### Digitalization in transport

Two use cases from Bologna

4<sup>th</sup> Florence Intermodal Forum

What role for digitalization in order to achieve and intermodal level playing field?



### Who is SRM?

SRM is the local Authority for Public Transport of Bologna

Activities and functions:

- To prepare and manage the tenders for Public Transport and for parking service
- To award the services
- To manage Service Contracts and their financial flows
- To monitor delivered services by the awarded operators
- To manage and plan real estates directly owned (all the networks, infrastructures, plants)
- To support local bodies in mobility planning
- To manage European Projects on mobility related issues



### Membership











### Projects





### Projects





### Projects





# ICT in projects

- Behaviour change campaigns
- Support to planning on cycling and behaviour assessment
- Improvement of quality on PT services
- Connected cars
- Intelligent camera for automatic petty crimes detection
- Flexible transport system operation and optimisation
- Strategic risk assessment on infrastructures



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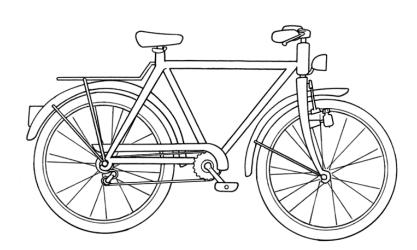


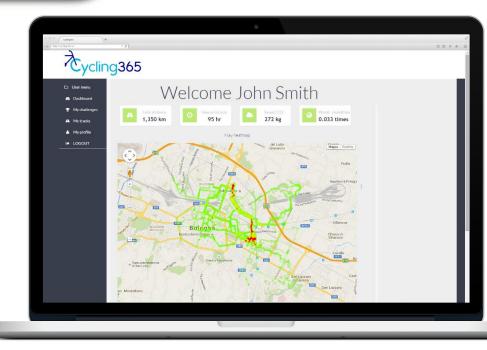
### Use case 1



#### gamification:

The use of game mechanics & rewards for non-game applications in order to increase engagement and loyalty.









The European Cycling Challenge – ECC2015 is a urban cyclist team competition which works on the basis of cities competing against each other, with any trips logged in the city accruing towards their leaderboard.

Born as a pilot project in the CIVITAS Mimosa framework, is now an annual event which takes place from 1 to 31 May.

The tool used is a GPS based App – Cycling365

Some figures from 2015 edition:

- **39 cities**
- 26,000 participants
- 2,5M km tracked





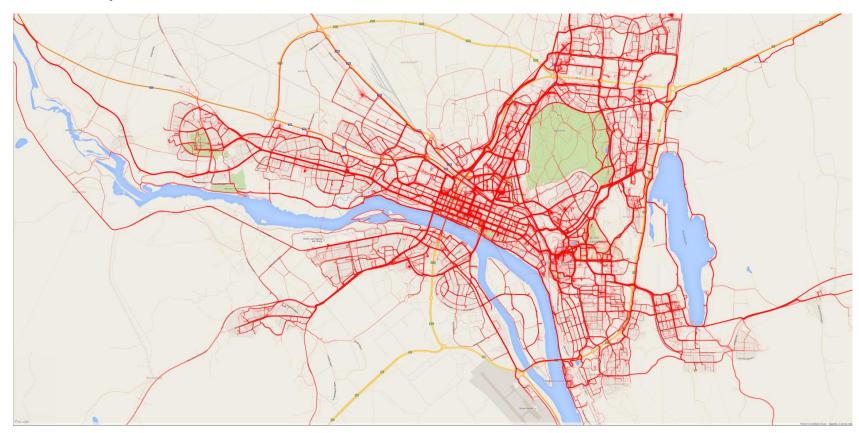
Heatmap - BOLOGNA







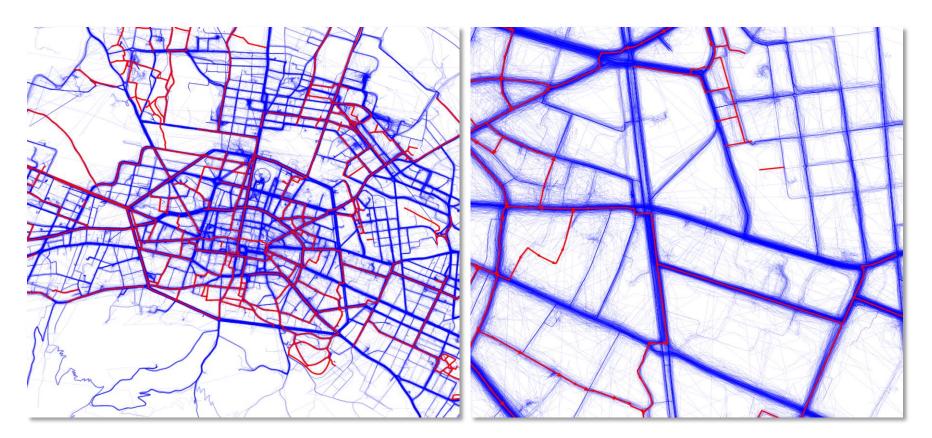
Heatmap - UMEA







Urban planning vs. user experience







#### **Origins/Destinations**







#### Bike Lane or Road?







Impact of investment on infrastructure



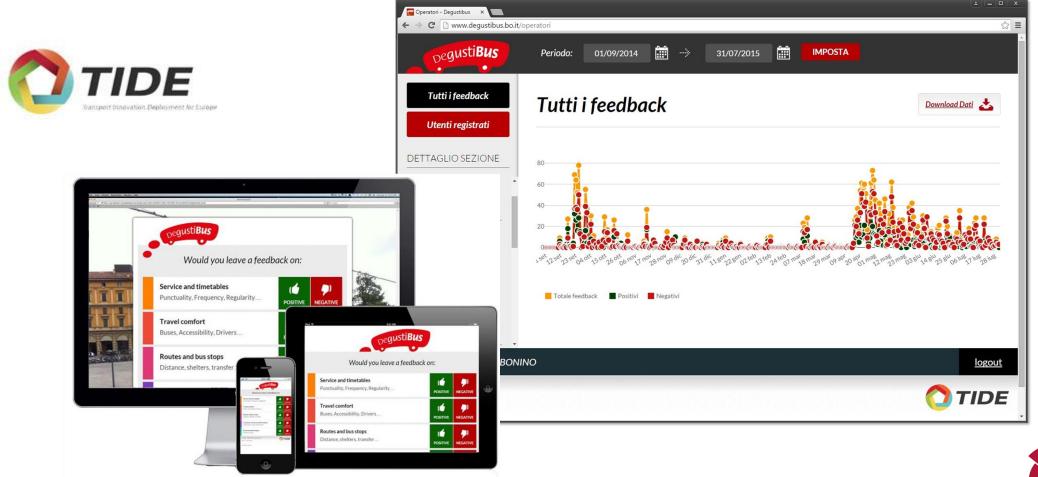


#### EUROPEAN CYCLING \* \* \* **GIS Advanced elaborations** CHALLENGE در 😫 🕅 🐮 الجار 🚛 📩 🖵 🛲 🖾 📲 🔤 در 🕲 🔊 🕲 🔍 🕲 🕲 🕲 🖓 الجار 🕹 🕲 🖓 الجار 🕹 🕲 🖓 الجار 🕹 🖓 🛃 الجار 🕹 🖓 🛃 الجار 🕹 🖓 🛃 الجار 🕹 الجار 🛥 🗃 🖷 🖷 🖷 🖷 🐨 🚳 👌 🌓 🛄 🚵 V: 🖬 🍕 🖉 😋 🧐 🍕 🌾 7. 🔹 🛐 创 🤏 🔻 🖬 🖬 🕞 roads\_with\_buffer\_and\_counts roads\_with\_buffer roads with trips projecte Speed: 0.0 - 2.0 km/h Speed: 2.0 - 3.6 km/h Speed: 3.6 - 9.5 km/h OGRGeoJSON LineStrin •• 🛃 🕅 🔩 ان 🚛 📩 ان 🚛 🗂 🖓 📲 🔤 📲 🖓 📲 🕲 🖉 😓 🖓 😓 🖓 📲 🖓 trips\_cleaned OpenStreetMap 🔤 🔍 👶 🧬 🛗 📥 🖓 👭 🥦 🧖 🖓 🗬 🖓 🥵 🎭 🛸 🔳 » S Coordinate: Scale 1:25.000 - Rotation: 0,0 🚔 🕱 Render 🛛 EPSG:3857 (OTF) 🗨 1259089.5541186 S Coordinate: Scale 1:25.000 - Rotation: 0,0 📥 🗶 Render 🛛 EPSG:3857 (OTF) 🔍 1259694,5540932



### Use case 2

#### DEGUSTIBUS based on European standard UNI EN 13816





# How does digitalization affect transport and the competition between transport modes?

- In a win-win scenario digitalization affects transport and the INTEGRATION between transport mode
- Data gathering and exploitation are strictly related to the quality of service delivered from several point of view
- Public authorities should have the task to facilitate digitalization at local level thinking global (standards, benchmarks, etc.)





### Many thanks

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