

URBAN DATA AT THE DIGITAL AGE :

THE EMERGENCE OF A NEW TERRITORIAL DIMENSION

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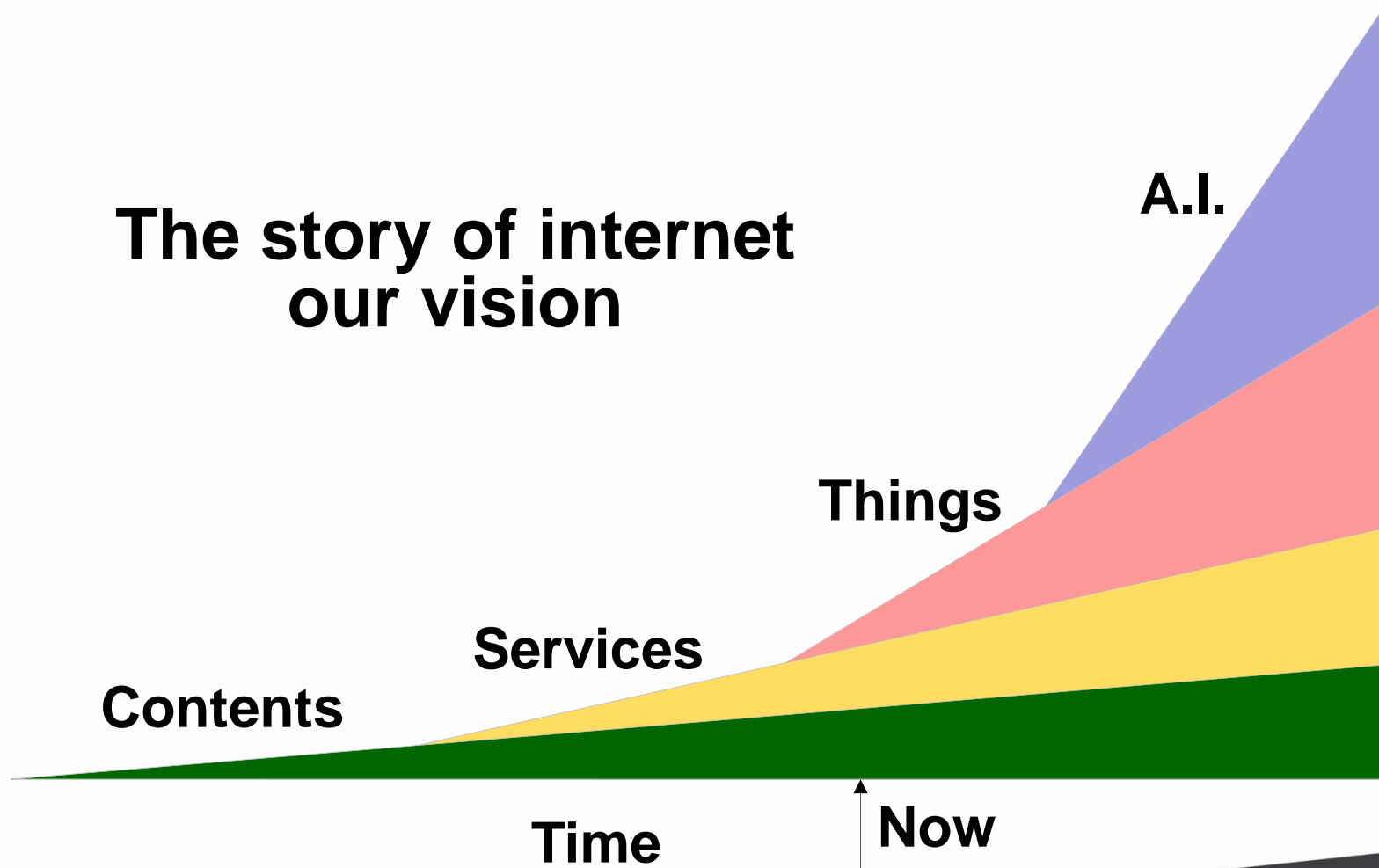


Data...

- ... why data ?
- ... what for ?
- ... Which data ?
- ... how ?
- ... some examples !

Data is everywhere !

The story of internet
our vision



Data... what for ?

- **Knowledge of the territory** house hold survey
- **Public action efficiency** optimisation, targeting, public policies evaluation
- **Break down the silos !**
- **Toward a custom public action**
- **Public action transparency**
- **City monitoring**
- **Innovation and economic development**
- **Protecting individual freedoms (RGPD)**

- **Data is the fuel / electricity of the smart city**

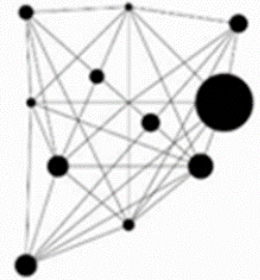
Data... sources

- **The need of a « Data taxonomy »**
- **Public and private**
- **« Data of general interest »**
- **Personal data, my data, our data, data about people like me**
- **Citizen as a sensor**
- **Geolocation and 3D**
- **Observatories**
- **Real time and time series**
- **Business intelligence, trends and forecast**

Data strategy toolkit (1)

- **Strategy and governance**

- Which goals
- Governance (administration, territory), CDO
- Public policies optimisation with data (data driven decisions), data scientist
- Understanding and skills (the elected, city servants, residents, education...), “data mediation”
- Licenses for data reuse and protection (a trusted framework)
- An operator of data of general interest
- Data crowdsourcing and ecosystem animation
- Data and cyber security for urban data
- Personal data protection
- Evaluation



Data strategy toolkit (2)

- **Value of data and business models**
 - Events to create new city services based on data (hackathon)
 - Studies on business models based on data, “infonomics”
 - Innovation and data
 - “Data detachment” and contribution to standards
- **City as a platform**
 - Data platform
 - Real time, video
 - Data historisation, analysis and predictions (IA), anonymisation and aggregation
 - Semantics and standards
 - IoT platform
 - Personal data and personal clouds “my data”

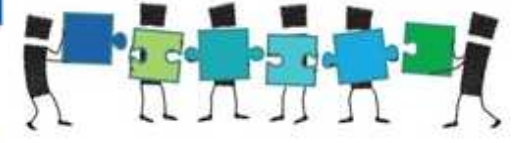
EUROPEAN PARTNERSHIP



12 PRIORITY THEMES



PARTNERSHIPS

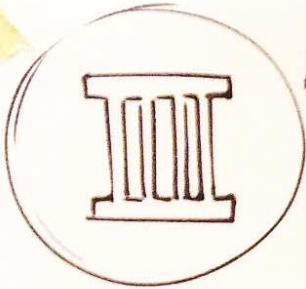


ACTION PLANS

- COMPOSITION:** European Commission, Members States, cities, stakeholders
- For each **PRIORITY THEME**
- PREPARATORY PHASE**
- IMPLEMENTATION PHASE**

OBJECTIVES



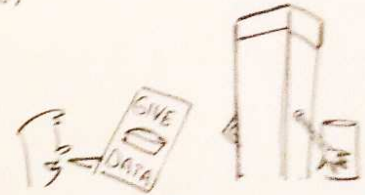
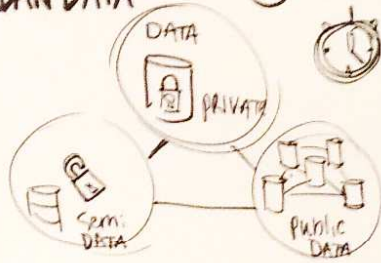


ACTION: USE OF URBAN DATA

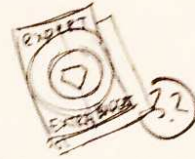
ACTION 3

EFFECTIVE USE OF URBAN DATA (incl. personal)

3.1 Build a data Taxonomy at a European level



3.2 Access, Re-Use of DATA of General DATA Interest from private sector



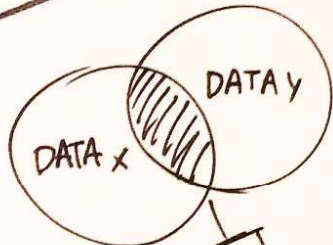
3.3

Accelerate the Dev. of personal clouds for personal DATA and related services

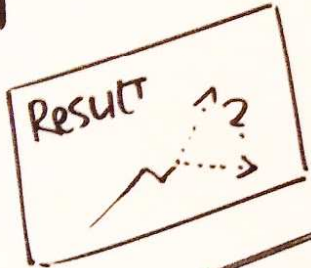
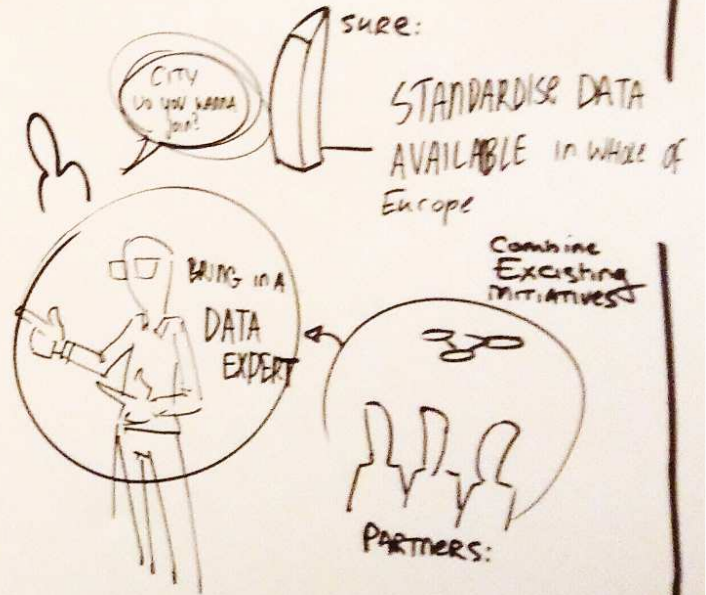
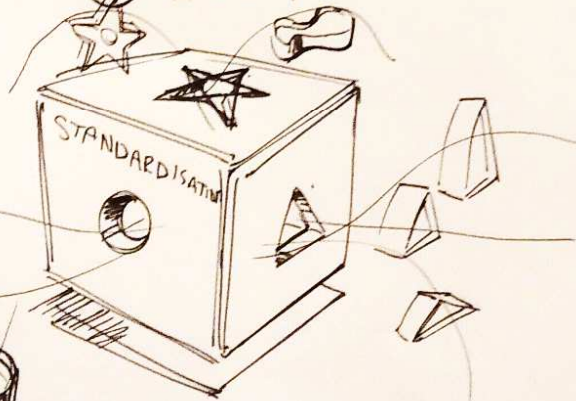


3.4

STANDARDISATION OF DATA of general interest



NEW SERVICES



Data... examples

- **Mobility**
- **Energy**
- **Air quality**
- **« my data »**

Exemples of data uses

OPTIMOD'LYON

Smart transport systems (French acronym: ITS) to optimize sustainable mobility in the city

C'EST QUOI ?

A PUBLIC-PRIVATE PARTNERSHIP INNOVATION PROJECT aiming for the joint development of real-time and predictive urban mobility information services

LES +

REAL-TIME DATA COLLECTION AND PROCESSING

- | Over 30 databases
- | 20 million data items per day
- | Real-time diffusion of **reliable information**

1st in Europe

1-HOUR TRAFFIC PREDICTION

- | Reactive traffic management by traffic light control

LES BÉNÉFICES

1st in the World

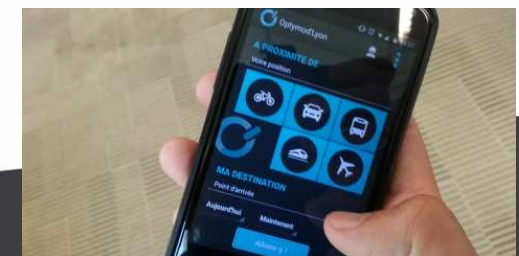
AN URBAN MULTIMODAL GPS

- | Information in **real time**
- | **1-hour predictive**
- | **All modes of transport**
- | Available everywhere and always



AN URBAN FREIGHT NAVIGATOR

- | Traffic conditions
- | Availability of delivery yards, building sites
- | Recalculation of delivery round routes in the event of disruption



13 PUBLIC-PRIVATE PARTNERS

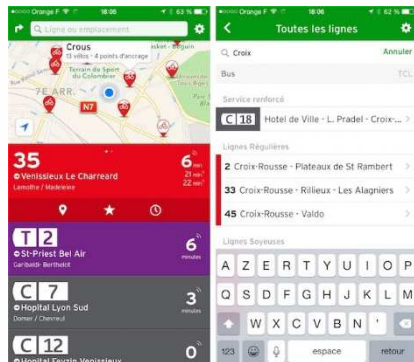


Exemples de data uses

- **App for delivery optimisation in the urban environment - NavTruck**
 - > Benefits for the haulage business: Greater efficiency, less time lost in traffic jams, less diesel consumed, satisfied customers (deliveries made on time)
 - > For the local authority: Less congestion and pollution, better living environment



Source image : <http://www.truckeditions.com>



- **Mobility app - Transit**
 - > Benefits for the citizen: Efficiency in access to public transport, mobility
 - > For the local authority: Use of public transport, less pollution, better living environment

- **Creation of a 3D display open-source web tool – The company Oslandia**
 - > Economic development (jobs)
 - > Benefit for the local authority: open-source tool used by the departments



Oslandia annonce la sortie de Cuardo

Communiqué de presse | 24 octobre 2014

Catégorie: [3D](#), [Communiqués](#), [Logiciels](#)

[Oslandia](#) annonce la sortie de Cuardo, le résultat d'un de ses projets de recherche et développement.

Cuardo est un outil OpenSource de visualisation de données 3D web, principalement pour l'analyse et la visualisation de données urbaines.

A Time-Dependent No-Overlap Constraint: Application to Urban Delivery Problems

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Abstract. The Time-Dependent Traveling Salesman Problem (TDTSP) is the extended version of the TSP where arc costs depend on the time when the arc is traveled. When we consider urban deliveries, travel times vary considerably during the day and optimizing a delivery tour comes down to solving an instance of the TDTSP. In this paper we propose a set of benchmarks for the TDTSP based on real traffic data and show the

• Validation and financing of research work

- > Research progress, associated publications, international presentation with the City's DataSets