into the second year of the programme there was a real emphasis on the deployment of solutions and overcoming or navigating any obstacles to implementation.

This business-like approach was reflected in the Milan programme of activities for the week. The Consortium Meeting was preceded by peer learning visits for the Fellow Cities, an all-day meeting of the Sharing Cities Advisory Board, a meeting of the Programme Board and a bespoke meeting of Work Package 4 on Urban Sharing Platforms. The Consortium meeting was also followed by further bespoke work package meetings on measures and replication (Work Packages 3 and 5) and business models (Work Package 7).

The theme of this Consortium Meeting was 'Delivery' and its aims were to:

- Improve performance by focusing on the timeliness and specification of our work;
- Through collaborative discussions explore how to assure the quality of our deliverables;
- Build trust and collaboration across the Sharing Cities partnership.

The objectives of the Consortium Meeting were to:

- Restate global programme objectives with a particular focus on the next six months;
- Clarify programme tasks and approach to delivery;
- Raise the visibility of dependencies;
- Address technical challenges in the implementation of measures;
- Share an understanding of what is happening across the partnership;
- Curate an inventory of activities that develop city business models for smart urban services.

This report outlines the key points from the main sessions, any actions captured and represents the formal record of the meeting.

## Day One Wednesday 1<sup>st</sup> February

### 1. Welcome

The meeting was opened with a welcome from Renato Galliano, Director of Urban Economy and Work at the Municipality of Milan, and also fraternal greetings from Bruno Marasà, Director of European Parliament Information Office in Milan. Following this the programme's Senior Responsible Officer, Andrew Collinge, and PMO Director, Nathan Pierce, provided an strategic-level overview on progress as well as a programme management update.

Renato Galliano explained Milan's commitment to the smart cities agenda and the importance of Sharing Cities within that context along with some of the initiatives the city is undertaking.

Andrew Collinge spoke on the importance of high quality delivery and meeting the programme objectives, raising the profile of the programme and achieving Sharing Cities' audacious aims.

Nathan Pierce stressed the progress being made and how well Sharing Cities was placed among other SCC01 partnerships across Europe. Management plans are complete; there has been a successful budget and deliverables review; the partnership has punched above its weight on the European stage; we are forging links with a range of cities and institutions and we have an excellent evaluation framework to help us monitor our impact.

### 2. Work Package and City Updates

Work Package leads presented updates to partners with a reminder of the main content and deliverables within their WP as well as an update on general activity and activity within each city. They also provided details of their future plans. The updates reflected the work being undertaken for the Periodic Review in March and came with a strong focus on delivery.

These presentations are available on the Sharing Cities Google Drive:

<https://drive.google.com/drive/folders/0B2UszkAxtoilcGFCQjdRRHBxVG8?usp=sharing>

City Leads also gave presentations about the work package activity in their respective districts, and these may also be found through the above link.

### 3. Advisory Board feedback

The Sharing Cities Advisory Board took place the day before the Consortium Meeting.

Three members of the Advisory Board, Carolina Barco (Inter-American Development Bank), Susan Parnell (University of Cape Town) and Julia Seixas (Nova University of Lisbon) addressed the Consortium Meeting to give feedback on the considerations of the Advisory Board meeting.

The Advisory Board recognised the strong sense of purpose and enthusiasm about the Sharing Cities programme. The Board offers a global perspective, which is hoped will be of great value to the programme. The Board is available to help the programme and the work of Sharing Cities will inform the Board members about best practice that they can promote within their networks, which could also complement the programme's replication, scaling-up and inward investment objectives. The Board recognised that navigating privacy and security

issues will be a major obstacle, which it would like to address. Working together multilaterally along with global businesses will help the programme achieve its ends.

Extensive notes of the Advisory Board meeting are found in the annex to this note.

#### 4. Introducing the World Café table discussions

The "World Café" is a structured conversational process intended to facilitate open and intimate discussion and link ideas within a group.

Participants move between a series of tables where they continue the discussion in response to a set of questions, which are predetermined and focused on the specific goals.

Table topics included:

- Table 1: Dashboards – The shop window for the urban sharing platform
- Table 2: Data strategy and Urban Platform interoperability
- Table 3: Marketing strategy and branding
- Table 4: How involve the market: city business models, participation and procurement
- Table 5: Societal Engagement – Tools, Methods, Stakeholders and Use Cases
- Table 6: Measures and Tools – Planning the Components of Delivery
- Table 7: The Digital Social Bond – An Incentives Framework for City Services
- Table 8: Replication – Direction of Travel in Fellow and Scale Up Cities

Rapporteurs would guide the table conversations by outlining and documenting a set of common barriers, issues and obstacles that cities face in delivery.

Following the introduction to the exercise two 90 minutes discussion sessions took place before breaking for the Consortium dinner hosted by the City of Milan.

## Day Two: Thursday 2<sup>nd</sup> February

### 5. Further World Café table discussions

Following a morning introduction and warm up exercise, a third 90 minute discussion took place. In all everyone would have taken part in three of the eight table discussions.

### 6. Porta Romana suty visit

Consortium members visited the Porta Romana district on the outskirts of Milan where some buildings are going to be equipped with innovative technology under the project. These retrofits of both private and public buildings are performed by Teicos, Future Energy and Milan's Housing Department with the scientific contribution of Politecnico Energy Department.

A further part of the visit was to inspect Milan's smart lamp posts, shared electric vehicles and bikes, digital islands and related applications. The active participation of the locals is part of the process. Through their involvement from the earliest stages, residents stay informed and learn to monitor and manage their own energy consumption and envision a new kind of building with shared services and functionalities. This co-design process is led by Politecnico Urban Planning Department.

### 7. World Café Rapporteurs feedback

Each rapporteur presented an overview of the discussions that had taken place in their respective workshops. An overview is provided here and the full World Café feedback presentations are available on the Sharing Cities Google Drive:

<https://drive.google.com/drive/folders/0B2UszkAxtoilN0dSanREdHRXb00?usp=sharing>

#### ***Table 1: Dashboards – The shop window for the urban sharing platform***

The discussions on dashboards focused on the logic and workflow of such platforms, including customer needs, synergies with other work packages, avoiding duplication, best practice and technology, integration with existing dashboards, extensibility, costs, delivery and legal issues. Some of these issues could be addressed through benchmarking and best practices to create an aligned look and feel.

#### ***Table 2: Data strategy and Urban Platform interoperability***

Data Strategy covered issues such as privacy and how the law is open to interpretation creating challenges. Citizens should know what is happening to their data and why it is being collected, but there is a perceived lack of understanding that needs to be addressed. Data value needs to be returned to citizens in some way. Ways of managing information could include Hypercat standards necessary to access and catalogue data. Solutions discussed also included actions to support informed citizen choices about how to use their data linked to the work on the digital social bond.

**Table 3: Marketing strategy and branding**

Marketing discussions explored how the programme can convert its vision and objectives into key messages and a strategy for sustained impact on the market place. Different stakeholder groups were identified. This was followed by discussions around marketing tools, calls to action and communications channels. Barriers that Sharing Cities face include a lack of visibility, but this will change as delivery kicks in and if there aggregated communications across all SCC01 cities in Horizon 2020. Opportunities include using the lighthouse brand to market our smart solutions Europe-wide and demonstrate the impact of smart tech.

**Table 4: How to involve the market: city business models, participation and procurement**

There is a need to incentivise engagement with businesses supported by a universal pitch that demonstrates the benefit of using the tools developed and deployed through the programme. Also critical to attracting wider business attention is connecting with cities outside the partnership, talking with citizens about how technology will make their lives better and engaging with private sector investors for financial scale-up of programme activities.

Other ingredients could include sensible standardisation for Lego-like compatibility supported by a clear understanding of policy interdependencies and technology strategy. The programme should also pay attention to the co-investment programme Funding London and collaborate with the European Innovation Partnership.

**Table 5: Societal Engagement – Tools, Methods, Stakeholders and Use Cases**

There is a potential conflict between what people want and what Sharing Cities is providing. It was suggested that citizens want security doors and buses that run on time but we propose to give them energy efficiency and smart meters. Energy savings could be relatively small for individuals and therefore people will not always pay attention. However, the programme requires that we should ensure that 7500 actively participate on retrofitting buildings.

Therefore the workshop explored how we create a convincing narrative that makes sense; how to utilise suppliers to support our endeavours in cities; how to strengthen collaboration with the EIP-SCC (Citizen Focus group is developing a Toolkit on this topic); and address city-specific communications challenges to increase engagement.

**Table 6: Measures and Tools – Planning the Components of Delivery**

Different measures face specific barriers. For example, virtual power plants are not possible in Italy because of the monopoly conditions for energy means that peer-to-peer energy networks cannot function. Another problem is that cities too often are working alone. The discussions therefore explored how we could strengthen working between cities, possibly through a more active Design Forum and through greater political engagement. Improved monitoring of deployment activities, the communication of a shared vision and common standards and tools would also increase coherence.

**Table 7: The Digital Social Bond – An Incentives Framework for City Services**

In engaging with citizens and society the digital social bond will have to feature in the conversation to explain what it is, how it works and why it is a bond. Barriers include the visibility of the programme, public apathy towards a smart city agenda and the digital divide that excludes people from fully engaging with technology. This can be addressed through a



more robust approach to engaging with citizens so they fully understand and inform the use cases for smart technology.

**Table 8: Replication – Direction of Travel in Fellow and Scale Up Cities**

Replication of new best practice is undermined by non-technical procurement operations leading to wrong choices. Therefore the programme should promote novel processes of project procurement and delivery and these could be a subject of further discussion at the next Consortium meeting.

## 8. Preparation for INEA Periodic Review & Returns

The Programme Manager (Compliance) for Sharing Cities gave a presentation to introduce the issue of the annual reporting to the European Commission and to take questions about complying with both the technical and financial aspects of the returns.

The presentation is available on the Sharing Cities Google Drive:

<https://drive.google.com/drive/folders/0B2UszkAxtolIN0dSanREdHRXb00?usp=sharing>

## 9. Conclusions

Representatives of the programme's 35 partner organisations came together in Milan on 1-2 February to mark Sharing Cities' one-year anniversary, undertake discussions and to think strategically about the year ahead.

The partners took time to sum up their priorities for the next few years and to collectively identify obstacles that the programme is likely to encounter. They also discussed the state of play of the different deliverables.

In a series of sessions, participants assessed progress in specific areas, such as replication, the marketing strategy, or ways to encourage social engagement. Technical issues, such as the dashboard for the urban sharing platform or the tools used to measure progress, were also presented.

Overall the meeting was productive with good attendance from partners. A forward plan for future Consortium meetings has been adopted by the Programme Board, which identifies that the next meeting should take place in London in September with themed discussions around 'impact'.

This meeting in Milan committed a lot of time to group discussions, interaction and feedback, as requested by partners following the event in Burgas and the peer learning visits to the Lighthouse cities. Because there were fellow city visits, Advisory and Programme Board meetings, and work package workshop, Sharing Cities used up a full week in Milan. This was a deliberate response to partners' concerns that two days would not be long enough.

The planning for the next Consortium meeting will begin shortly.

**Location and date of next meeting: London, September 2017 (date TBC)**

Record submitted by: Matt Clifton, PMO Programme Manager – Partnership Lead  
Approved by: Nathan Pierce, PMO Programme Director





## Annex

SHARING CITIES

ADVISORY BOARD MEETING NOTES

TUESDAY 31 JANUARY 2017

**BASE Milano, Via Bergognone 34, 20144, Milano**

### Attendees

Acuto, Michele	University College London
Barco, Carolina	Inter-American Development Bank
Barros, João	Universidade do Porto
Bucalem, Miguel Luiz	University of Sao Paulo
Chwieduk, Dorota	Technical University of Warsaw
Clark, Greg	Chair, Sharing Cities Advisory Board
Cosgrave, Ellie	University College London
Feenan, Rosemary	JLL
Pais, Ivana	Università Cattolica del Sacro Cuore
Parnell, Susan	University of Cape Town
Seixas, Júlia	Nova University of Lisbon
Testa, Paulo	National Association of Italian Municipalities
Zappalorto, Marco	NESTA

### Apologies

Cederschiold, Carl	City of Stockholm
Hoorweg, Dan	University of Ontario
Joshi-Ghani, Abha	World Bank
Shi, Nan	China

### Invitees

Guri, Nathalie	Eurocities
Clifton, Matt	Greater London Authority
Collinge, Andrew	Greater London Authority
Pierce, Nathan	Greater London Authority
Rui Franco	Municipality of Lisbon
Pelizaro, Piero	Municipality of Milan
Tajani, Cristina	Municipality of Milan
James, Sizwe	Royal Borough of Greenwich
Dorling, Trevor	Royal Borough of Greenwich
Butler, Sarah	Royal Borough of Greenwich
Colclough, Graham	UrbanDNA

## Introduction (GC)

Aim of the meeting is to strike the right the balance between posing great questions and undertaking practical discussions.

The morning focus will focus on presentations from cities and their practical experience. The afternoon will include discussion on the global visibility of Sharing Cities and its potential leverage for investment and the ambassadorial role of the Advisory Board.

## Welcome address from Christina Tajani, Deputy Mayor of Milan

The Advisory Board heard a welcoming statement from the Deputy Mayor responsible for smart city development, which emphasised the priority Milan attaches to sharing smart sustainable best practice and a collaborative approach to urban economic, social and environmental development.

## Presentation: Royal Borough of Greenwich, London

### Trevor Dorling, Director, Digital Greenwich

Greenwich has a rich history but mixed fortunes. The Sharing Cities demonstrator site is located on the Greenwich peninsula, which used to house the largest gas works in Europe and was the UK's most contaminated site.

There are 30,000 households in demonstration areas, a third of which is social housing. Greenwich also has three universities – Greenwich University, Trinity Laban, and Ravensbourne – which have a combined body of 30,000 students.

The Sharing Cities programme fits into the overall strategy of Greenwich to become a digital and sustainable borough, reflected in its commitment to improved air quality, low emissions and smart technology consistent with the London Plan and the Smart London Plan.

Greenwich is affected by the wider demography of London. In terms of its population size, the population of Britain's 24 other largest cities equates to that of London. That population is also growing, and by 2028 the population in Greenwich is expected to reach 340,000 up from 250,000 today. That population will be increasingly elderly.

The impact of the rapid digitalisation of the economy is that universally 50% jobs are at high risk from computerisation. These jobs in semi-skilled repetitive administrative roles. The least threatened roles focus on human interaction and are highly skilled.

Greenwich, already scarred from industrial decline, has a concentration of lower level business services jobs is therefore at risk from the new digital industrial revolution. To get ahead of this developmental curve, the borough is positioning itself as testbed for integration and new technologies, such as autonomous cars and shared electric mobility.

### Sarah Butler, Sharing Cities Delivery Manager, Digital Greenwich

Under Sharing Cities Greenwich is undertaking a wide-ranging programme of citizen engagement.

In addition to mobility as a service, retrofit of buildings is also a key feature of Sharing Cities' activities supported by the borough's capital housing fund. Features of retrofit include smart

metering, district heating using a water source heat pump, the upgrading of Greenwich power station with excess heat from Combined Heat and Power (CHP) to supply local estates.

There are issues that still need to be addressed, such as the air quality impact from additional engines at the power station and the policy challenges that presents.

However, progress is being made to implement a sustainable energy management systems to boost efficiency through algorithms and predictive control in the energy supply.

A demand analysis of eMobility is underway while smart lampposts are being deployed to support smart parking as well as hosting environmental monitors to assess ambient levels of NOx and PM10 in the air.

Greenwich is also working on its Urban Sharing Platform (USP) in partnership with Concurus and NEC with a focus on interoperability and delivering a common framework for data privacy and security.

Greenwich is seeking advice from the Advisory Board regarding engaging with residents at pace, defining the Digital Social Market and addressing the policy challenges, such as the align of local priorities with London policy frameworks.

### **Presentation: Municipality of Milan**

Piero Pelizaro, Sharing Cities programme manager, Municipality of Milan

Administration creating a new urban economy, which aims to overcome the digital divide, support the development of new technology and promote interoperable systems.

The meeting location, BASE, is an example of building both collaboration and community regeneration to promote new enterprise development.

This collaborative approach is also being delivered in city services. For example, there are 2,000 daily users of car sharing supported by six service providers; there are 10,000 daily users of bike sharing, as well as a successful electric scooter scheme. Milan also offers 30 digital islands on its road network offering EV recharging, bike sharing stations and wifi. This is an example of the development of a sharing economy to address resource scarcity.

Milan is taking a positive view of the future, with climate change presenting an opportunity to grasp the nettle of change. There is retrofitted space for industrial purposes as well as for start-ups and financial schemes to support freelancers. There are almost 500 subscribers to open business data and 237 open data sets. There are eight new community gardens for social activities and green improvement as well as 300,000 users of public wifi. Milan is demonstrating a tactical urbanism by taking control of local assets – industrial space, business data and open space - and deploying those in a strategic fashion.

The municipality is matching civic crowdfunding with €400,000 and offering up €9 million for participatory budgeting, broadening the concept of local democracy and empowerment.

The Sharing Cities demonstration area, Porta Romana, is funded mainly from municipality budget, which includes district heating, improved links with the city centre and a distinct sub-urban plan. The demonstration area is putting into effect an emerging circular economy that is leveraging combined heat and power (CHP).

Service co-design is supported by a survey of 500 people, data collection through smart lampposts and experiments, such as the condominium car sharing scheme. The resulting Digital Social Market is an eco-system approach to promote applications and ideas grounded in good communications and advocacy.

Co-design offers resilience and a methodology for other policy developments. However, privacy laws on profiling create obstacles to the installation of smart parking sensors, for example.

### **Presentation: Municipality of Lisbon**

#### Rui Franco, Member of the Municipality of Lisbon

The City of Lisbon has been losing population for last 40 years falling from 800,000 to 500,000. Lacking residents the city is becoming reliant on tourism.

However, more recently there has been a pick-up in enterprise growth particularly in new technology. However, finding the skills locally to meet demand remains a challenge.

Given its climate, heating less of a problem than cooling and this brings new challenges for the retrofit of buildings.

A stronger focus on working together within the municipal government has led to successes – notably the localisation and transfer of public transport to city control. However, there is still the need to break the silos in municipal governance.

Given the urgency of climate change adaptation and mitigation, managing change and implementing new ways of working there is huge pressure to scale up activities. It is not always affordable for a city to wait for results of a pilot programme.

There is a concern that waiting two years for outputs on lampposts will be a lost opportunity to be at the cutting edge of city-centred technology. Consequently Lisbon is focused on implementing a global strategy for whole of the city area.

Lisbon also needs a clear data policy that identifies clear roles for citizens, the administration and businesses in managing personal information. This is a good example of how the legal framework struggles to keep up with technological change.

Another example is the growth of the digitally-enabled sharing economy, exemplified by AirBnB. While AirBnB has brought benefits to the tourism sector and short-term rentals, other sectors that are not so advanced get left behind. There are also unintended consequences, such as upward pressures on long-term rental prices that ignore the needs of residents.

Cities therefore need the regulatory powers to align the sharing economy to benefit residents and rebalance the local economy to meet longer term city needs.

### **Presentations Summary**

Greenwich would like advice on how to engage with its public, the design of a digital social market and making the most of its housing stock.

Milan is looking for ways to establish a balanced data sharing policy and to scale up its activities.

Lisbon is eager for change but require more integrated governance to manage technological change and spread the benefits of a sharing economy to meet citizen needs.

## Reflections and Comments

### MZ

Would the use of 'block chain' technology help overcome data sharing issues? Distributed privacy aware architecture will grow with the Internet of Things, and offers both encryption and citizen choices about what data to share. Developing this evolution are EU programmes to help boost digital participation.

### DC

Retrofit is important because energy aspects of these projects are critical to smart cities. Energy is both heating and cooling and we need to know more about Greenwich's water source heat pumps and how they work.

Lisbon has a great opportunity with its acquisition of local transport, presenting a platform for mobility and connectivity.

Technical problems with heating and cooling need integrated solutions.

### JS

The Sharing Cities projects must contribute to drastic reduction of CO<sub>2</sub> emissions taking the partners cities toward becoming carbon neutral climate resilient cities.

Energy is a good issue, upon which to engage citizens, drawing upon, for example, domestic renewables and smart grids.

### MB

Cities must explain to their citizens what they are doing. There is a huge asymmetry between what cities try to do and what citizens know about these projects. Consequently it is important to quantify the benefits of the projects and innovation in both economic and social terms. This will also help find financial partners and co-investors. There should also be constant pushing at the boundaries of the projects, for example, moving from just vehicle sharing to also trip sharing.

### CB

More sharing of experience among the Horizon 2020 Lighthouse cities would help reduce risks and bring bigger returns on experimentation. It would also heighten the demonstration effect of the demonstrators.

It is also important to consider that there is a difference between data privacy and security and to avoid conflating the two.

There is going to be a conflict in the digital sharing economy between AirBnB and traditional hotels, and Uber and taxis. The role of governance is to manage that conflict.



It is also necessary to have an appropriate communications strategy to manage the gap in public perceptions and understanding about what cities are doing to address sustainability.

## **IP**

Peer to peer networks between citizens is changing the way the economy works and is offering people the opportunity to participate without strong rules. In this context the municipality must think about its role. How does a city authority move from a provider to an enabler role? How can it be a platform? In being innovative how should a city monitor and manage failure? How can cities learn from an innovative culture and what are their critical performance indicators?

## **EC**

To be at the innovative cutting edge, means that cities need to be in a situation where they are able to fail. But failing in local government is not ok. This is a real conundrum for risk-adverse local authorities.

UCL is researching data security standards with IoT, while its postgraduate students are also documenting case studies on scaling urban innovation.

When thinking about inclusion, cities need to consider who they are including because citizens are not a homogenous body. City authorities usually access an existing elite, so they need to work with bodies that might have a better reach.

## **PT**

The problem with the eMobility platform is that only a small section of citizen uses it; so the question is how to change behaviour more widely.

Collecting data is one thing; cities also need to consider how to make use of public data effective. This also means that public data should be flexible enough to derive some public good.

Using public data effectively does not generally happen, so cities need to think about how to kick start this activity.

Housing is not something that can be left to private sector – the market has given us both empty properties and people seeking affordable homes. Initiatives that address such problems need to lead to activities that mainstream into the policy cycle.

## **RF**

Language is important – ‘Smart’ is edgy, but ‘Sharing’ is a bit soft.

It is also important to have clear city metrics – there are 263 international indices for cities. Whereas sharing with the investor needs to be clear and have a commercial wrap around.

Key metrics might focus on growth, improvement and citizen satisfaction. However, prioritisation is hard when people want better buses but are not interested in smart meters.

Privacy surfaces as something more tangible: retailers understand the importance of personal payback in return for customers surrendering their information. Improved policy does not cut it!

## **MA**

How tangible and interoperable is the data produced from the Sharing Cities measures and what is the quality framework?

What is the value proposition for the data and what mechanisms are in place for successful scale up?

Collaborative projects are more likely to scale up, but these require joint delivery, city networks and diplomacy and are therefore harder to initiate.

## **SP**

Because of city and residential politics, the storyline of smart cities matters. In particular, why is smart city innovation associated with urban change and how?

It is new face of local government that addresses technological, climate and employment change to maintain the urban fabric, support employment, act as a local counter to the loss of jobs associated with computerisation, and improve quality of life?

Are smart cities collective acts of innovation that attempt to incorporate technological change into place-making? If in the era of such speculative government how do we articulate a public good, particularly when smart city activities do not connote a political value?

Rather than social models, we are now tracking business models. If so, what matters and how does it matter? What is the value-add and for whom? What matters at scale and how does this relate to tax and national fiscal systems? What's the bottom line for the public, for the City, for the nation and for the planet?

Such questions are important in building a narrative to sell back to residents and act as an antidote to anti-immigration sentiments and counter blaming the global south for rising inequality.

## **GC**

There is a need for the integration of governance across, which could encompass both public and private sectors. Transport is a good example of this whereby the most integrated transport authorities are the ones that have the biggest impact.

Virtual integrated transport authority

Shared balance sheets, value propositions, cross finance, fiscal innovation

Linkages between interventions and the performance of urban economies as well as environmental goals

Smarter system cities are more able to accommodate growth and reduce unintended consequences

## **GCoI**

A tactical point is that the impact of the new General Data Protection Regulation (GDPR) may be perceived as modest at an individual city level, however will be transformative when viewed at market level (e.g. requirement for an accountable officer in all cities).

A couple of strategic points are that governance requires cross-silo leadership and that city growth presents the opportunity to scale solutions.

Therefore, because Sharing Cities is one of nine programmes, we therefore need to understand what's going on with the other eight and link that to our own audacious goals to

aggregate demand, engage with 100 cities and devise common replicable solutions supported by 10 tools or frameworks and trigger euros €500m of investment, among other things.

## AC

Stakeholders are cohering around a meta narrative on delivery and innovation and the opportunity therein for active citizen participation.

Platform businesses – such as AirBnB and Uber – are emerging in the sharing economy and this is disruptive; this will require monitoring and evaluation.

Surveys, modelling and frameworks will be critical for scaling up innovation however inherent will be the tangible risk of failure and cities will need to learn to account for this and manage its reputational impact. Risk management, mitigation and recovery capacity are also necessary ingredients of building confidence with investors.

## Greenwich Response

### TD

We have heard some encouraging and helpful thoughts. There has been more discussion about future of cities in past 5 years than in past 35 years. We need to know who our audience is. It might comprise the Commission, citizens, thought leaders and cities.

We have to move at speed – but difficult when dealing with people's homes and lives. The Sharing economy should also mean citizens having a stake in it. This might include collectively owned local platforms to fight back against big platform providers.

### SB

Citizen involvement requires a demand side response, and the common-place use of online technology will demonstrate its effectiveness in delivering engagement at scale and in-depth, breaking the rules of conventional consultation.

We need to build awareness of the benefits of Sharing Cities, for example, in terms of air quality. For instance, new developments are underpinned by the Mayor's policy on zero carbon homes.

### SJ

Residents do not know the what, why and how of smart city benefits. Therefore we should develop the narrative further. The challenge we face is that people's everyday concerns and needs mean they cannot easily engage with this sort of agenda. This makes the language and narrative of Sharing Cities feel somewhat out of touch.

## Milan Response

### PP

Cities need to strive to keep it simple. Technology is important but it's not what Sharing Cities is all about. Critical is the common endeavour to intervene and co-design city solutions.

In public housing energy costs are constant so marginal savings are not of interest; what is of interest is the comfort of the home.

The climate is continuing to have an impact. Drought has nullified the impact of reductions in PM10 on air quality.

Milan is keen to develop a co-financing model of crowd funding to support civic projects and social innovation, which involves a two-step evaluation – a commission-led selection and a market test.

## Lisbon Response

### RF

The core business of local government is changing.

The most efficient tools are not traditional planning tools, which are giving way to citizen participation and managing information.

There is a difference between statistics and perception and this gap in popular understanding needs to be addressed.

On smart retrofit, Lisbon has developed a new external coating, which absorbs CO2 and increases resilience using cork, which has the added benefit of being a local product.

However, the most successful programme was to hire local unemployment young people to share saving behaviours. These 'real' people acting as smart ambassadors and local facilitators aimed to reduce energy consumption by 25%, but achieved 30% within 6 months.

Lisbon is also developing data payback – system to access to all existing platforms but with personal data rules. The payback is free internet for transparent sharing of data.

While there has been a growth in employment there is also a serious risk of growing inequality. There is also a tension between people and place based strategies. Although not sufficient in itself, the city is undertaking a strategy of investing technology education in poorer districts to mitigate against computerisation effect on jobs.



## Breakout Groups

### 1. What do we mean by scaling up and how does it occur? (PT, MB, JB)

#### Design for replicability

- Identify the minimum viable conditions for a particular innovation
- Start in a district and then extend the innovation outwards, and/or
- Identify other districts with similar min viable conditions
- Prepare packages that can be readily implemented, for example:
  - o infrastructure,
  - o communications
  - o social fabric
  - o and other open source building blocks
- Someone has to be responsible for scale up and knowledge management from day one
  - o writing down all that works and all that does not
  - o documenting all steps that got you from A to B
  - o distilling information to replicate and grow
- An 'Igniter' to catalyse activity
  - o this could be a NGO or a local authority
- Financial model
  - o Scalable business model
  - o Get the right, scalable partners
- Political will
  - o Long term vision
  - o Voter messages
  - o Usable templates
- Standardise processes as much as possible
  - o Demand aggregation based on networks of cities
  - o Know what an appropriate uptake looks like
  - o establish the basic constructs, while allowing some customisation
  - o use a 'Lego' methodology – component based standards approach
  - o Lampposts are a good starting point

## 2. Optimise use of data and incentivise citizens and reassure (EC, MZ)

### *Data protection*

We are technology aware, but not technology experts, but with all the technology projects is there a core list of security / data protection concerns that we could seek a collective answer across the sharing cities programme. For example, in urban tech innovation, we could think about common principles of data privacy and security to build a 'cheat sheet' of codes and considerations on issues such as tracking, data holders and data quality (durability, reliability, etc.). This will help people know they have to act, and seek to find the appropriate solutions.

It is also recommended to establish in what circumstances such data protection principles and codes apply, for example, the presence of Wifi hotspots and systems that profile people.

EC and MZ will have a go at the principles and return to board.

### *Community engagement with data*

This works in two ways:

- 1) Engagement with their own data
  - a. Individual choice, agency, safety and power
  - b. Data metering that will "empower" them to make "better" choices.

Recommendation:

Cities should have a clear view on with whom and for what purpose they want to engage with individuals about their own data.

Cities need a way to communicate the services they offer citizens that might require keeping data about them. This would necessitate a platform for managing the data that shares a clear understanding about how cities engage with an individual's own data and how it is put to collective use.

- 2) Engagement with society through tech

We live in a moment when people trust public institutions even less than before; this is compounded by the problem that cities tend to be profiled as a homogenous whole, which are then designed for urban elites.

Cities should have a better understanding of the "who" of society and the public, and then promote sharing data as a positive thing by communicating the great things that we can do. However, this requires genuine engagement instead of perfunctory and patronising approaches – using community organisations and the not for profit sector.

### *Understanding urban change and its business models at an aggregate level*

Only 3% of people over 50 have used a sharing economy platform, compared to 95% of tech entrepreneurs. Therefore it is necessary for cities to partner with local community groups on projects of real meaning and value the input from non-tech perspectives in order to ensure public good and redistribution from data.

Also it is necessary to consider the exchange of data between organisations, and not just

citizens, as this will be critical to integration.

### *Participatory democracy*

Cities offer participation that can reach beyond sticks and carrots, but creates societal engagement in a much deeper sense. For example, D-CENT was a Europe-wide project to create digital tools for direct democracy and economic empowerment led by NESTA, and offers practical ways to put this into action.

<https://dcentproject.eu/>

Recommendation:

Do a horizon study on what we do know about cities (through the amazons, googles, apples etc.) and investigate the data collaboratives work from Beth Noveck.

<http://thegovlab.org/datacollaboratives/>

<http://www.thegovlab.org/beth-noveck.html>

### **3. What's the narrative and what's the right language for citizens and investors (SP, IP, SJ)**

Each project and city should help build a big narrative for a global agenda on 'nexus urbanism' that is legible to states, citizens and investors.

We need to have a common understanding of why a new global message about 'nexus urbanism' is important. This would be a narrative about the new phase of cities that is born of a commitment to universal values, the realities of globalization, the opportunities of computerization and the imperatives of renewable energy.

Nexus urbanism is as radical (socially, economically, financially and politically) in its impact as industrialisation was at the end of the C19 and early C20th.

Can Sharing Cities say how their projects inform such nexus urbanism?

- Update mode of governance and service delivery to 21<sup>st</sup> century

One aspect of the universalism/globalisation/computational and renewables rupture is to update the mode of government and service delivery to the C21 technical and organisational realities while holding onto and updating the mandate of public service (equity/resilience/safety/predictability).

- The second is the role of government to ensure that it innovates itself and facilitates the innovation of others

What examples are there of what Sharing Cities projects generate?

Working from the assumption that it is possible to save or make money from both aspects, if you know what you are doing and get political acceptance for it, can you highlight the lessons learned from Sharing Cities?

At the moment there are three different pitches – one for government (good governance, efficiency) one for citizens (shared economy/improved quality of life) and one for investors (you will be able to make money through local government use of smart technology).

Using examples from Sharing Cities can you suggest, ways these can be rationalised or harmonised to prevent conflicting rationalities and expectations.

From here use illustrations of smart cities to build an alternative sellable global the brand that is able to segment the market and illustrate how the same message might be used in different ways.

We need to understand why 'smart cities' are a good thing and not just reinforce what are often conflicting and preconceived assumptions of the benefits. Interrogating the validity of this would make the communication strategy more honest and more targeted. This would improve understanding and alert users to the unintended consequences of the application of smart tech innovations and help resolve conflicting messages about the smart innovations put into practice.

Lexiconography of city innovation is difficult and there is a need for a better clarification of terms that have seeped into usage (such as 'Smart'). However we may need to accept a degree of fragmentation that characterise periods and evolution and support a shared understanding of a phenomenon.

#### **4. How to draw the attention to global networks and organisations (MA, CB)**

Create models of knowledge that define information about smart city paradigms as tools and instruments that become of interest to multinationals.

International businesses are beginning to look more closely at the sub-national level and other businesses are also scaling up from local to metropolitan.

Multinationals are looking for complementarity across cities in order to grow their markets. Therefore cities working collaboratively across global networks has dividends in terms of programme resilience and viability.

A retrospective analysis is needed, perhaps through a cross network technical working group, to understand smart cities as a network of networks, that have a particular set of business cases that reveal a new political economy.

For example, a lamppost might be a mundane universally understood technology, but is therefore a good global demonstrator, with which investors and cities can engage.

Lighthouse Cities, as a global umbrella brand, might appeal to global investor networks and banks, especially if nation-state urban strategies are able to mainstream smart innovation.



## 5. Investment leverage: making the programme investment ready (RF, GC)

Cities need a transparent return on investment model based on rich data that identifies

- Assets with data streams
- Value of entrepreneurship
- Value of returns on venture capital
- Emerging best practice for enterprise
- Opportunities for financing

## 6. Technology suggestions and technologies for energy and mobility (DC, JS, GCoI)

Six Areas of Opportunity identified:

- 1) ESCO-type Models that Change the Energy Supply Chain Dynamic
- 2) Making Energy Local and Renewable
- 3) The Building as an arena for Resource Management
- 4) Exchange & Trading: Peer-to-Peer and cross-National City-to-City
- 5) Technical Retrofit Insights
- 6) Equitable Energy & Mobility

### *ESCO-type Models that Change the Energy Supply Chain Dynamic*

#### Why

Moves power and influence back towards the user / community

#### What

- Deliver end user savings
- Enable new energy sources to be brought into the supply chain; can provide advisory services to support that move
- Put power into the right hands – closer to consumer and away from large providers which should be genuine ‘utilities’
- Can incentivise green clean energy
- ESCOs appear to work for big buildings – does the model work for smaller residential portfolios and mild climates?
- How best can cities influence via policy, regulatory, financial/fiscal incentives?

#### How

Produce “10 things to do to make an ESCO a success”. Capture the different ‘contexts’ of the cities/jurisdictions; and capture ten best common ideas.

### *Making Energy Local and Renewable*

#### Why

Increase local ownership and involvement; create local jobs; increase production/consumption of local RES

#### What

- Developing the right business models
- ...and creating / supporting local businesses
- The city taking a small percentage of the market – to influence the market (e.g. set up a RES business to understand cost structure and influence through action; or at least set in place the appropriate incentives)

#### How

National actions set important context. City actions can support; notably around grants, business support etc. What are the cities doing on this?

### *The Building as an Envelope for Resource Management*

#### Why

Reduced (all forms of) resource consumption

#### What

- Systemic circular approach
- Address nexus of energy, water, waste, food...a 'resource envelope' not just energy – that may be more engaging to society than energy alone
- A building is developed as an energy system, it produces and consumes energy by itself at site
- End users of energy (energy consumers) become energy producer – business and social aspects

#### How

Creating / supporting local businesses; developing business models at the building scale

### *Exchange & Trading: Peer-to-Peer and cross-National City-to-City*

#### Why

Make real the opportunities of micro-energy RES trading; incentivise energy conservation; and in-city RES adoption

#### What

- Clearly a means to engage society – it provokes a response (both positive and negative), however it is a clear means of engagement with a potentially significant value proportion
- A new concept would be city-to-city trading on local RES (e.g. the 'windy north' and 'sunny south'); this really takes power to a different dimension and exploits the likes of blockchain-type technologies. Also supports the European Energy Union

#### How

Seek examples to learn from: Washington Street in NYC is understood to be a potential candidate:

<http://www.theepochtimes.com/n3/2027695-worlds-first-peer-to-peer-energy-transaction-on-the-blockchain-has-arrived/>

How it works at neighbourhood level: <http://www.slideshare.net/JohnLilic/transactive-grid>

### *Technical Retrofit Insights*

#### Why

Increase the speed of adoption, scale of adoption, and success of implementation of EE retrofits.

#### What

- Is there a set of technical solutions and business models that can help accelerate energy efficiency upgrades at scale in the ShC cities and beyond? First – to reduce the energy needs of heating/ cooling energy and electricity – to develop the energy efficiency solutions
- Next – to introduce new innovative energy systems, mainly based on renewables

#### How

Understand / capture the city-specific legal, regulatory, policy, perception context – and compare between cities

Access external examples of different retrofit technologies; and business models as stimulation for the cities (eg NL/BE rapid EE retrofit model) – what can be learned from the other SCC01s for instance?

### *Equitable Energy & Mobility*

#### Why

To address the sub-urb, ex-urb, city centre diversity in service and economics for energy and mobility through financial mechanisms (principally pricing)

#### What

- Consider a city-wide ‘average charge’ for transport or energy that helps improve equality / inclusiveness
- Consider possibility of energy production (based on renewables) in suburbs, e.g. PV plants, for the use in the city centres

#### How

Seek out examples of where this has been undertaken; and/or develop an outline model to pilot / test, for example:

- Equality on mobility energy averaging costs between internal and periphery city areas

- Peer to peer energy trading – city to city trading between windy north and sunny south