



# Co-creation of STI policies using the IntelComp platform

Jerónimo Arenas-García (UC3M)

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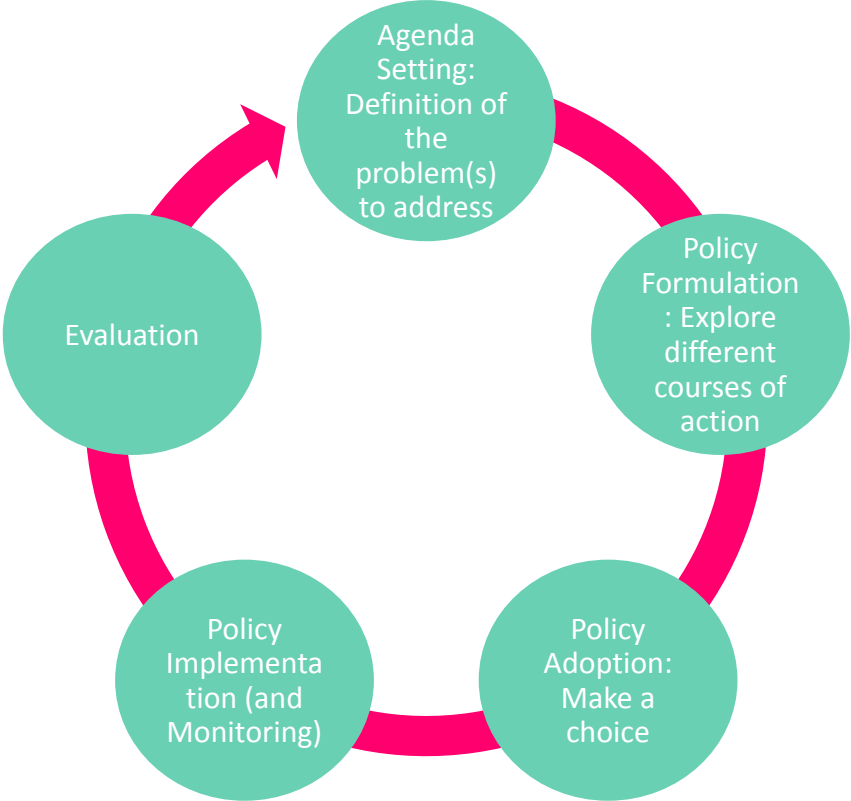
Evidence Based Policymaking in Europe Summit 2021



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

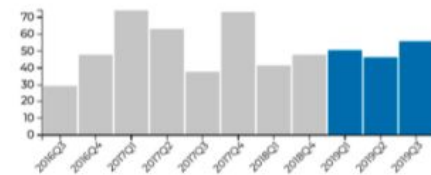
- Simplified version targeted to citizens (transparency, impact of public funding)
- Analysis of social data
- Data gathering : Participation mailbox + activity analysis



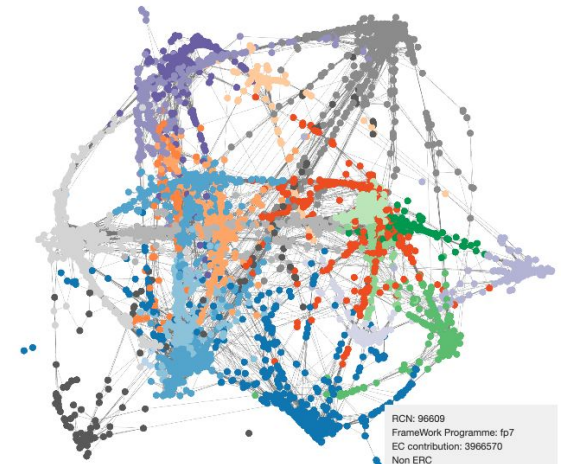
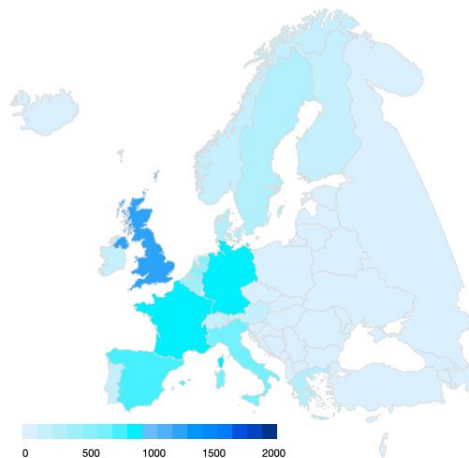
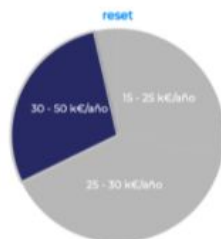
Tiempo que la oferta permaneció publicada en el portal



Año y Trimestre de las ofertas

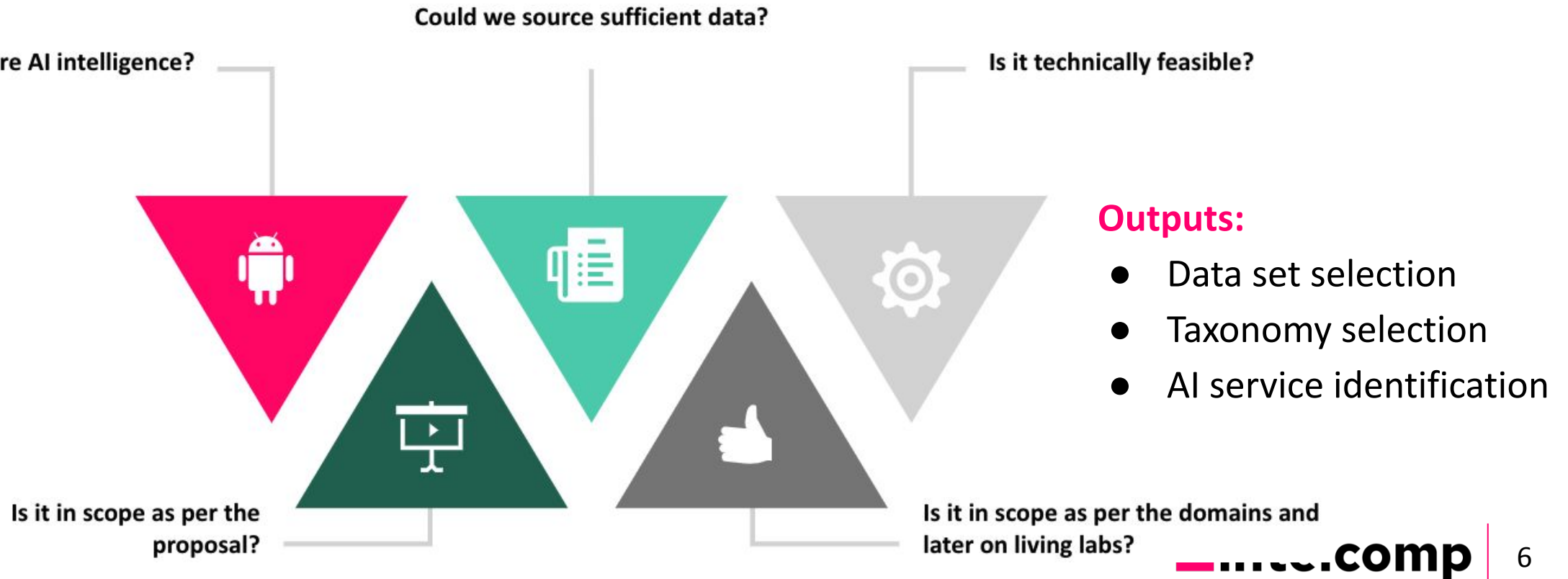


Intervalo salarial publicado



# Methodology: From policy questions to quantifiable STI measurements

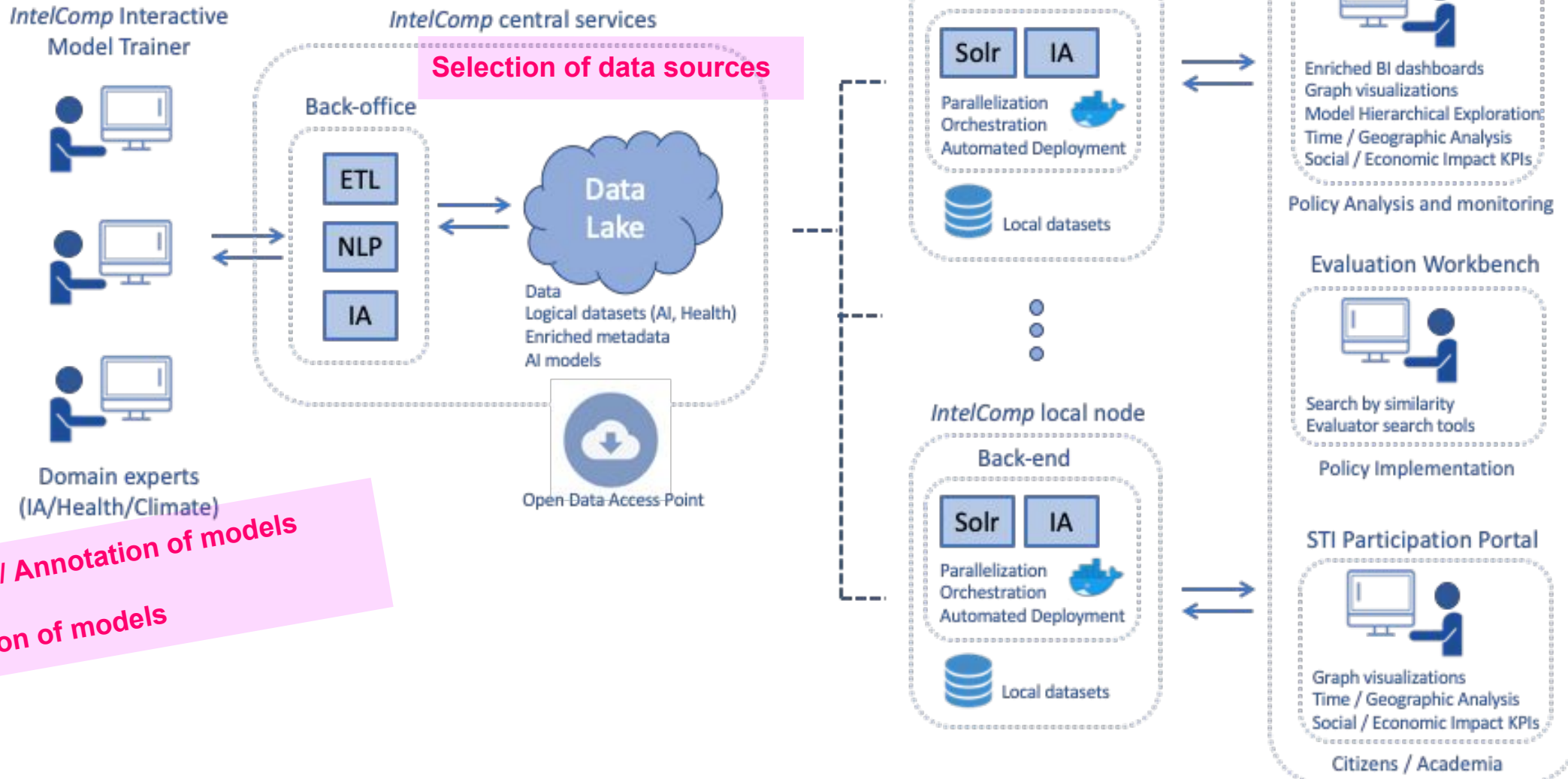
- 160 domain-agnostic questions for all functions of the innovation system and phases of the policy cycle were preliminary identified
- They were analyzed jointly with policy makers in three consultation workshops
- Prioritized questions were analyzed internally according to different dimensions



# 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



Curation / Annotation of models  
Evaluation of models

Visualization co-creation

Tools co-creation

Data gathering



# 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/>

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



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