



Data Driven Policy Cluster

Co-creating digital tools for better governance

Using the European Cloud Infrastructure for Public Administrations

The Data Driven
Policy Cluster
Roadmap

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Using the European cloud infrastructure for public administrations

Digital technologies have changed the world. Today people expect faster, seamless, on-demand services from their providers, and Governance is no exception. For better public services which make life easier for citizens. Public Sector decision making needs to become more agile, breaking down data silos to combine day-to-day tactical decisions with longer term policies and strategies. Disruptive technologies such as Digital Twins, Artificial Intelligence (AI) and High Performance Computing (HPC) unlock new opportunities for decision making through visualisations, simulations, predictions and intelligence that enhance transparency, increase public support and

involvement, and optimise resources. Handling data sources too large or complex to be handled by conventional tools.

To support this transformation, Policy Cloud, Decido, AI4PublicPolicy, DUET and IntelComp pan-European projects and initiatives dedicated to using cloud for data-driven policy, have joined forces to raise awareness on their cross cutting work on data and cloud-based tools for data-driven decision making. In this document we aim to describe how the Data Driven Policy Cluster contributes to using the European cloud infrastructure for public administrations.



AI4PublicPolicy Automated, Transparent Citizen-Centric Public Policy Making based on Trusted Artificial Intelligence



DECIDO eviDence and Cloud for more Informed and effective pOlicies



DUET Digital Urban European Twins for smarter decision making



IntelComp A Competitive Intelligence Cloud/HPC Platform for AI-based STI Policy Making



Policy Cloud Cloud for data-driven policy management





Who benefits from Data Driven Policies?

Actors	Players in the field	The benefits
 <p>Enablers</p>	<ul style="list-style-type: none"> » Upcoming Data Spaces » Legal Community » ICT standardisation organisations (generic W3C, OGC), specific Telecom, ITS,... 	<p>Facilitate deployment of new cloud-based initiatives for the public sector, based on normalised tools and standards of all types (technical, legal, procedural).</p>
 <p>Policymakers</p>	<ul style="list-style-type: none"> » Public authorities » Regional policy makers (domains, mobility, spatial planning, environment, energy) » EU policy makers (green deal, ICT domains - HPC/data cloud,...) 	<p>Improved efficiency and effectiveness of the policymaking process through access to:</p> <ul style="list-style-type: none"> » Scenario simulations to model and evaluate policy impacts » Analytical tools to enhance the predictive power of data » Enhance the full policymaking cycle exploiting the predictive power of data » Cleaned, refined, structured and trustworthy datasets emerging from pilot use cases
 <p>Industry</p>	<ul style="list-style-type: none"> » Technology providers » Service providers » Businesses 	<p>Improved efficiencies and new business opportunities through access to:</p> <ul style="list-style-type: none"> » Novel data management and analysis solutions » Tools for cleaning and refining data » Centralised and easy access to new datasets
 <p>Research & Academia</p>	<ul style="list-style-type: none"> » European Cloud Infrastructure providers » Research Centres & universities » Citizen scientists, professional research community 	<p>Better quality research outcomes through access to:</p> <ul style="list-style-type: none"> » Solutions and policy making services available through EOSC » Previous project results upon which to build further
 <p>Citizens</p>	<ul style="list-style-type: none"> » Local action groups - grassroots organisations 	<p>Improved quality of life through:</p> <ul style="list-style-type: none"> » Participation in policy making » Continuous improvement in policy design Creation of targeted policies



What is the added value of data-driven policymaking?

Given the complexity of our societies and the rapid generation of data, DUET, Policy Cloud, AI4 PublicPolicy, IntelComp and DECIDO will enable public authorities to transform the usually slow, policy making process to one that is more agile and responsive, which develops better evidence-based policies which adapt as new data comes to light, and which are trusted, understood and contributed to by relevant stakeholders.

Data-driven policymaking supports the full policy cycle from agenda setting, policy formulation, policy adoption, policy implementation and policy monitoring to evaluation. In addition, data-driven policy making takes a closer look at the full process for analytical purposes and facilitates this process with technical tools.

The table below visualises the societal, technological, economic and political challenges the Data Driven Policy Cluster addresses.

Societal	Technological
<ul style="list-style-type: none">» Mobility & transport» Security» Social issues & wellbeing» Social unrest» Health (Cancer)» Agri-Food» Urban environments, and making cities more liveable places» Ensuring gender balance» Environmental initiative/climate change/sustainable blue growth	<ul style="list-style-type: none">» Lack of standards» EU Data cloud is still a concept (lack of EU big data cloud)» Data interoperability» Reusability» Data availability» Simulation model interaction» Big volume of historical data to be processed for visualisation» Data Cleaning
Economic	Political
<ul style="list-style-type: none">» Unemployment» The economical impact of environmental issues (liveability, air, noise)» Cost of HPC infrastructure to run complex simulation models (how to share these costs between all involved players e.g. when setting up a Digital Local/Urban Twin)» Proving that changes in traffic, increasing liveability is not affecting the local economy in a negative way.» Costs or services» Cost & resources for obtaining data, curating (or even procured datasets) cleaning before data can be used for the policymaking in the data analytical tools. (examples from DUET, Polivisu)	<ul style="list-style-type: none">» Sharing policy making power with all stakeholders, and in particular with citizens means a cultural shift.» Communicating the “rationale” behind a decision» Ensuring gender balance» Define, develop & implement specific tools for specific policymaking lifecycle stages





/// Data Driven Policy Cluster Future Perfect

The Data Driven Policy Cluster defines a perfect future as follows:

- » Policymakers making effective use of data-driven policymaking tools: actual uptake for a paradigm change. Bringing policymakers closer to the needs of citizens.
- » Connect existing data resources, from cities to digital twins, to solve the challenges experienced by citizens.
- » Integration in a permanent data-driven policymaking platform. Importance of permanence, interoperability of public administrations and a standardised approach.
- » Privacy Issues in the future related to personal data needs a unified easy-to-use approach. DECIDO is using AMNESIA (EOSC provided application) to perform this exercise.
- » Digital Twins for policy-making solving cross-domain challenges and cross-silo problems
- » Digital Twins are able to connect different open and proprietary components, data sources and simulation models. The core data broker component shall be standards-based and open.

/// Digital Future for Europe Strategy

Digital technology is changing people's lives. The [EU's digital strategy](#) aims to make this transformation work for people and businesses, while helping to achieve its target of a climate-neutral Europe by 2050.

The Commission is determined to make this Europe's "Digital Decade". Europe must now strengthen its digital sovereignty and set standards, rather than following those of others – with a clear focus on data, technology, and infrastructure. The Data Driven Policy Cluster contributes to Europe's Digital Future with:

- » Digital marketplaces on EOSC for the exchange of assets among PAs (data, tools, information on experiences).
 - » Create a cloud agnostic, scalable, replicable and cost-effective digital twin that can be set-up easily.
 - » Create an observatory aims to act as a single point of reference for big data cloud and the European Cloud Infrastructure use in policy making.
 - » The IntelComp project will enrich the EOSC Catalogue with new services (reusable analytical tools): a suite of Natural Language Processing/Machine Learning services for the analysis of STI-relevant information. IntelComp components, generated models and tools will apply standards for interoperability with EOSC.
- The Data Driven Policy Cluster is working on closing the following gaps on the road towards data-driven policymaking for Europe.
- » Privacy issues for the use of data.
 - » Closing the gap in effective policy making by collaborative policy making.
 - » PAs to rely on digital technologies for the policy making process.
 - » Sustainability, reliability and volatility of open data sources (IntelComp).
 - » Closing the current tools and solutions gap by creating concrete plans formulated by pilot cities.



Co-Creation

Co-creation refers to a product or service design process in which input from consumers plays a central role from beginning to end. But why is this important in Data Driven

policy-making? Who is involved and which methodologies can be used? The table below shows the answers to these questions from the Data Driven Policy Cluster perspective.

Why is it important?	Who is involved	Methodologies used
» Deliver policy and services	» Citizens	» Hackathons & Datathons
» Deliver social good	» Policymakers	» Storytelling with data
» Bring together stakeholders capabilities	» Academia & research	» Gamification
» Unlock innovation & support entrepreneurship	» Entrepreneurs & start-ups	» Community networking events
» Measure and predict performance	» Public sector experts	» Living labs
» Build Data Literacy	» Technology & data enthusiasts	» Opening data to solve public sector challenges
» Co-creation of tools: To count with users (PAs and stakeholders -the research community, business and civil society-). Co-creation of policies: To allow stakeholders to inform policy-making processes		» Crowdsourcing platforms
» Avoid Not Invented Here syndrome, and build a solution close to the real needs of policy makers		
» Build confidence in the society on the policies applied and co-share the authorship so people trust them more.		





From local to European policies. How do we contribute?

The Data-Driven, Cloud, Policymaking Cluster is working on a total of 19 locally focused use cases, with issues that are playing on a local level, but are certainly not limited to one city or region in Europe. This is how the Data-Driven Policymaking Cluster contributes to European policies:

- » Create replicable solutions
- » Create scalable tools
- » DUET Solution enables different cities that use the same tools to exchange data models and scenario simulations to see if policy solutions can work at regional/European level
- » Enable data driven policymaking at any level in PAs, with the right selection of data and KPIs to monitor
- » Identification of a set of pathways, recommendations and lessons learnt addressing Public Authorities through the transition towards the use of the European Cloud Infrastructure and the application of evidence and co-creation in the policy lifecycle



Next steps



The Data-Driven Policymaking Cluster dedicated to using cloud for data-driven policy, have joined forces to host Evidence Based Policy Making Summit in Europe, a premier conference for government that focuses purely on data and tools for decision making. Together with leading change agents from the European Commission and Local Government the event will explore the new decision-making ecosystems being built by cities and administrations, including the use cases being adopted, and the innovative data and tools being adopted for modern policy making.

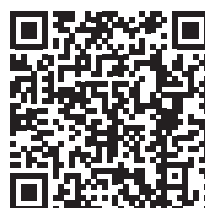
Taking place virtually on the 9th and 10th of December, 2021, here's what to expect:

» Use Cases: We've asked our speakers to bring real-life examples of how they are transforming the traditionally slow deliberative policy making process in the fields of health, climate change and mobility, to one that is more agile and responsive. Hear directly from cities themselves on how they are developing better evidence-based policies which adapt as new data comes to light, and which are trusted and contributed to by relevant stakeholders who feel engaged in the process.

- » Tools: See how city managers and policy makers are co-creating data-driven decision-making ecosystems with cutting edge tools which enable them to visualise, analyse and even predict the complex impact of decisions across multiple domains, time and space. Be hands-on with AI, big data and digital twin demos and be inspired by what you could potentially achieve for your administration.
- » Strategies: Learn how to manage legal, ethical and standards challenges and constraints in our increasingly digital world. From best practices to principles and legislation our speakers will help you understand and navigate the complex environment in pragmatic ways that will get you started on your journey.

Attendance is open to all. Join us as we forge the future of modern policy making.

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