



Data Driven Policy Cluster

Co-creating digital tools for better governance

Innovative Tools for Evidence Based Policy

Track 1: Stakeholder engagement & co-creation

A new era of collaboration, co-creation & consultation with citizens & stakeholders

10 December 2021



Data Driven Policy Cluster is a group of 5 projects that have received funding from the European Union's Horizon 2020 research and innovation programme. Policy Cloud - GA #870675, Decido - GA #101004605, AI4PublicPolicy - GA #101004480, DUET - GA #870697, Intelcomp - GA #101004870.

Agenda

- **Introduction. A new era of collaboration, co-creation & consultation with citizens & stakeholders** – Germana Gianquinto (AI4PublicPolicy)
- **The Turin Co-Creation Model** - Fabio Perossini (KPRF - DECIDO)
- **Co-creation of STI policies using the IntelComp platform** - Jerónimo Arenas (UC3M, IntelComp)
- **LDT Typology** - Pavel Kogut (21C Consultancy, DUET)
- **Panel Discussion** on a new era of collaboration, co-creation & consultation with citizens & stakeholders



Co-organised by:



Policy Cloud
Cloud for Data-Driven Policy Management

Decido



intelcomp

9-10 December 2021

EVIDENCE BASED POLICYMAKING IN EUROPE 2021

USE CASES AND DIGITAL TOOLS
FOR IMPROVED DECISIONS

Track 1: Stakeholder engagement & co-creation

- We live in a digital world, shopping, working and even meeting our friends and partners online, Despite the wealth of digital tools at our fingertips, participation in democratic processes is falling across Europe. This may be because so far Governments have just digitised what we already do offline (e.g. e-petitions, e-consultation etc.) whereas new technologies and data opens up much more exciting possibilities for collaboration, co-creation and consultation with citizens.
- All the projects that are under focus, today, evaluate the impact of co-creation and this track, in particular, explores how new technologies and tools can be used for engagement and innovative collaboration between policy makers and citizens creating ecosystems for positive change.

Evidence Based Policymaking 2021

Session: Evidence Based Policy Cases
from data to decision making

Track 1 - Stakeholder Engagement

Join us:

10th December 11:30 am CET



Fabio Perossini

KPRF
DECIDO



Jerónimo Arenas García

Universidad Carlos III
IntelComp



Pavel Kogut

21C Consultancy
DUET

CITY OF TURIN GROWING EXPERIENCE

Author(s): Fabio Perossini

Affiliation: Kpeople Research Foundation (MT)

Event: Evidence Based Policymaking in Europe summit

Date: 9-10 December 2021

Decido

evidence and Cloud for more Informed and effective policies



This project has received funding from the European Union's Horizon 2020 research and innovation under grant agreement N° 101004605

PROJECT PARTNERS:

101004605 — DECIDO — H2020 - SC6 - GOVERNANCE - 2018 - 2019 - 2020 / H2020 - SC6 - GOVERNANCE-2020





**Data Driven
Policy Cluster**

Co-creating digital tools for better governance

City of Turin Communities, approaching evidence base policy improvement.

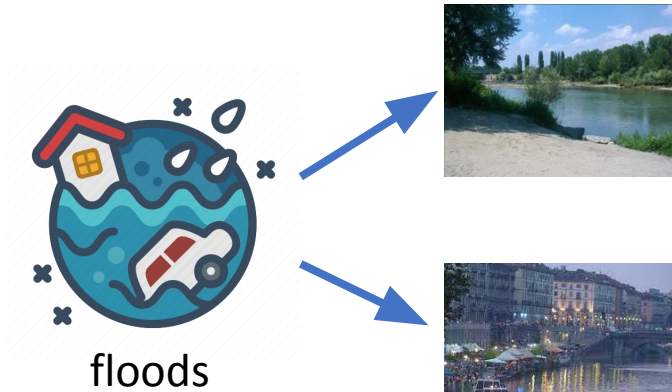
A New Era of Collaboration, Co-creation & Consultation with Citizens & Stakeholders



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and innovation under grant agreement N° 101004605



Citizens expectations



Citizens, Associations, Churches

- Improve communication with first responders
- Better coordinate post-hazard recovery

Sports circles, Pubs, Restaurants

- Improve communication with first responders
- Capacity building through knowledge transfer around river behaving



Covid19



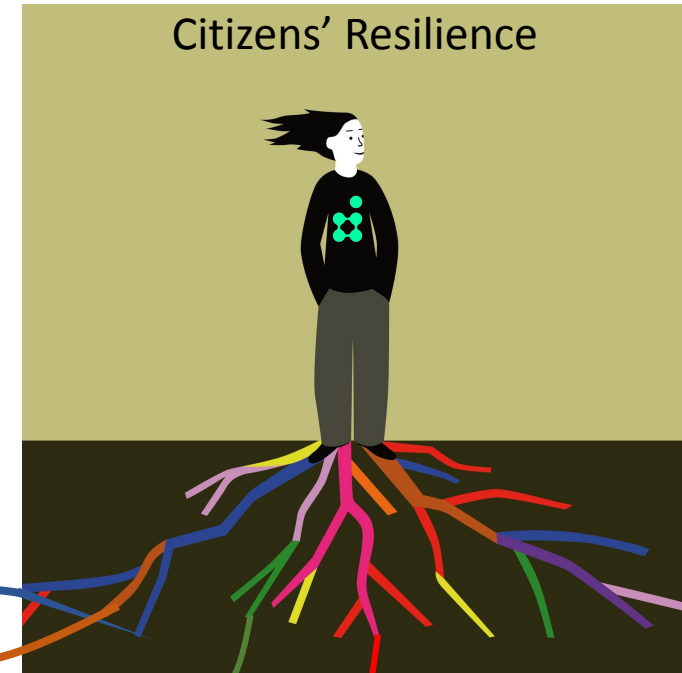
Young Adults in difficulties

- Real bottom-up approach: listen to requests
- Support co-creation of initiatives

Disadvantaged people support

- Better sharing of information and needs
- Enlarge involvement of civic volunteers

Citizens' Resilience



Source: The New York Times

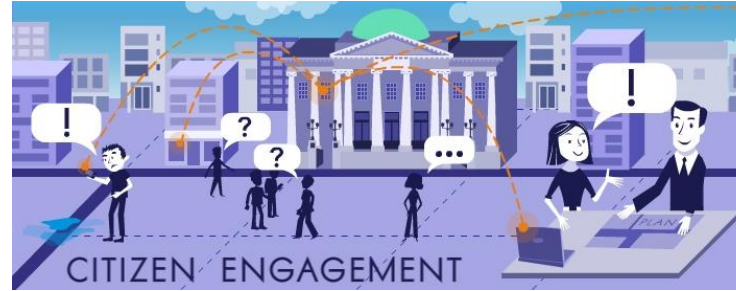


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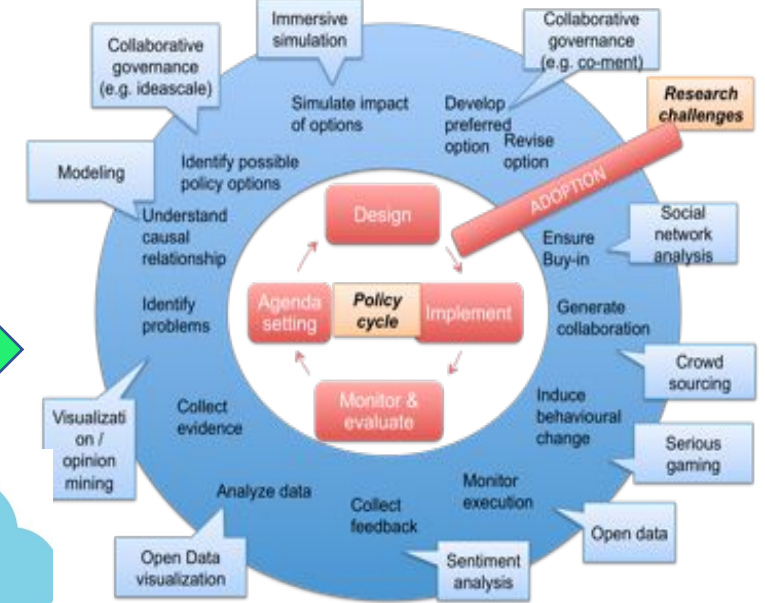


DECIDO challenges in Turin: 3 pillars

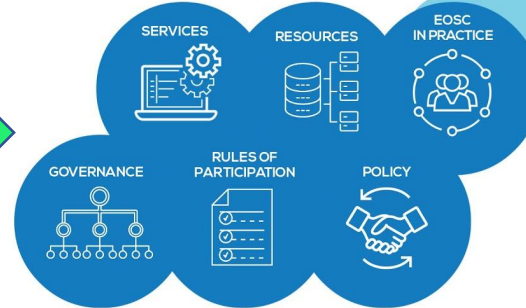
- Citizen Engagement



- Policy Lifecycle



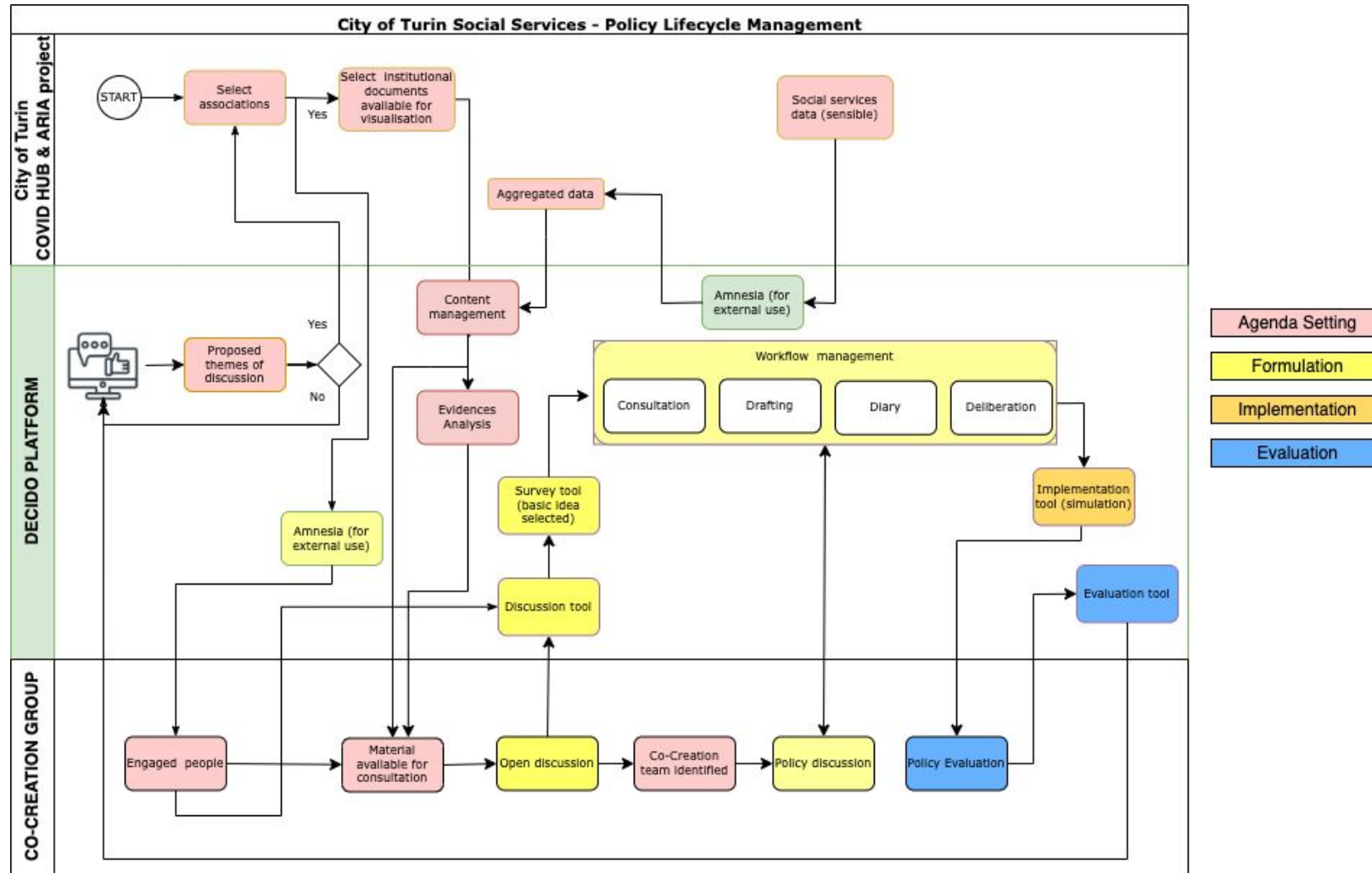
- EOSC Services



This project has received funding from the European Union's Horizon 2020 research and innovation under grant agreement N° 101004605



Co-creation proposal



This project has received funding from the European Union's Horizon 2020 research and innovation under grant agreement N° 101004605



DECIDO early adoptions

- Data availability vs usability
- Listening capability
- "Fluidity" in co-creation
- Trust is based on presence:
project team should stay in touch with citizens



Cultural Challenges

- Capacity building
 - Human feeling (attitude)
 - Traditional training > **Role Play Training** (Policy Implementation simulation) > **Digital Twin**;
- Citizens motivation
 - **Rewarding** > Civil sense (How ?)
 - Associations > Civic volunteers (is there a border ?)
- Policies and Commons
 - Co-creation > **Democratic innovation**



THANKS FOR YOUR ATTENTION



Decido

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This project has received funding from the European Union's Horizon 2020 research and innovation under grant agreement N° 101004605

PROJECT PARTNERS:

101004605 — DECIDO — H2020 - SC6 - GOVERNANCE - 2018 - 2019 - 2020 / H2020 - SC6 - GOVERNANCE-2020





Co-creation of STI policies using the IntelComp platform

Jerónimo Arenas-García (UC3M)

10/12/2021

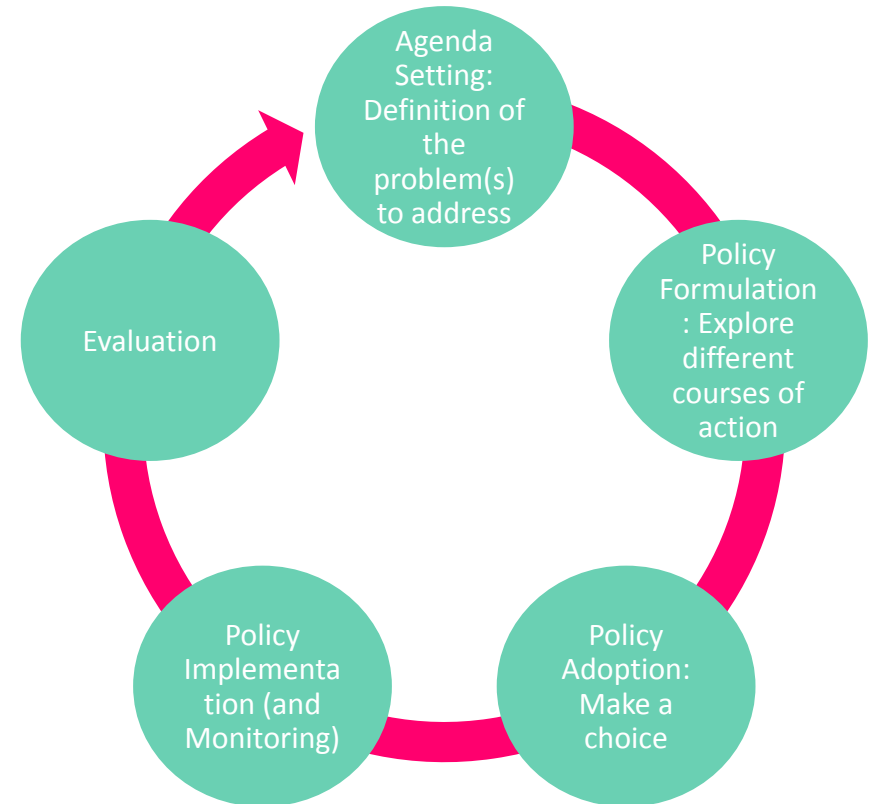
Evidence Based Policymaking in Europe Summit 2021



IntelComp - STI driven policy intelligence

Deliver a platform assisting and facilitating the whole-spectrum of Evidence-based AI-driven

STI Policy



IntelComp Objectives

1. Understand the challenges of STI policy making via the development of a co-designed framework with stakeholders (e.g. citizens)
2. Create a Data Space of STI related data sources
3. Develop a suite of analytical tools for STI analysis learning from text
 - NLP pipelines
 - Automatic classification
 - Enriched topic information
 - Graph analysis
4. Create an AI-assisted policy modeling multilingual platform comprising developed models
5. Deploy in HPC/HTC environment ensuring connection with EOSC
6. Co-develop tools and policies via three Living labs

IntelComp tools & services

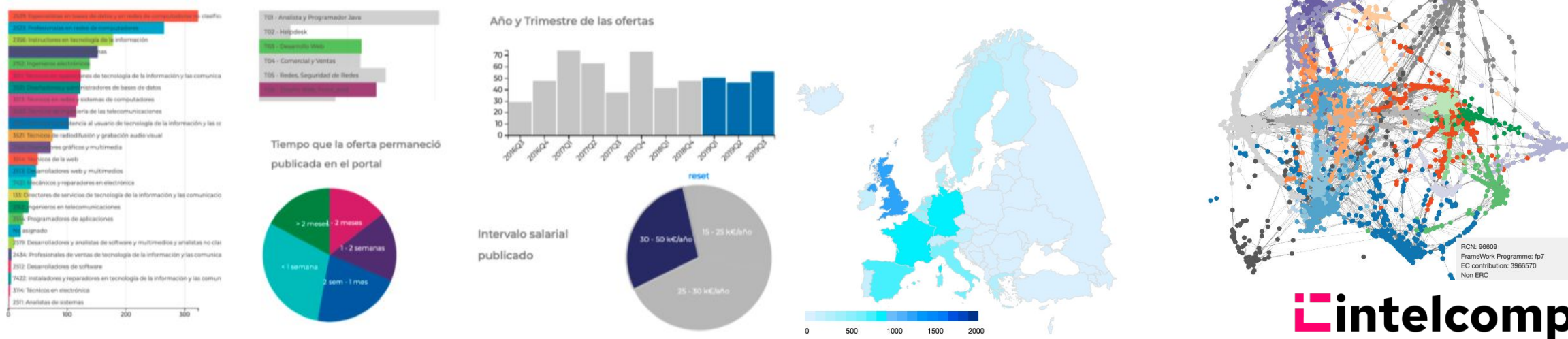
<i>IntelComp Tool</i>	<i>Final-user services</i>		<i>Target Users</i>
<i>Interactive Model Trainer</i>	<ul style="list-style-type: none"> - Curation and Annotation of Models - Construction of domain-specific data sets 		Domain experts
<i>STI Viewer</i>	<ul style="list-style-type: none"> - Topic and graph enriched BI dashboards - Time and geographic STI analysis - Heterogeneous corpus comparison (e.g., NSF vs CORDIS) with lead-lag estimation - Profiling of STI agents. - Analysis of granted projects by instrument (call, programme and topic); by management unit; and by level of government (European, state and regional). - Interactive graph view of STI documents 		Public Administration
<i>Evaluation Workbench</i>	<ul style="list-style-type: none"> - Reviewer and expert selection tool - Search by similarity tools - Alarm tool (for duplicated project proposals) - Fraud detection tool - Automatic classification service (e.g., CPC, IPC, Frascatti, etc.) 		Public Administration
<i>STI Policy Participation Portal</i>	<i>Citizen Viewer</i>	<ul style="list-style-type: none"> - Simplified BI dashboards of STI domain - Time & geographic STI analysis - Simplified STI graph visualization - Graph Viewer for community visualization - Citizen STI participation mailbox - Time & geographic STI analysis - Surveys and blogs 	Citizens
	<i>Academia and Industry Viewer</i>		Academia, and Industry with STI Interests

STI Viewer: AI-enriched BI panel

- Addressed to policy analysts
- Allows exploratory analysis of available metadata + AI variables
- Filters can be applied to obtain relevant measures

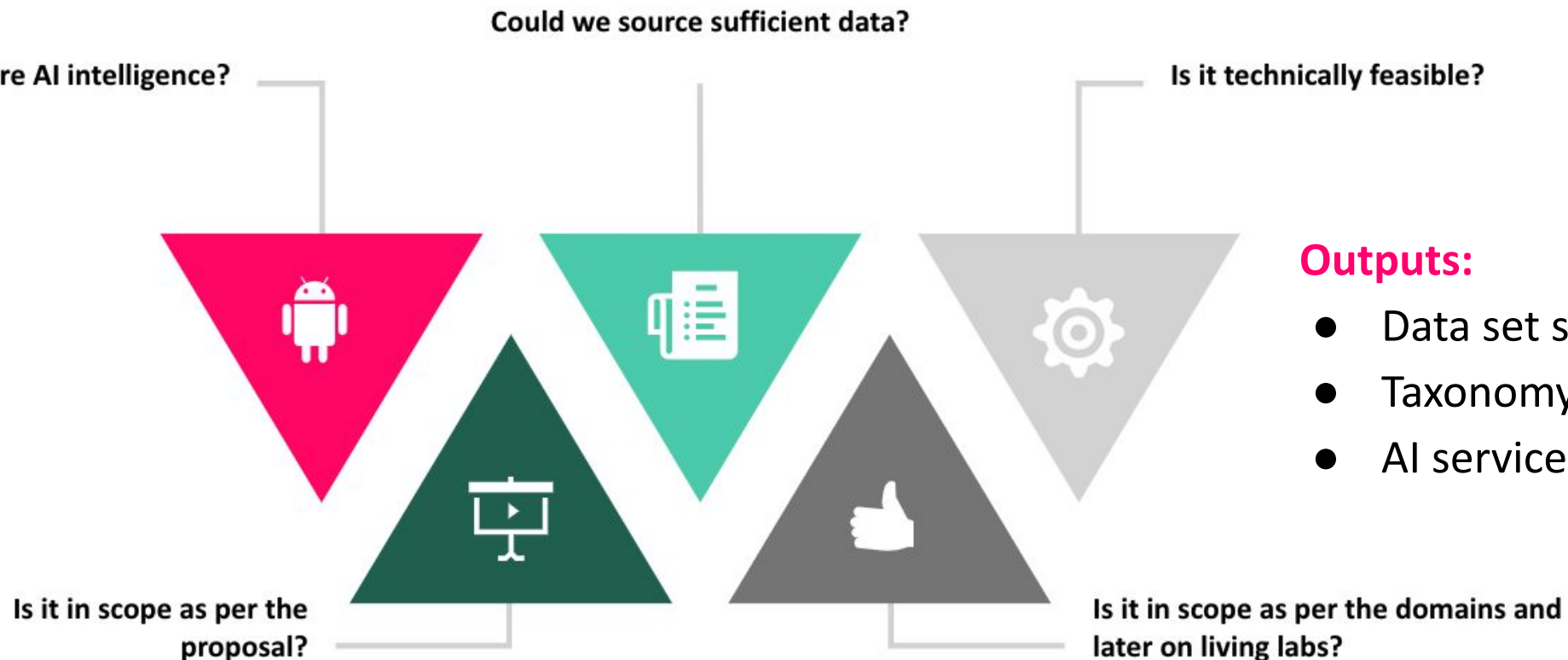
Citizen Viewer

- Simplified version targeted to citizens (transparency, impact of public funding)
- Analysis of social data
- Data gathering : Participation mailbox + activity analysis



Methodology: From policy questions to quantifiable STI measurements

- 160 domain-agnostic questions for all functions of the innovation system and phases of the policy cycle were preliminary identified
- They were analyzed jointly with policy makers in three consultation workshops
- Prioritized questions were analyzed internally according to different dimensions



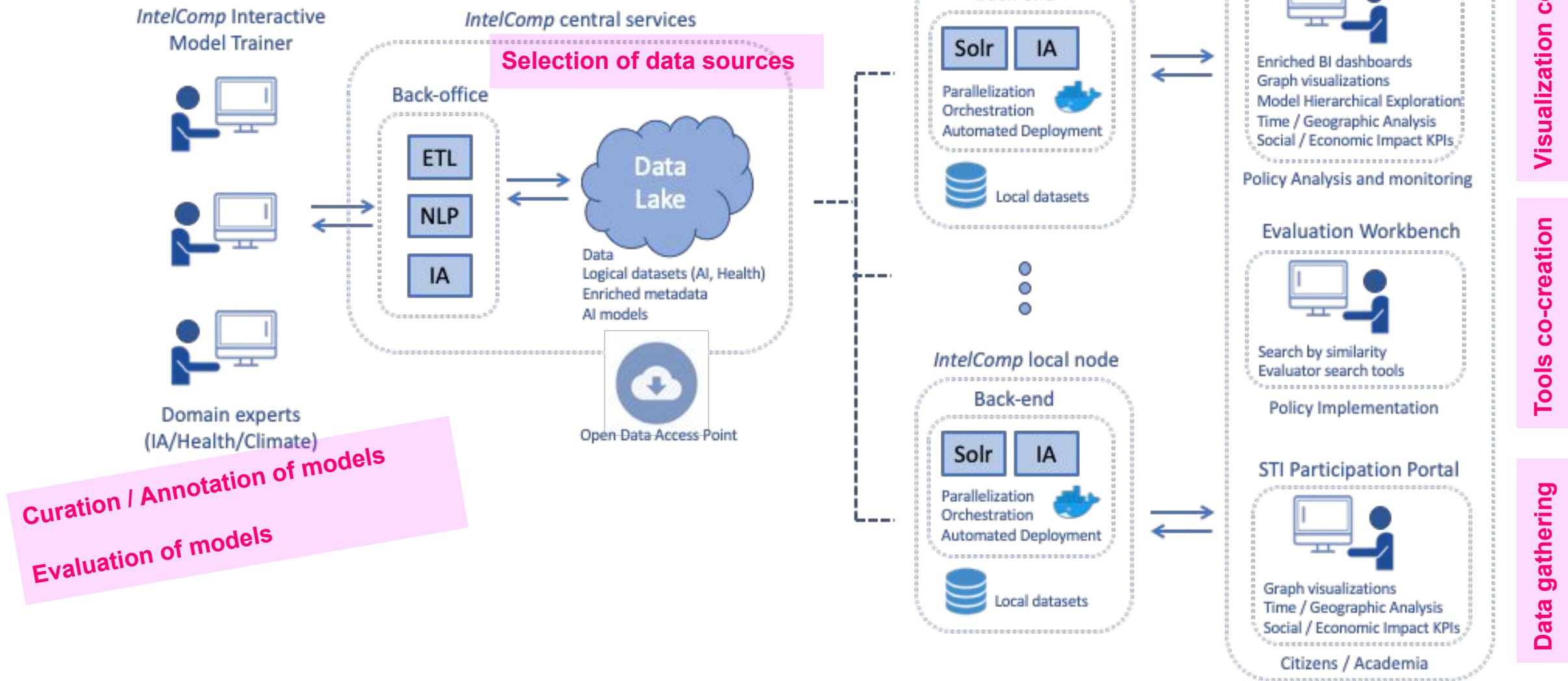
Outputs:

- Data set selection
- Taxonomy selection
- AI service identification

Methodology: Cocreation of tools via Living Labs

- IntelComp Platform is a generic and domain independent solution
- Three pilots in the form of Living Labs will be developed
 - Artificial Intelligence
 - Climate Change / Blue Economy
 - Health / Cancer
- Three use cases have already been identified:
 - The Spanish National Strategy on AI
 - The Sustainable Euro-Asian Seas Initiative (coordinated by Greece)
 - The research on cancer of the Science and Technology Observatory (France)
- We will incorporate **domain experts' knowledge** to validate the technical solutions
- We will build **the right user visualization tools** to make the results easy to use and actionable to the final users
 - Co-creation methodologies (Living Labs) will be exploited, jointly revising user requirements and improving the developed tools in an iterative manner (**agile methodology**)

Methodology: Cocreation of tools using Living Labs



Conclusions

1. IntelComp is developing a platform to provide data-based evidence for STI policy making
2. It is powered by last NLP & AI advances, particularly for unstructured text analysis
3. Tools for model co-creation (human-in-the-loop approach)
4. Co-creation of visualizations involving users through an agile methodology
5. Three living-labs to validate the approach in corresponding domains



<https://intelcomp.eu/>

@IntelComp_H2020

Jerónimo Arenas-García (jarenas@ing.uc3m.es)



This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No. 101004870. H2020-SC6-GOVERNANCE-2018-2019-2020 / H2020-SC6-GOVERNANCE-2020



A Typology of Local Digital Twins

Implications for collaborative governance

10 December 2021 | Pavel Kogut (21c Consultancy)



Local Digital Twin (LDT)

Digital city twin

Digital twin of smart city

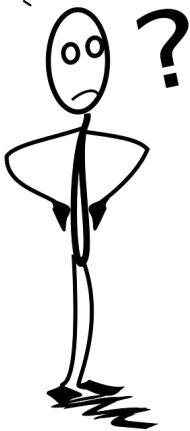
Urban digital twin

Digital urban twin

Digital urban city twin

Digital twin city

Smart city digital twin



Why LDT typology?





Why LDT typology?

- Capture a variety of LDTs
- Identify distinguishing features
- Develop maturity models and requirements

Value Y	Type B	Type C
	Type A	Type D
		Value X



Why LDTs?

Data driven tools for urban challenges

LDTs v. BIM, IoT dashboards, GIS (similarities)

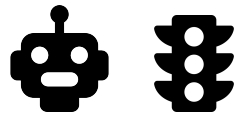
- Contextual information



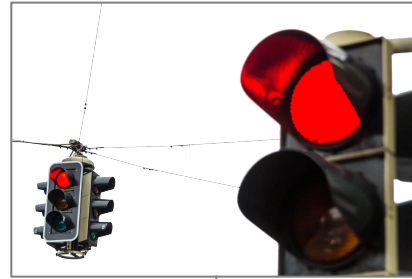
- Trend monitoring



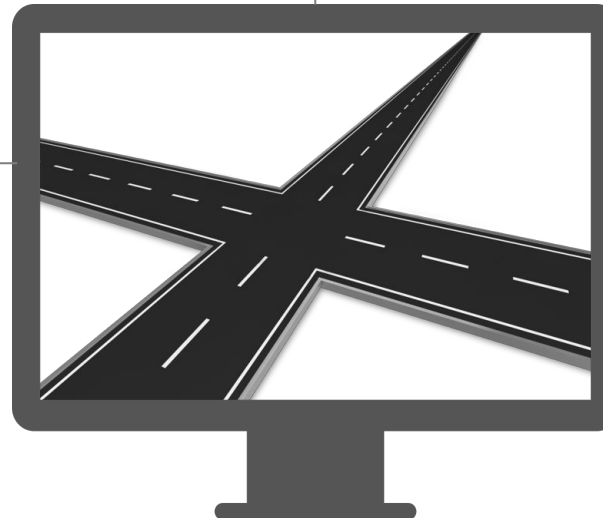
- Optimisation



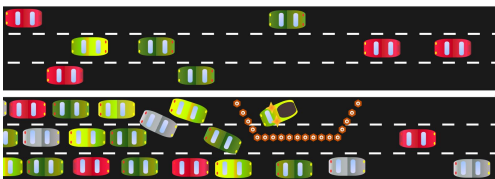
LDT benefits: *Horizontal integration & reuse*



Security monitoring



Traffic control



Autonomous navigation



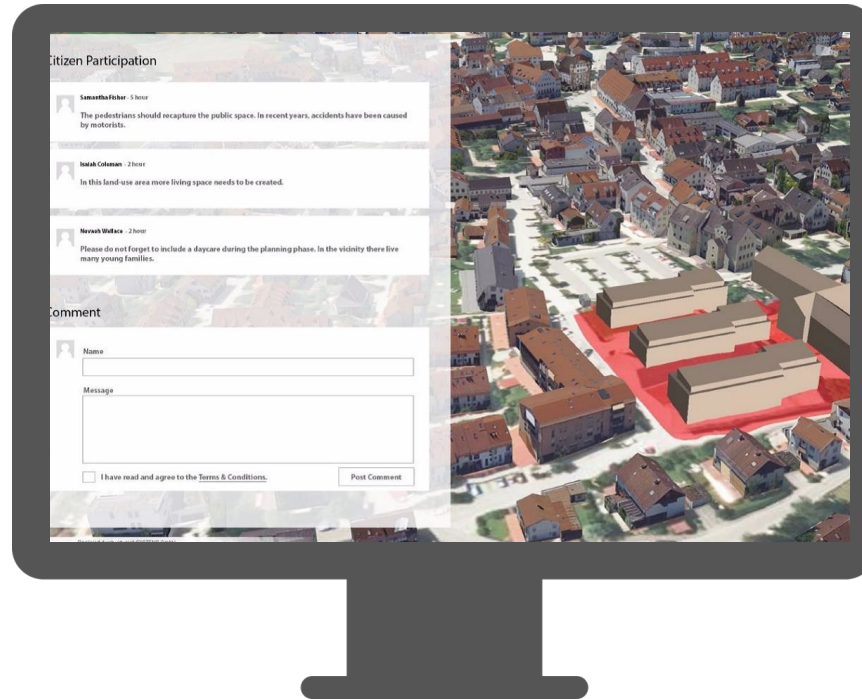


LDT benefits: *Sandbox for policy experiments*



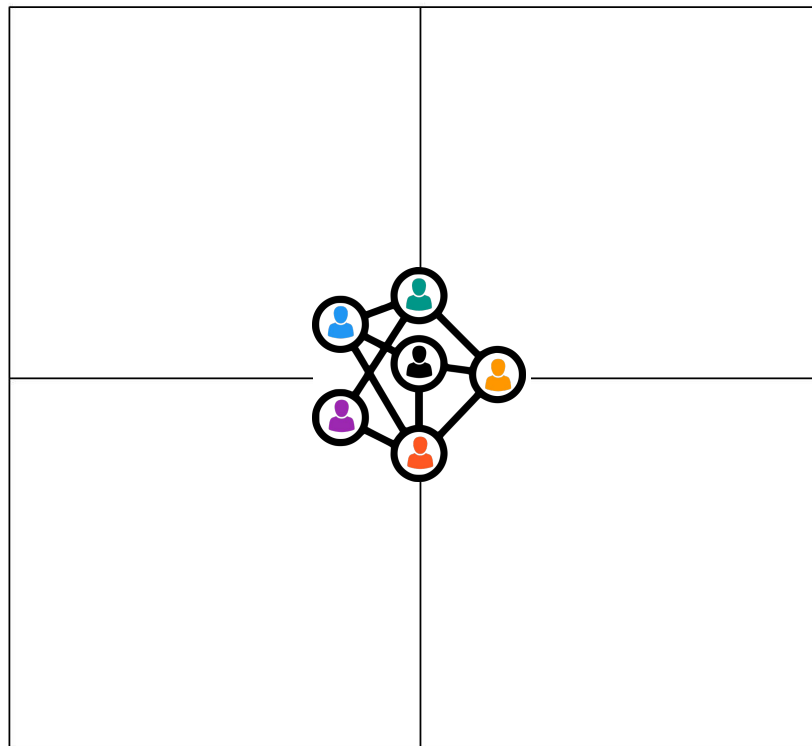
Testing a fleet of autonomous vehicles: mission possible?

LDT benefits: *Citizen centric public services*

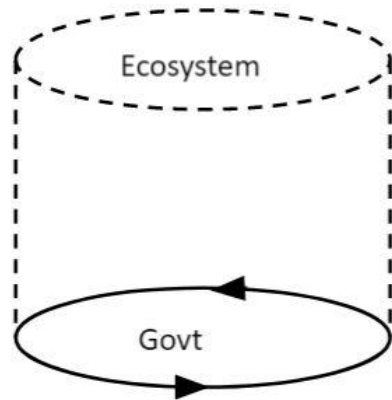


Three colored squares: a light green square, a medium green square, and a grey square.

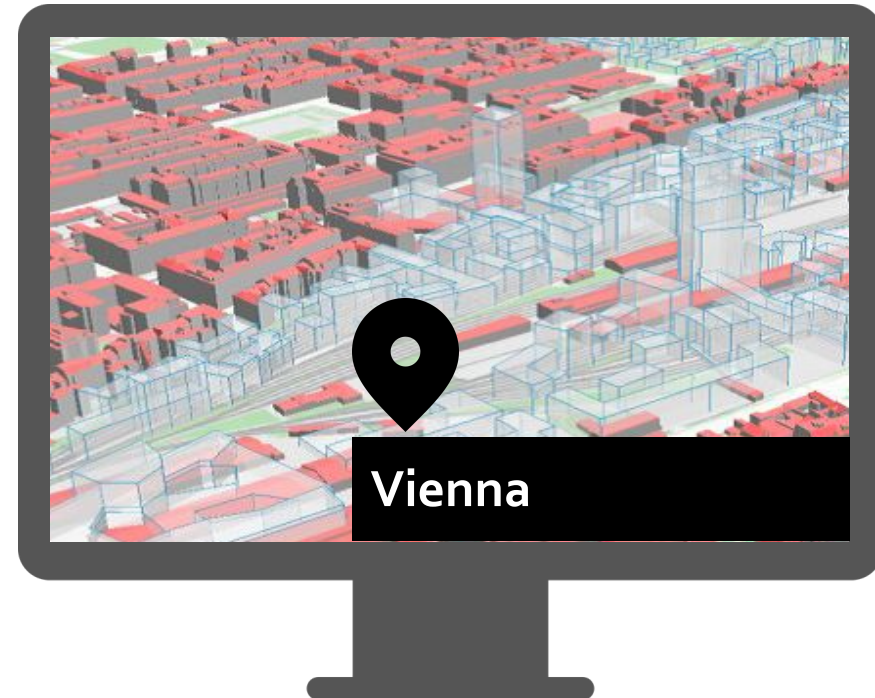
LDT typology



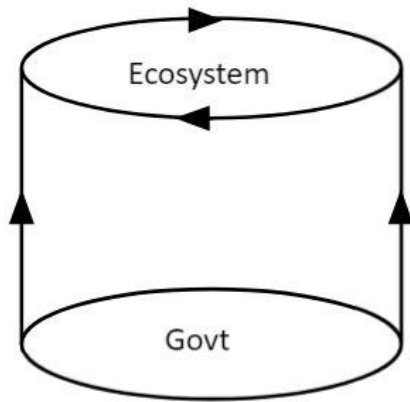
Closed LDT



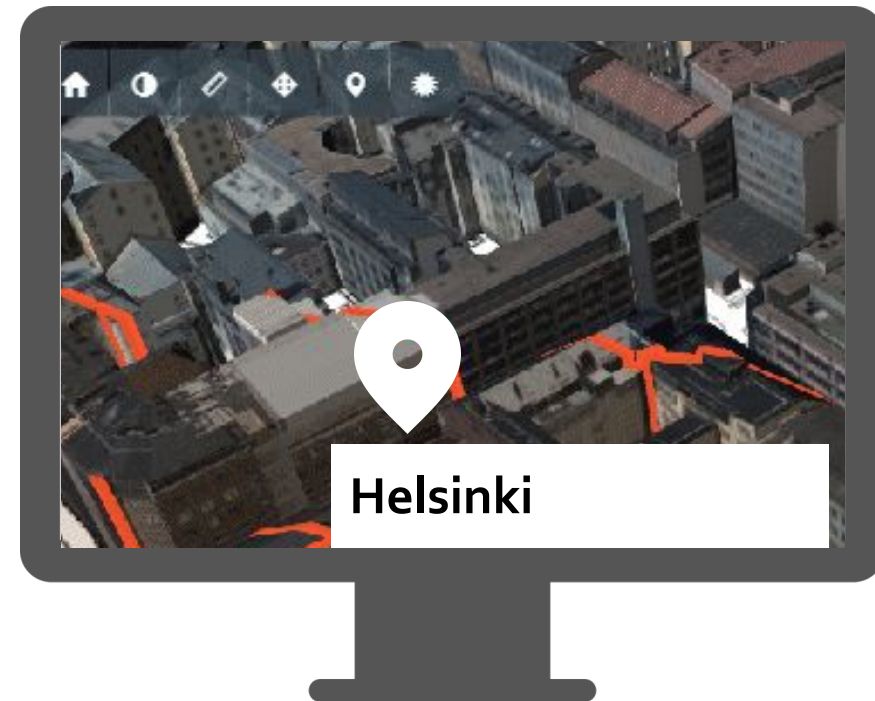
- Internal support tool
- Govt initiates, manages, pays and sets conditions
- Mostly govt data
- Policy making and urban planning



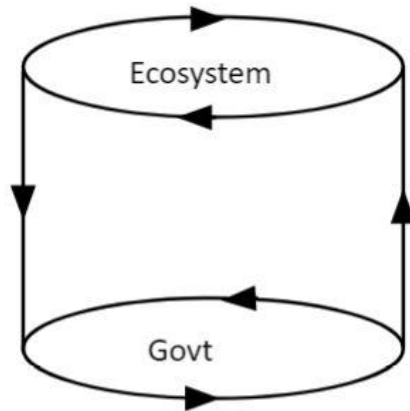
Network Oriented LDT



- Initiated by govt to facilitate open innovation
- Companies and citizens among users
- Commercial reuse allowed



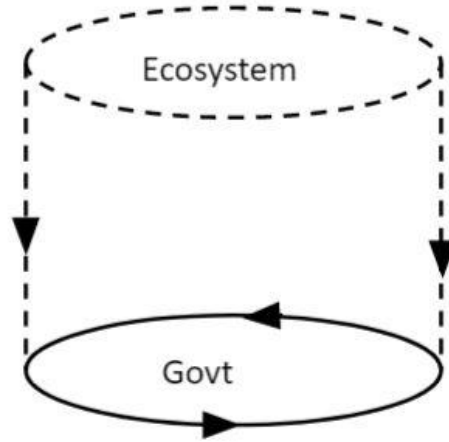
Network Owned LDT



- High level of decentralisation and openness
- Role of govt and public funding non-primary
- Future state in the maturity model
- Enablers: DGA, Gaia-x..



Network Enabled LDT



- High decentralisation but policy oriented
- Closed part of an otherwise open system
- Govt sets up an LDT for private use
- Data and infrastructure can be shared



Recap

	Closed	Network Oriented	Network Owned	Network Enabled
Purpose	Policy Making	Open Innovation Citizen Participation	Open Innovation Citizen Participation Policy Making	Policy Making
Owner	Government	Government	Ecosystem	Ecosystem
Data Type	Governmental Purchased Commercial	Governmental Purchased Commercial	Governmental Commercial Personal	Governmental Licensed Commercial
Data Control	Government	Government	Ecosystem	Government Ecosystem
Examples	Vienna	Helsinki	Rotterdam*	Örebro*



Conclusion

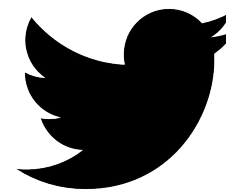
- LDTs can make governance more collaborative, but it depends on the LDT type
- Closed and Network Enabled LDTs primarily benefit govt
- Network Oriented and Owned LDTs most conducive to collaborative governance
 - Rotterdam 3D: feedback on planning applications
 - Helsinki's Energy Atlas: housing companies, developers, companies
 - DUET: citizen science
- LDT choice depends on data governance framework and culture
- LDT can co-exist



Thank you !



digitalurbantwins.com



[@DuetH2020](https://twitter.com/DuetH2020)



DUET has received funding from the EU Horizon 2020 research and innovation programme under grant agreement No. 870697

Panel Discussion- A new era of collaboration, co-creation & consultation with citizens & stakeholders

- What is the benefit of collaboration, co-creation & consultation with citizens & stakeholders for evidence based policymaking?
- What are the challenges that you have encountered when facilitating collaboration, co-creation & consultation with citizens & stakeholders?
- Why is the work you are doing in your project in the local communities important for Europe at large?
- What is your recommendation to policymakers for evidence-based policymaking?
- What's your main takeaway for the cluster?





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