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FLAMENCO: AIR QUALITY SENSING IN FLANDERS MOBILE ENACTED CITIZEN OBSERVATORIES

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FLAMENCO

- Participatory sensing: people-centric monitoring
- Citizen observatories:
  - Set of ICT tools to collect, analyze and visualize sensor data
  - Improve quality of life

Current practice
- Developed from scratch in different application areas
- Difficult and labour intensive
Objectives:

- **Build** and valorize an open and configurable citizen observatory platform for Flanders
• Objectives:
  • Build and *valorize* an open and configurable citizen observatory platform for Flanders
• Objectives:
  • Stakeholders can initiate citizen observatories using this platform
  • Web services and apps are generated
  • Stakeholders see their concerns translated into procedures for participatory campaigning
  • Moving away from research-oriented approach
FLAMENCO: valorisation scheme

Infrastructure Application and best practices Governance
Can we create software which allow us — in a plug ‘n play manner — to compose a citizen observatory?

Short answer: yes

Long answer: how?
FLAMENCO: Vision

End-user composition citizen observatories

Campaign/App/Server Definition

Enactment

Analyse & Monitoring

- IWT-Financed
- Start Jan 2016
- 2,7 Million Euro
- 4 years
FLAMENCO: central concept

CAMPAIGN: “a geographically and temporally constrained series of systematic operations to gather a particular type of data”

- Mobility
- Air quality
- Noise
- Health indicators
FLAMENCO: Interface

Configuration dashboard:

End-user interface to
- design a campaign
- design an app
- design a data model
- design a post-processing chain

Internally = Lego-Components
Valorisation (use case)

Objective: optimal citizen observatory conceptual design
Research issue of motivation and engagement
Identify current practices, opportunities and challenges for environmental and mobility-related participating sensing campaigns
Objective: lift participatory data through the FLAMENCO platform to a higher abstraction level so that campaign quality can be assessed and policy support can be provided.

- Quality of participation
- Quality of environmental data
- Data interpretation and visualization tools
- Satisfying stakeholder's requirements
FLAMENCO: using previous experience

- Review of state-of-the-art sensor technologies for environmental sensing (air quality, also mobility, noise)
FLAMENCO: participatory environmental sensing

• Current practices, opportunities and challenges for participatory mobility and environmental sensing
  • Learn from other projects
    • Campaign’s purpose
    • Campaign’s coordination
    • Monitoring tools used
    • Data representation and reporting to stakeholders
    • Results obtained
    • Domain specific limitations: accuracy, coverage, interpretation of crowd sourced data

• Conceptualization of the platform
CONCLUSIONS

Input from your experience is warmly welcome!