

Disruptive technologies for urban development...



Benefit or burden?



URBANITE

www.urbanite-h2020.eu

Data-driven and Evidence-based Decision making in the urban transformation field using disruptive technologies and a participatory approach.

A diversity of sensing devices densely spread over the infrastructure, vehicles or the travelers' devices act as sources of data flow that eventually fed mobility managers and modelling scientists, etc., to deploy more reliable decision support tools. This opportunity also brings with it specific challenges around ethics, confidence and trust in the whole process and the harmonization of practices. Supporting policy-making is essential to overcome these barriers.



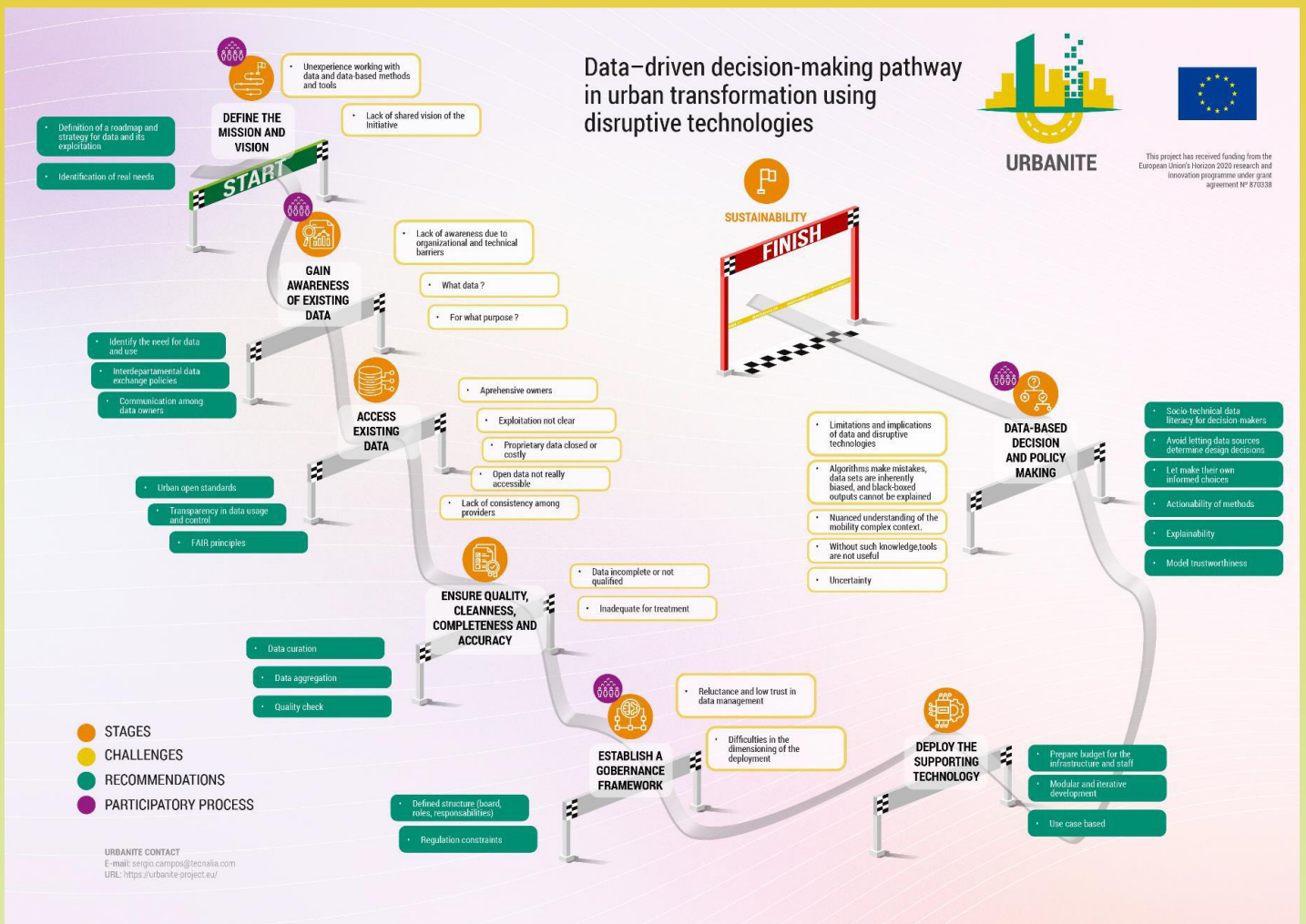
Supporting **decision - making** in
Urban Transformation

with *disruptive technologies*



The PATHWAY TO A DATA-DRIVEN DECISION MAKING

The pathway to data-driven decision making in urban transformation using disruptive technologies covers several stages, each of them with its own challenges that need to be faced in order to be successful in the final goal of making appropriate decisions that will lead to a sustainable urban mobility plan.



- Challenges (in yellow)
- Recommendations (in green) to mitigate the risks.



The PATHWAY to a DATA-DRIVEN DECISION MAKING

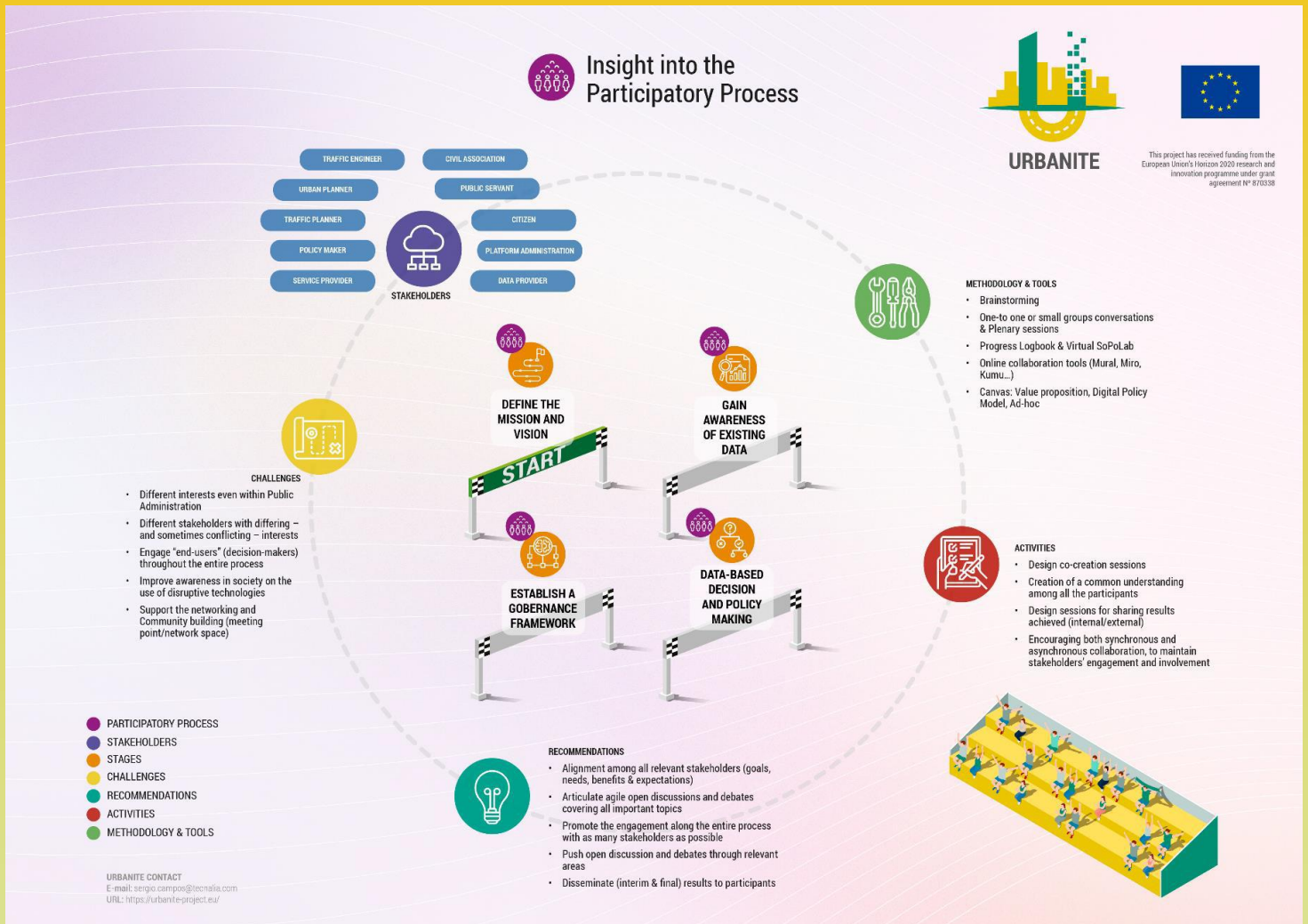
Mapping of Policy Layers on the stages of a data-based decision-making process.

	Data Collection and Merging		Data Standards		Data Infrastructure		Governance and Accountability		Use and Analysis		Communication and capacitacion		
	Privacy and Data Protection	Aggregation of Data	Standard Development	Standard Adoption	Financing Infrastructure	Technical requirements	Control over Data	Structure of Governing Body	Data access	Analytics and simulation reliability	Ethical Use and Processing	Communication and awareness	Coaching and training
	Regulation and Control Civil and criminal liabilities and penalties Privacy and data protection authority Privacy impact assessments (PIA) Comprehensive national data privacy law Personal data sharing tool Financial and technical support schemes Common data platforms Mandate data sharing among departments Mandate open data Mandate data sharing		Financial and technical support programs Guidance on common standards Mandate data standards Common and standard APIs Data and metadata standard developments		Budget for communication infrastructure Software costs and licensing investment Attractive investment environment Security measures Architecture modularity Multi-level architectural approach Experimentation of new control models Algorithmic regulation IP Cores		Data ownership and transfer rights Responsibilities of data providers Clear vision and objectives Delegation of oversight authorities Structured learning process Public-private partnership Participatory process Clearing house for data sharing Harmonization of data sharing		Iterative policy development Data license templates Flexible data sharing models Evaluation of forecasting methods confidence Method stability Availability of mores and methods Independent enforcement bodies Policies addressing the equitable and ethical use of data Operational level oversight		Communication activities Technical training Public outreach, education, and awareness initiatives		
Define Mission and Vision													
Gain awareness of existing data													
Access Existing data													
Ensure quality, cleanliness, completeness and accuracy													
Establish Governance Framework													
Deploy the supporting technology													
Data-based decision and policy making													
Sustainability													

Analysis of policy suggestions, including information (actor, impact, samples and supporting documents, templates or practices) eases policymakers in identifying the best to adopt the policy suggestions in their specific situation for each of the stages of a data-based decision-making process.

	Policy and/or supporting documentation or process	URBANITE Referencias	Referencias
Use and Analysis	Policies to enable public, private, or other third parties to access shared data and to ensure the ethical use of data to protect public interests		
Data Access	Iterative policy development	Use case selection methodology. URBANITE adopts an iterative approach, replicating three steps: use case definition, implementation/deployment and evaluation. The term license refers to the legal conditions under which the work is made available. This list of the licenses conformant with the principles.	<ul style="list-style-type: none"> • Specific use cases for Bilbao/Melinski/Amsterdam/Messina pilots have been designed (as described in deliverable D6.1) • The Japanese Ministry of Economy, Trade, and Industry published contract guidelines on the utilization of data and AI, addressing legal and practical aspects of data provision, creation and sharing to promote effective data utilization. • The Infocomm Media Development Authority in Singapore also provides a data sharing agreement template to facilitate data sharing between parties. • Contracts for Data Collaboration has created a framework that outlines the key elements needed in a data sharing agreement, based on the analysis of 43 DSAs.
	Data license templates		<ul style="list-style-type: none"> • The ICDO (Information Commissioner's Office) Regulatory Sandbox is a service developed by the ICO, to support organisations who are creating products and services which utilise personal data in innovative and safe ways. • The Japanese Ministry of Economy, Trade, and Industry published contract guidelines on the utilization of data and AI, addressing legal and practical aspects of data provision, creation and sharing to promote effective data utilization. • The Infocomm Media Development Authority in Singapore also provides a data sharing agreement template to facilitate data sharing between parties. • Contracts for Data Collaboration has created a framework that outlines the key elements needed in a data sharing agreement, based on the analysis of 43 DSAs.
	Flexible data sharing models	Templates for data sharing (personal, non-personal data)	In the Lyon Smart Data platform, three types of data access licenses were used to ensure a fair and competitive ecosystem and boost volume of data shared. Licenses ranged from open to restricted to authorized licenses. (see case study on Lyon in Appendix D)
Ethical Use and Processing of Data	Independent enforcement bodies	Identification of ethical committees and procedures for the ethics management (included on DS.X)	<ul style="list-style-type: none"> • The EU Gender Equality Strategy 2020-2025 calls for solutions to potential gender biases in AI to support the • The EU Gender Equality Strategy 2020-2025 calls for solutions to potential gender biases in AI to support the
	Policies addressing the equitable and ethical use of data	Data ethics Canas. Analysis of ethics-related information for each of the cases and datasources. Templates for data sharing (personal, non-personal data)	<ul style="list-style-type: none"> • The EU GDPR requires certain organizations to appoint an independent data protection officer. • An example of such operational-level oversight include Data Review Boards and Consumer Subject Review Boards. These have been identified as emerging mechanisms for organizations to make responsible decisions regarding data use and demonstrate commitment to ethical decision-making.
	Operational level oversight	Identification of independent commission, involving local committees and data protection officers (not directly involved on the project)	<ul style="list-style-type: none"> • The EU GDPR requires certain organizations to appoint an independent data protection officer. • An example of such operational-level oversight include Data Review Boards and Consumer Subject Review Boards. These have been identified as emerging mechanisms for organizations to make responsible decisions regarding data use and demonstrate commitment to ethical decision-making.

Insights into the PARTICIPATORY PROCESS



More information: D1.6– Policy Brief (Main findings) Version 1, 2023
D2.6-Impact analysis and recommendation. 2023

Web: www.urbanite-h2020.eu
Twitter: @urbaniteh2020
LinkedIn: www.linkedin.com/groups/69691
Slideshare: www.slideshare.net/URBANITEProject
GitHub: git.code.tecnalia.com/urbanite

CONTACT INFORMATION
Project Coordinator:
Sergio Campos
Sergio.Campos@tecnalia.com
+34 664 100 109

