

MONICA LSP Project

Management Of Networked IoT Wearables – Very Large Scale
Demonstration of Cultural Societal Applications



MONICA Project presentation eXperience for the future

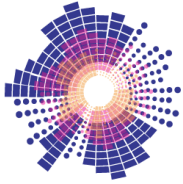
12/4/2019 - Roberto Gavazzi - TIM - Italy



Co-funded by the
European Union



MONICA



Introduction and Objectives of MONICA

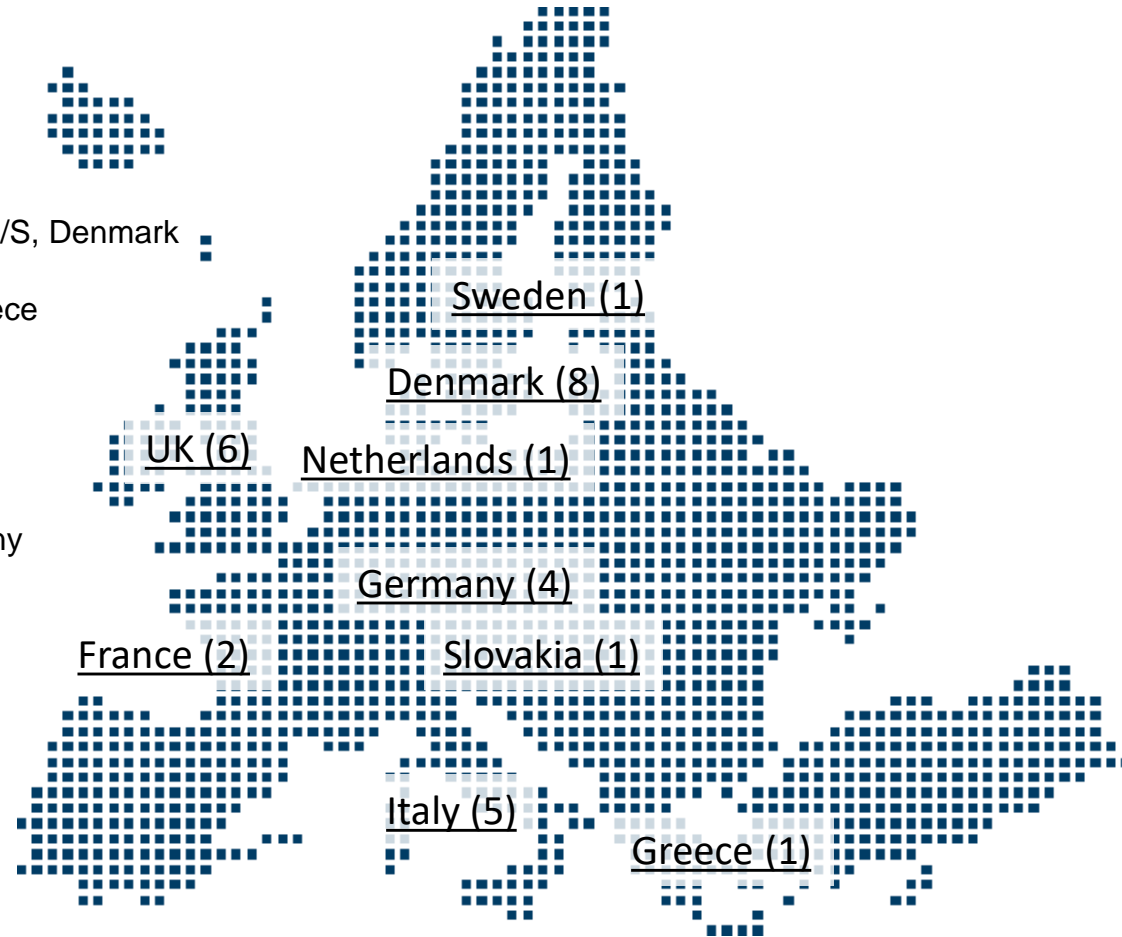
- MONICA is a large-scale demonstration of multiple existing and new IoT technologies for Smarter Living
 - Advanced wireless technologies for **Sound control**, **Safety** (Drones, Cam, Wearables, and smartphone apps), and **User experience** deployed at big, open-air cultural and sport events





Partners

Fraunhofer FIT, Germany
City of Lyon - Acoucit , France
Atos IT Solutions and Services, Slovakia
Br el & Kj er Sound & Vibration Measurement A/S, Denmark
City of Bonn, Germany
CERTH Information Technologies Institute, Greece
CNet Svenska AB, Sweden
Dexels BV, Netherlands
DigiSky SRL UAV & Robotics Systems, Italy
Technical University of Denmark
City of Hamburg, Germany
Hamburg University of Applied Science, Germany
HW Communications Ltd, UK
In-JeT ApS, Denmark
ISMB Istituto Superiore Mario Bella, Italy
City of Copenhagen, Denmark
Kingston University, UK
Leeds Beckett University, UK
Movement Entertainment Srl, Italy
Optinvent S.A., France
Praesidio Group ApS, Denmark
Ring Advocacy ApS, Denmark
Telecom Italia S.p.A., Italy
Tivoli A/S, Denmark
City of Torino, Italy
VCA Technology Ltd, UK
Vaeksthus Zealand, Denmark
Yorkshire County Cricket Club Ltd, UK
Leeds Rugby, UK



29 partners, six cities, more than 16 events

Challenges

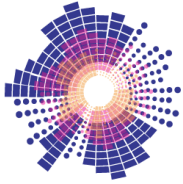


Massive scale operation, demonstrated by 10,000 simultaneous end users

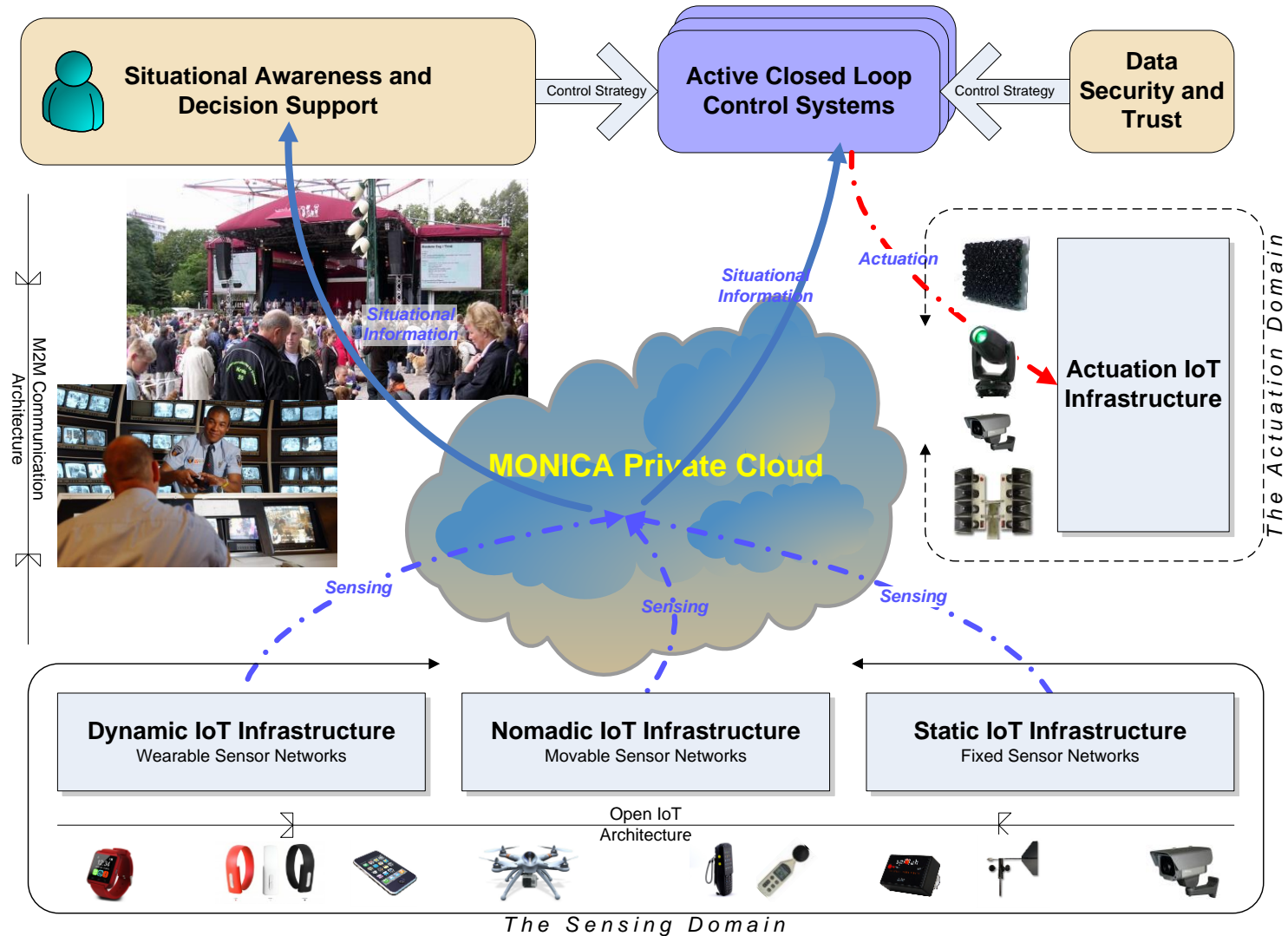
Based on open standards and architecture with only the application layer specific to deployment

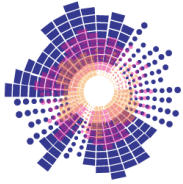
Using cost-efficient wearables and legacy smartphones

Data security and trust management framework, ensuring full data protection and privacy



Achievements: the technical concept

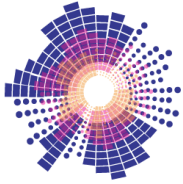




Achievements: Pilot cities and events 2018-2019

- Copenhagen
 - Four Friday Rock concerts at TIVOLI Gardens
 - 500,000 guests per season
- Bonn
 - Rhine in Flames festival
 - up to 90,000 visitors per day
 - Pützchens Markt festival, 5 days,
 - 1 million visitors in total
- Hamburg
 - Hamburger DOM funfair, 3 x 3 days
 - 7-10 million visitors yearly (91 days)
 - Port Anniversary, 2 x 3 days
 - 1 million visitors





Achievements: Pilot cities and events 2018-2019

- Lyon
 - La Fête des Lumières festival, 4 days
 - Nuits Sonores, music festival, 5 days
- Turin
 - KappaFutur Festival, 2 days
 - 20,000 people
 - The Movida, 2 weekends
- Leeds, Headingley Stadium
 - Cricket matches, 2 events
 - 158,000 visitors (2016)
 - Rugby matches, 2 events
 - 250,000 visitors (2016)

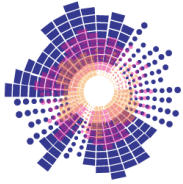




Achievements: Validation

- 100,000 application users of which 10,000 participate in evaluation and validation activities
 - Authorities, organisers and citizens
 - Technology, impact, user acceptance

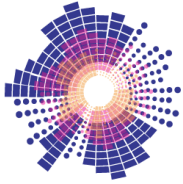




Involving the entire chain of stakeholders

- Security ecosystem
 - Applications that can be used to monitor and manage security before, during and after an event
- Acoustics ecosystem
 - Applications that help monitor and manage the sound before, during and after a performance
- Innovation ecosystem
 - Applications for public engagement and innovation based on open data and development tools





MONICA Sustainable and Replicable solutions

- Roadmaps to ensure further exploitation of MONICA apps
- Additional Business models and cases to show replicability of IoT platforms
- MONICA Platform Plug-in capability to other Smart City platforms
- Start-up services for entrepreneurs
- Open data repositories and tools for citizens and developers





A local example in which MONICA solutions can easily be **replicated**

- **Basic Infrastructure:** IoT Network coverage and evolution toward 5G
- **Safety and Security:** MONICA Solutions based on Drones, Cam, Wearables, and smartphone apps
- **Fan Experience:** MONICA wearables and apps for user experiences (professional and visitor apps)



Amsterdam Innovation Arena



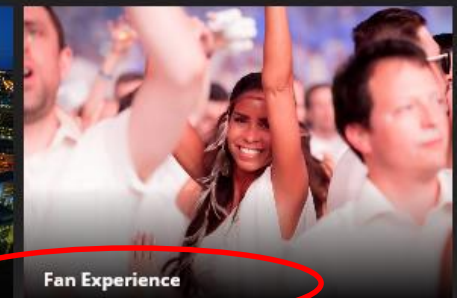
Basic Infrastructure



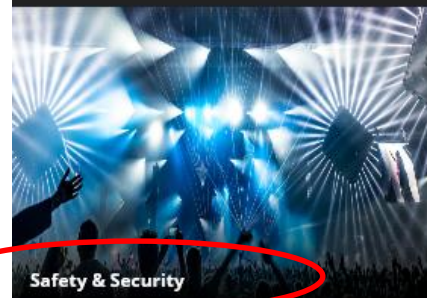
Customer Journey



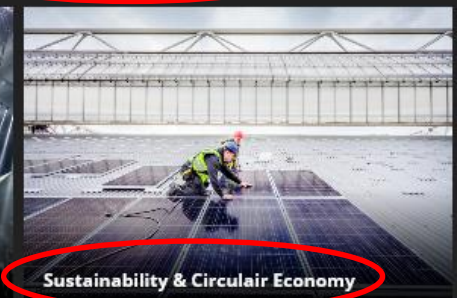
Facility Management



Fan Experience



Safety & Security



Sustainability & Circular Economy



Thanks for your attention and time!!!

**For any information: Roberto Gavazzi – TIM Italy – Phone:
+393357669704 - Email: roberto.gavazzi@telecomitalia.it**

All rights reserved.

All copyright for this presentation are owned in full by the MONICA Project.

Permission is granted to print material published in this presentation for personal use only. Its use for any other purpose, and in particular its commercial use or distribution, is strictly forbidden in the absence of prior written approval.

MONICA has received funding from the European Union's Horizon 2020 Framework Programme for Research and Innovation under Grant Agreement No 732350.

Possible inaccuracies of information are under the responsibility of the project. This presentation reflects solely the views of its authors. The European Commission is not liable for any use that may be made of the information contained therein.

Please see us here: www.monica-project.eu