



EMERALDS

Extreme-scale Urban Mobility
Data Analytics as a Service

Welcome

EMERALDS Webinar: Navigating AI's Ethical Aspects

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INLECOM Innovation

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EMERALDS's vision is to design, develop and create an urban data-focused **Mobility Analytics as a Service (MAaaS)** efficient, interoperable and easy-to-deploy toolset, consisting of the **'emeralds' services**.

Proof-of-concept version, enable urban mobility ecosystem stakeholders to harness the **untapped potential of extreme urban mobility data** utilizing **distributed computing resources**.

EMERALDS Toolset



Collect and manage spatio-temporal data of high volume, velocity and variety - advanced capabilities in data mining

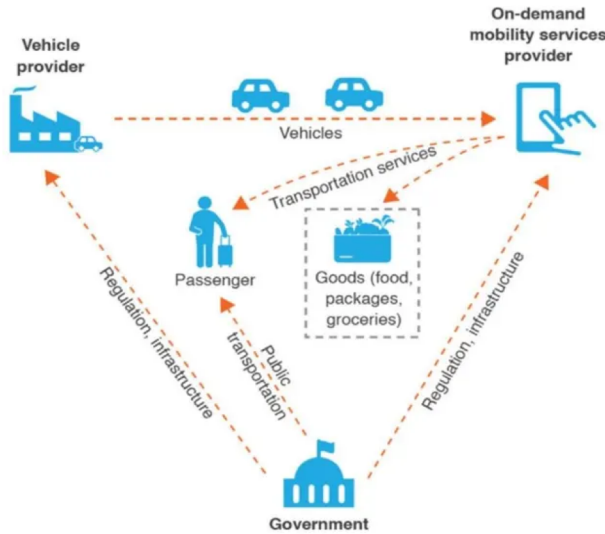
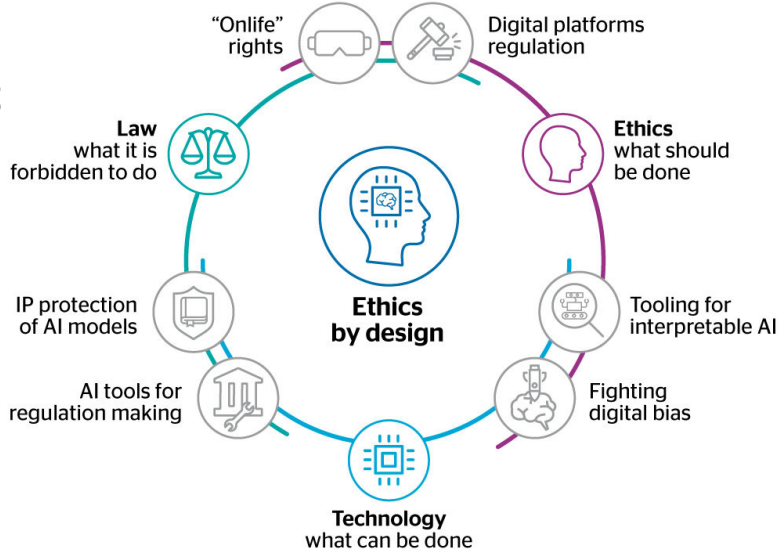
Reducing data ingestion times by pairing data-streams with a storage-querying-analytics backbone

Analyze data with real-time **responsive AI/ML algorithms**

Visualize results in interactive dashboards/**enhanced visual analytics**

Performing **sensitive data analytics** tasks in-situ

- Explore the **ethical dimensions of AI tool design** in the domain of urban mobility data science, in the light of relevant **EU regulations such as the Data and AI acts**.
- Discuss the **critical balance** between privacy, and legal frameworks governing AI technologies, focusing on real-world applications.
- Showcase the **ethical considerations** embedded in the EMERALDS project and the procedures towards shaping **responsible AI practices**.
- Engage with industry experts, stakeholders, and the public in a **meaningful dialogue on ethics in AI and data analytics**.
- Highlight the importance of **transparency, fairness, and accountability in AI systems** followed throughout the development and deployment process.
- **Ethical implications of the collection, use, and sharing of urban mobility data.**



Timeline

- **11:00 - Welcome and Intro**
Foivos Galatoulas, *EMERALDS Project Coordinator* INLECOM
- **11:05 - AI Trustworthiness: Insights into key ethical and legal issues in light of the new EU AI Act**
Konstantinos Ntzoufas, *LLM in Civil Law, Legal Ethics Advisor on AI*
- **11:20 - Data Governance and AI – the ethical aspects of sensitive data: the tool design, addressing profiling issues in AI systems, privacy preservation – Insights from The HAGUE Use Case**
 - **Ethical Table Process** - Jeroen Steenbakkers - *Owner & CEO, ARGALEO*
 - **TU Delft Human Research Ethics** - Sascha Hoogendoorn-Lanser - *Use Case Leader, TU Delft*
 - **Ethics of Mobility AI Development: energy, social, and transparency aspect** - Anita Graser - *Data Science Researcher, AIT*
- **11:45 - Data Governance Act and GDPR in the scope of EMERALDS algorithms**
Athanasios Fanos, *LLM in EU Law, Legal Ethics Advisor on Data Privacy and AI*
- **12:00 - Q&A & discussion**

Development of the data processing and AI tools is guided by an initial period of reflection and requirements collections, which informs a series of functional and non-functional requirements in each respective software component

Ethics Advisor Work Plan

- The advisors were appointed on **M1 (by end of January)** through a tender procedure.
- First output on **M2 guidance report - legal framework compliance table**
- The frequency of reporting **6 months**
- Early version of DMP
- Informed consent form for the collection of personal data
- Project description for Data Protection Authorities (DPA)s
- Non-Disclosure Agreements (NDAs)
- Online policies
- Ethics Checklist for Deliverables
- Questionnaires for solution developers, use case stakeholders, public authorities

open-source tools designed to assist developers to build more trustworthy solutions

AI Fairness 360 (AIF360)

AI Factsheets 360

Pymetrics' audit-AI

Google Model Card Toolkit

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The logo for inlecom, featuring the word "inlecom" in a blue, lowercase, sans-serif font, centered within a white rectangular box. This box is set against a larger, solid teal-colored square background.