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# **Privacy, Security, Equity, and Confidentiality: Perspectives on Data, Cities and Resilience**

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# Data and Cities

- Cities use technology to manage urban congestion, maximize energy efficiency, enhance public security, allocate scarce resources based on real time evidence, and even educate their citizenry through remote learning
- Concept of the 'smart city' has evolved as a radical new approach to remedy urban problems and make urban development more sustainable



## Data and Cities – cont'd

- Experimentation with Future Internet technologies has been led by commercial companies and research centers, with less involvement from external stakeholders like citizens or decision makers
- Achieving urban sustainability goals depends on the direct participation of local actors and stakeholders in the process of thinking, defining, planning, and executing social, technological, and urban transformations in smart cities



# The Sustainable Development Goals

- City leaders across the globe are rallying behind sustainable development in all its dimensions: environmental sustainability, economic opportunity, and social inclusion
- Mayors and local leaders were instrumental in securing a dedicated goal on inclusive and sustainable cities in the United Nations's 2030 Agenda and framework of 17 high-level Sustainable Development Goals
- Since then, hundreds of local leaders have made commitments to support SDGs in their cities, forming new global networks and designing local implementation plans



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# How Does Sister Cities Fit In?



# Our Beliefs

- We are motivated by the citizen diplomacy precepts of mutual respect , understanding and cooperation which are the basis and traditionally characterize sister city relationships between countries
- We acknowledge the importance of community to community relations within enduring bilateral dialogue
- We are convinced that world cities, as the government entity with the closest impact on its citizens and residents, are responsible for the implementation of major global policies



# What is Sister Cities International?

Founded in 1956, Sister Cities International is a nonprofit citizen diplomacy network that creates and strengthens partnerships between U.S. and international communities. Our mission is to promote peace through mutual respect, cooperation, and understanding—one individual, one community at a time.



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# What is a Sister City?

- Sister city programs are generally public-private partnerships, involving volunteers, nonprofits, civic groups, businesses, and others working with local government
- Sister cities pursue their mission by organizing arts, culture, youth, education, municipal, professional, and humanitarian exchanges





# Membership at a Glance

- 500 U.S. cities, counties, and states represented
- Over 2,000 partnerships with communities abroad
- Partnerships in 142 countries on six continents



# San Francisco, CA-Cork, Ireland- Linking Students & Coding Experts



- Middle school students and junior computer coding experts exchange coding insights and other Science Technology Engineering Math (STEM) activities
- Irish students taught peers at a school in San Francisco how to code and to also learn from senior engineers in the coding field

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# San Diego, CA -Jalalabad, Afghanistan – IT Exchanges



- Over 7 years Afghan Youth Connect
- Operate computer labs at 18 high schools in Jalalabad
- Receive IT and ELS training, students connect through Skype and Facebook.
- AYC has directly engaged:
  - 11,523 Afghan students (6,255 boys and 5,268 girls) and an additional 9,030 observers - 20,553 individuals total



# Austin, Texas-London, Borough of Hackney, United Kingdom

- Hackney is "Tech City", the East London hub of tech innovation and entrepreneurship
- 6 students from Austin Community College and 7 students from Hackney Community College (ages 18-24) for 3 cross-functional teams
- Trained on marketing, research, and prototyping
- Received advertising brief from either British Airways, Adobe Systems, or RetailMeNot, Inc. and weekly input from business expert
- Used Skype, Google Hangouts, and email to work
- British Airways brought the HCC student teams over to Austin to pitch their final solutions to top executives at Hackney House Austin, a custom pop-up venue created and programmed for four days by London Borough of Hackney, during the SXSW Festival



# Paris – San Francisco: Digital Economy and Smart Cities

In March 2013, a memorandum of understanding was signed between the two mayors, Bertrand Delanoë and Edwin M. Lee, to support research programs on these subjects, serve as experimental sites and share their data.



**These cities chose to support Inria** (French National Institute for Research in Computer Science and Control) **and CITRIS** (Center for Information Technology Research in the Interest of Society, University of California) to carry out joint research on smart cities.

➔ Joint project "Democratizing Urban Data for Healthy Cities"

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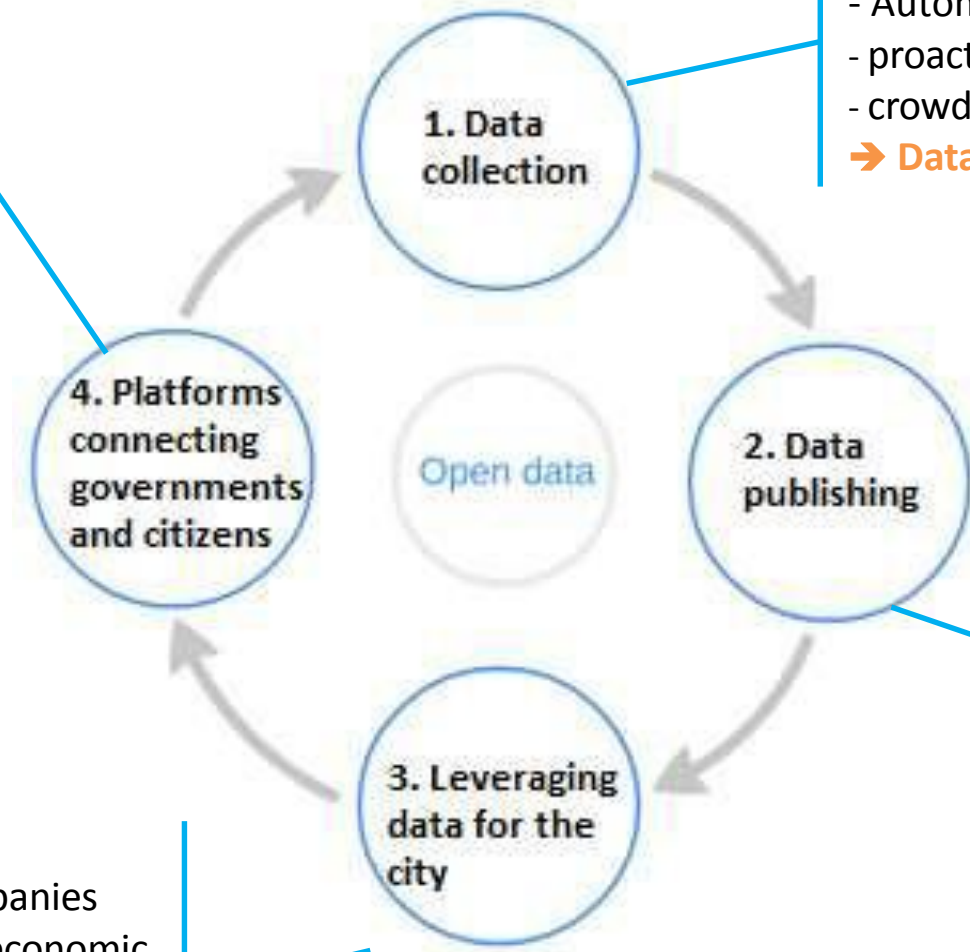
# Open data is at the heart of democratizing urban data

A win-win connection  
-Citizens benefit from these platforms  
-It becomes a new source of data for cities

Various sources

- Automatically generated data
- proactively sourced data
- crowdsourced data

→ Data collection is democratized

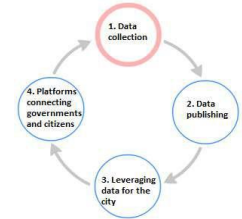


Innovative products are developed for companies and governments to release their data publicly. It makes it easy for citizens to access and understand the data.

Data has value that companies can leverage to provide economic opportunities & positive fallout for citizens



# Monitoring Transportation and Public Spaces



[Waze](#)

USA - Mountain View

2008 By simply driving around with Waze open, you're already contributing tons of real-time traffic & road info to your local driving community. You can also actively report accidents, hazards, police and other events you see on the road, and get road alerts on your route too.



[Ambientic](#)

France

2011 Support and optimize communication among individuals collaborating on a domain-specific task. With "**Boîte à Sardines**", passengers provide crowdedness information collaboratively to help you choose the best time and train for your journey.



[OpenStreetMap Foundation](#)

UK (origin)  
USA  
France

2004 OpenStreetMap is a collaborative project to create a free editable map of the world. Begins to cartography indoors.



# Urban Services Leveraging Open Data



## Trulia

USA – San Francisco

2005 Trulia gives home buyers, sellers, owners and renters the inside scoop on properties, places and real estate professionals. We have unique info on the areas people want to live that can't be found anywhere else: users can learn about agents, neighborhoods, schools, crime and even ask the local community questions.



Source: Anne-Laure Desjardins, ENSAE ParisTech for PRIME Paris Region International Mission Enterprise

## Kelquartier

France – Paris

2010 Kel Quartier is a free Internet website that gives you the information you need to find the neighborhood that is right for you (400 public sources - 42,000 neighborhoods and villages covering France)



## MeilleursAgents

France – Paris

2008 MeilleursAgents.com provides an outstanding heatmap of Paris real estate prices and allows sellers to safely price their property and hire the best brokers to execute the sale.



## Home'n'go

France – Paris

2011 We then help you get information on your potential neighborhood such as the average square meter price, where are the closest shops around, how far you'd be from your key locations (job, school, etc.).



## 1-800-recycling.com, ERI's subsidiary

USA – Fresno

## Ecology

1-800-RECYCLING.com features a comprehensive recycling location database that gives the user the ability to easily assemble a recycling-to-do list.







# Urban Services Leveraging Open Data



## Transportation



[Embark](#)

USA - SF bay area

They make free, fast, and simple mobile apps for mass transit riders worldwide.



[Recargo](#)

USA – Los Angeles

2010 Recargo, Inc., provides software and services for plug-in electric vehicle drivers and industry, including the #1 EV charging station finder app.



[Nextbus](#)

USA – San Francisco

1997 NextBus is dedicated to providing cost effective, high quality, reliable, real-time transportation information to the passengers and managers of public transit.



[Arrive Labs](#)

USA – San Francisco

2011 Software solutions for urban transit challenge.



[TeleNav](#)

USA – Sunnyvale

1999 Their personalized navigation services help people make faster and smarter daily decisions about where to go, when to leave, how to get there, and what to do when they arrive. They have approximately 34 million subscribers worldwide.



[Uber](#)

USA – San Francisco

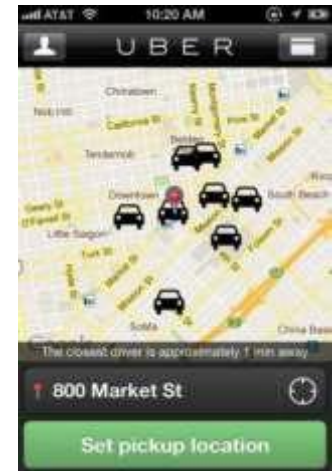
2009 Uber connects riders to drivers through apps to make cities more accessible, opening up more possibilities for riders and more business for drivers.



[Sharette](#)

France – Paris

2013 A mobile app/webite that combines carpooling and the public transport network to compute shorter itineraries.





# Urban services Leveraging Open Data



[Mom maps](#) (New Media Parents)

USA – San Francisco

2009 Mom Maps helps you find kid friendly locations on the go! Search an extensive list of parks, playgrounds, restaurants, museums and indoorplay areas.



[Yelp](#)

USA – San Francisco

2004 Help people find great local businesses like dentists, hair stylists and Mechanics. Yelp had an average of approximately 132 million monthly unique visitors in Q1 2014.



[Urban Pulse](#)

France – Paris (USA – NY)

2012 Urban Pulse is a mobile application that brings together everything you need for a great time out: deals and ideas for places to go, tools for finding and meeting up with friends, and a journey planner offering all the possible ways to get there. An initiative from VeoliaTransdev.



[Building Eye](#)

USA – San Francisco

2011 Buildingeye takes local government data on building permits in different locations and visualizes this information on itsmap.



[Govini](#)

USA – San Francisco

Govini takes big data generated by numerous federal, state, and local agencies and transforms it into analytics, benchmarks, trends, and custom research.



[Politify](#)

USA - SF bay area

2011 Politify is a platform that provides Americans with data-backed financial projections of political scenarios(mapping).



[Kernix](#)

France - Paris

With the support of CRT Ile-de-France (promoter of Paris Region for tourism), Handistrict presents public spaces according to their accessibility for disabled persons (all kind of handicaps).

## Entertainment

## Governance

## Accessibility



# Technology Across Borders: Mexico-U.S. Mayors' Summit 2018



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# The SDG Data Revolution

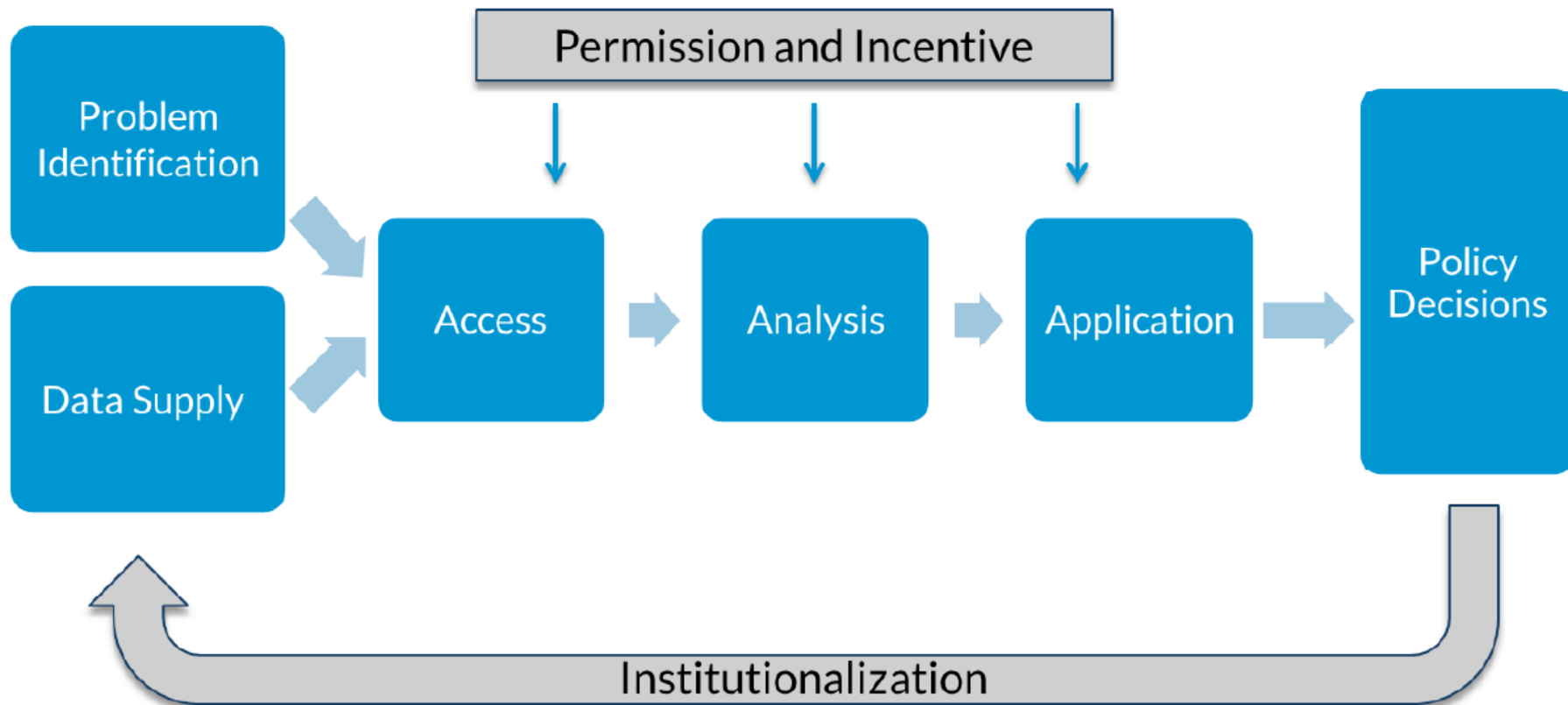
- The United Nations designed the SDGs to spark a global sustainable development “data revolution” to improve statistical capacities in countries that need them most
- Harnessing new data sources (e.g., those created by mobile phones and geospatial technologies) can track progress on the SDGs
- Philanthropic orgs, NGOs, and donors are already increasing local governments’ capacity to use new and existing data sources to support evidence-based policies and interventions



# Political Economy Framework

FIGURE 1

## Political Economy Framework for Data-Driven Governance



Source: Edwards et al (2016) "A Political Economy Framework for the Urban Data Revolution" Center on International Development and Governance





# Some Privacy Dimensions of Concern to City Officials

- — identity privacy (to protect personal and confidential data);
- — bodily privacy (to protect the integrity of the physical person);
- — territorial privacy (to protect personal space, objects and property);
- — locational and movement privacy (to protect against the tracking of spatial behavior);
- — communications privacy (to protect against the surveillance of conversations and correspondence); and
- — transactions privacy (to protect against monitoring of queries/searches, purchases, and other exchanges)

Source: Rob Kitchin, 2016 “The Ethics of Smart Cities and Urban Science:



# The SDGs provide opportunities for Mayors, But at the Same Time...

- City officials face broader constraints than a shortage of data or capacity
- Cities also need *permission* to use that data and *incentives* to apply it to decisionmaking
- National ministries may hold data that they don't disaggregate or share with local governments.
- National legal frameworks often limit city leaders' ability to analyze and apply data to local policies



# The SDGs provide opportunities for Mayors, But at the Same Time...

- When cities lack authority to administer services or raise revenues, data analysis can expose problems but not solve them
- Without transparent and democratic local political systems, city leaders may lack the incentive to allocate resources based on evidence rather than self-interest, leaving behind groups and neighborhoods that need those resources most





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