



RTPI + BUSINESS INTELLIGENCE IMPLEMENTED ON PUBLIC TRANSPORT SYSTEMS

28 February 2018

10:00



AUTOCORB





1. REQUIREMENTS



USERS

- Info on panels
- Info in App
- Info on the bus
- Google maps info



OPERATOR

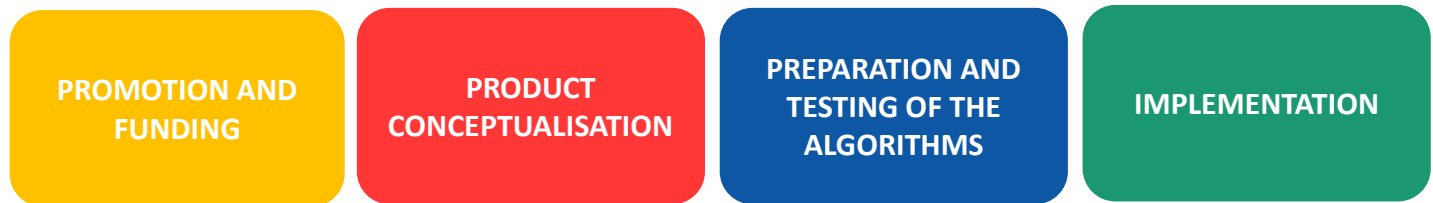
- Operational control centre
- Reports per driver
- Operation alerts
- Real-time delays
- Punctuality reports



PUBLIC AUTHORITIES

- Visual reports (GIS)
- Quality indicators (KPIs)
- Aggregate punctuality reports

2. PARTICIPATION IN THE PROJECT



Ideal line

e8 Barcelona - Corbera

- C. Urgell 229
- Av. Diagonal - Dr. Fleming
- Av. Diagonal - Dr. Ferrán
- Av. Diagonal - Facultat d'Empresarials
- Av. València 14-16
- Quatre Camins Carretera
- N-340 - Ciments Molins
- N-340 - Granja Garaña
- Poligon de Can Mascaró
- Urbanització de Can Vidal
- Pl. Anselm Clavé
- Av. Catalunya 42
- Av. Catalunya 114
- C. de Rafamans
- C. dels Horts
- Rotonda de Hans Christian Andersen
- Pont de Can Rafel
- Can Xorra
- Ctra. Barcelona - Font Vella
- C. Andreu Cerda / C. de Font Vella
- Can Fisa
- Ctra. de l'Amunt - Cotxeres

e8

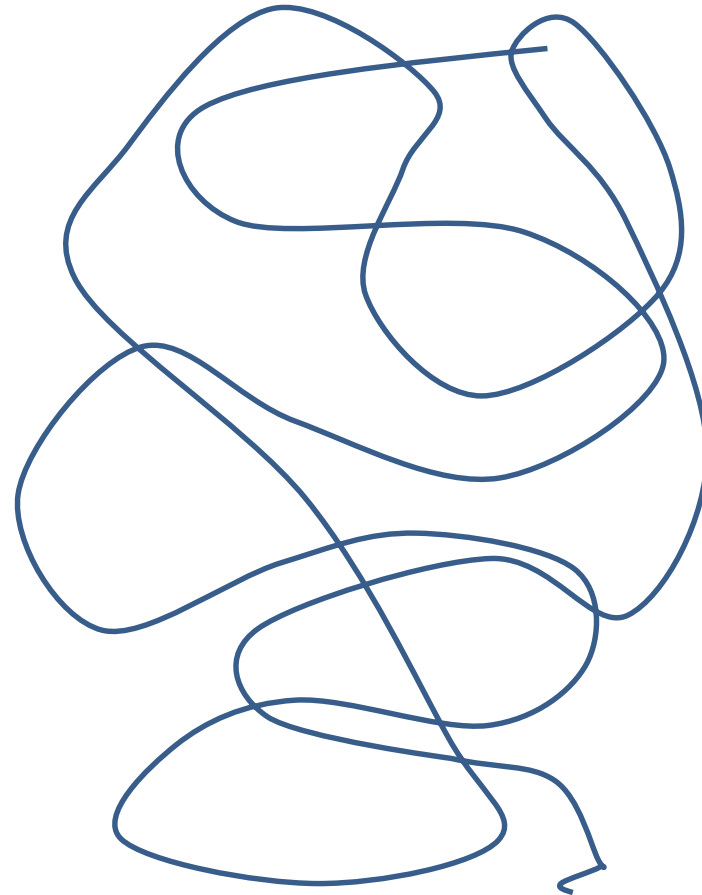
Ideal line

Real line

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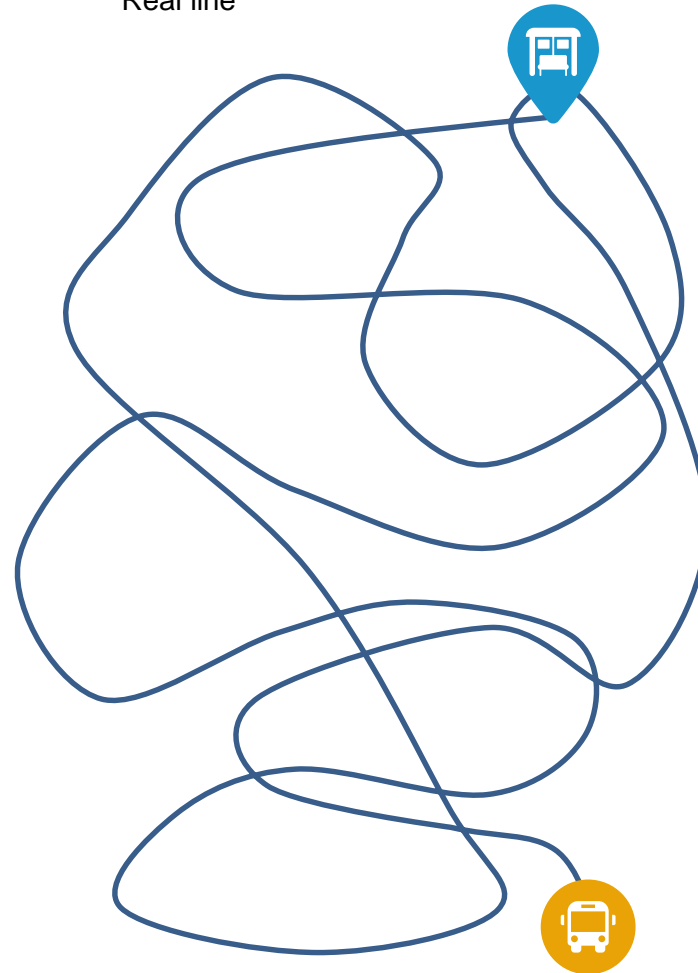
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Real line



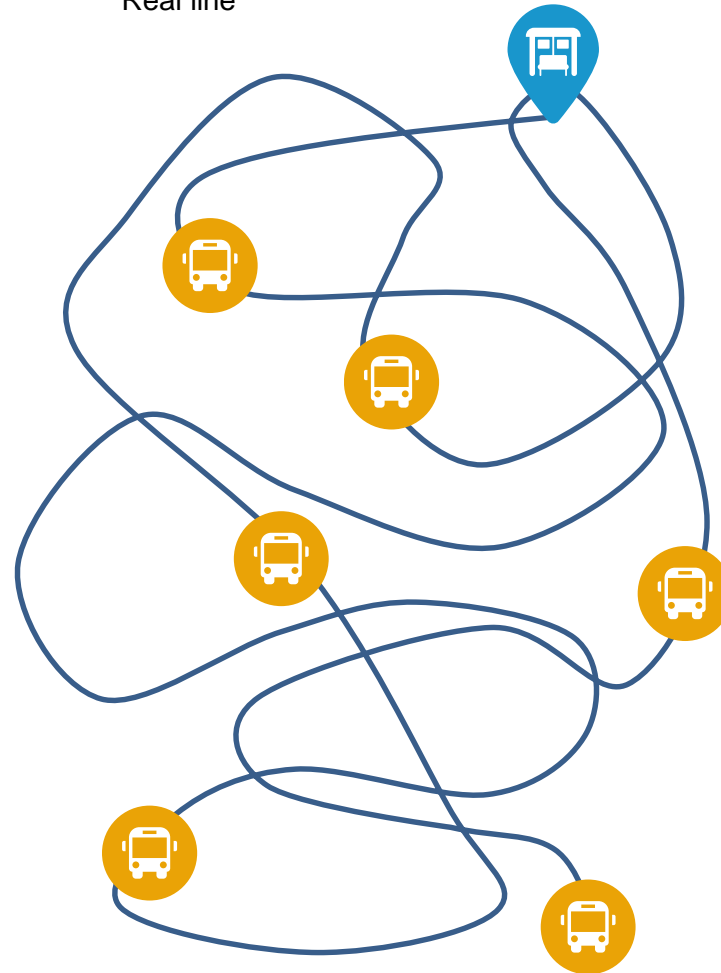
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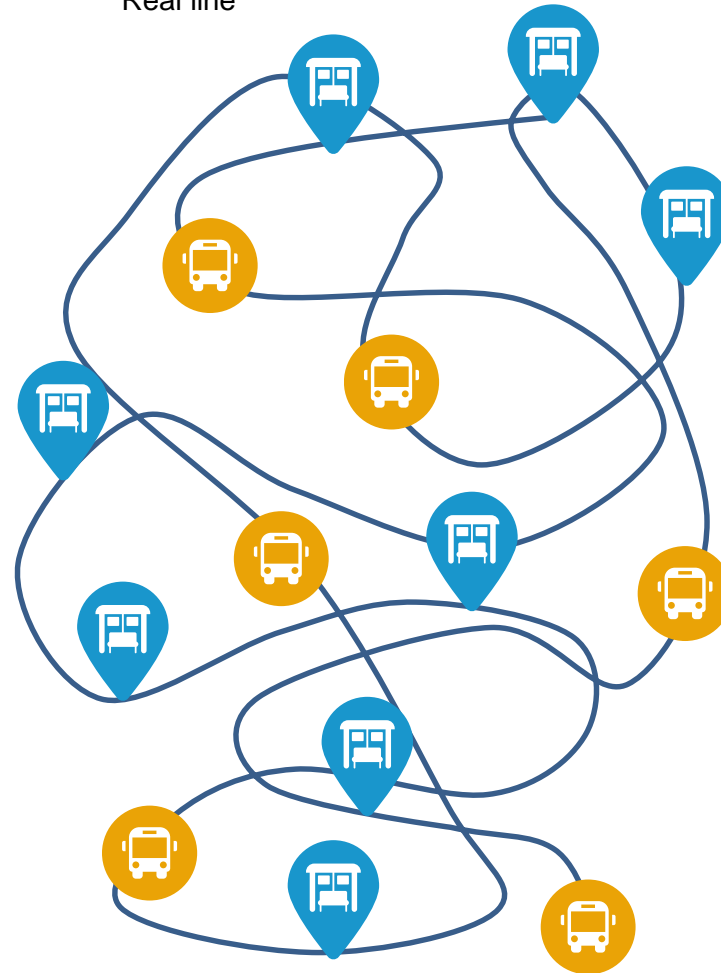
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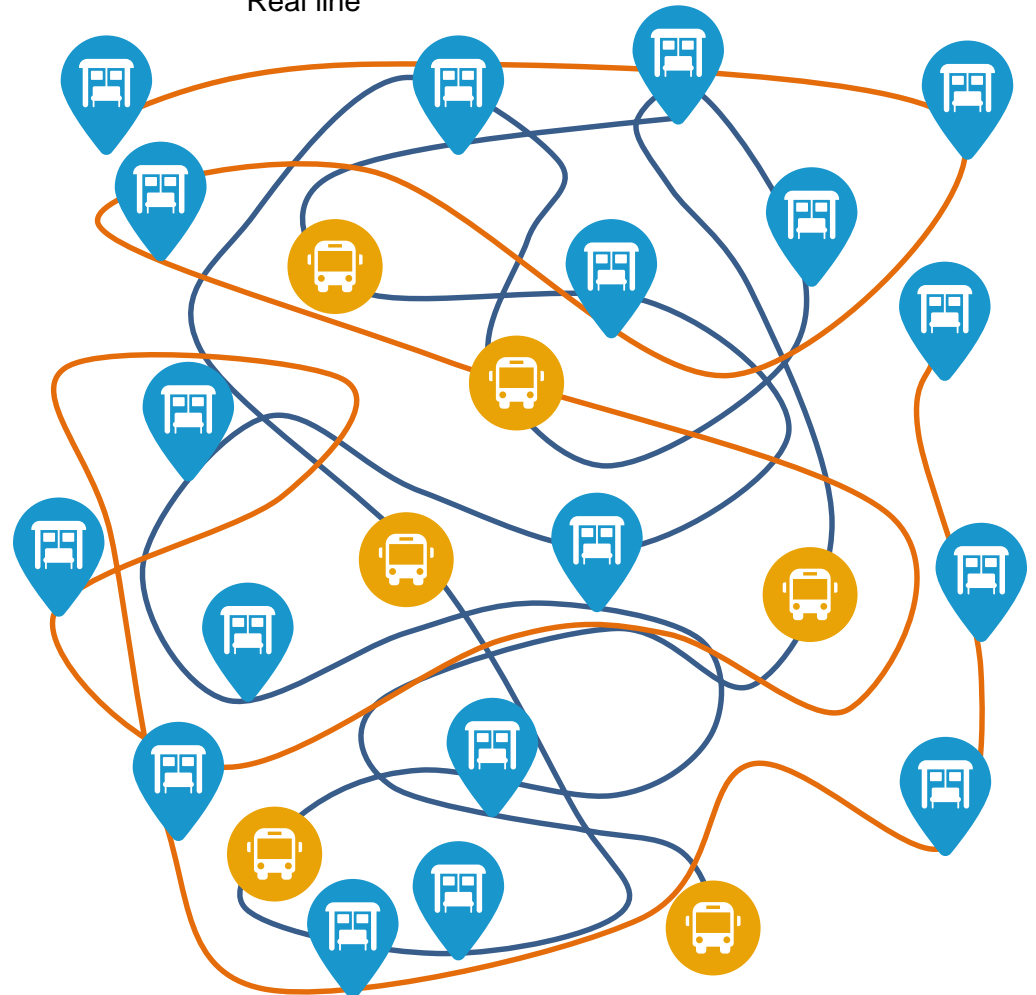
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e8

Real line



2.1 PRODUCT CONCEPTUALISATION

Fast implementation: Initial automated GTFS-based configuration (hours), minimisation of on-board equipment (GPS).

No mapping: The system requires no mapping. The lines themselves work as roadways. The basic mapping displayed will be Google Maps or Open Street Maps.

Strong and reliable: In order to be useful, the solution must be strong and generate top-quality information. Info refreshed every 10s. Review and correction of GPS data.

Maintenance-free: Minimise management and hardware maintenance.

2.1 PRODUCT CONCEPTUALISATION

Self-evaluation: A self-evaluation tool will be required for real-time control of information quality.

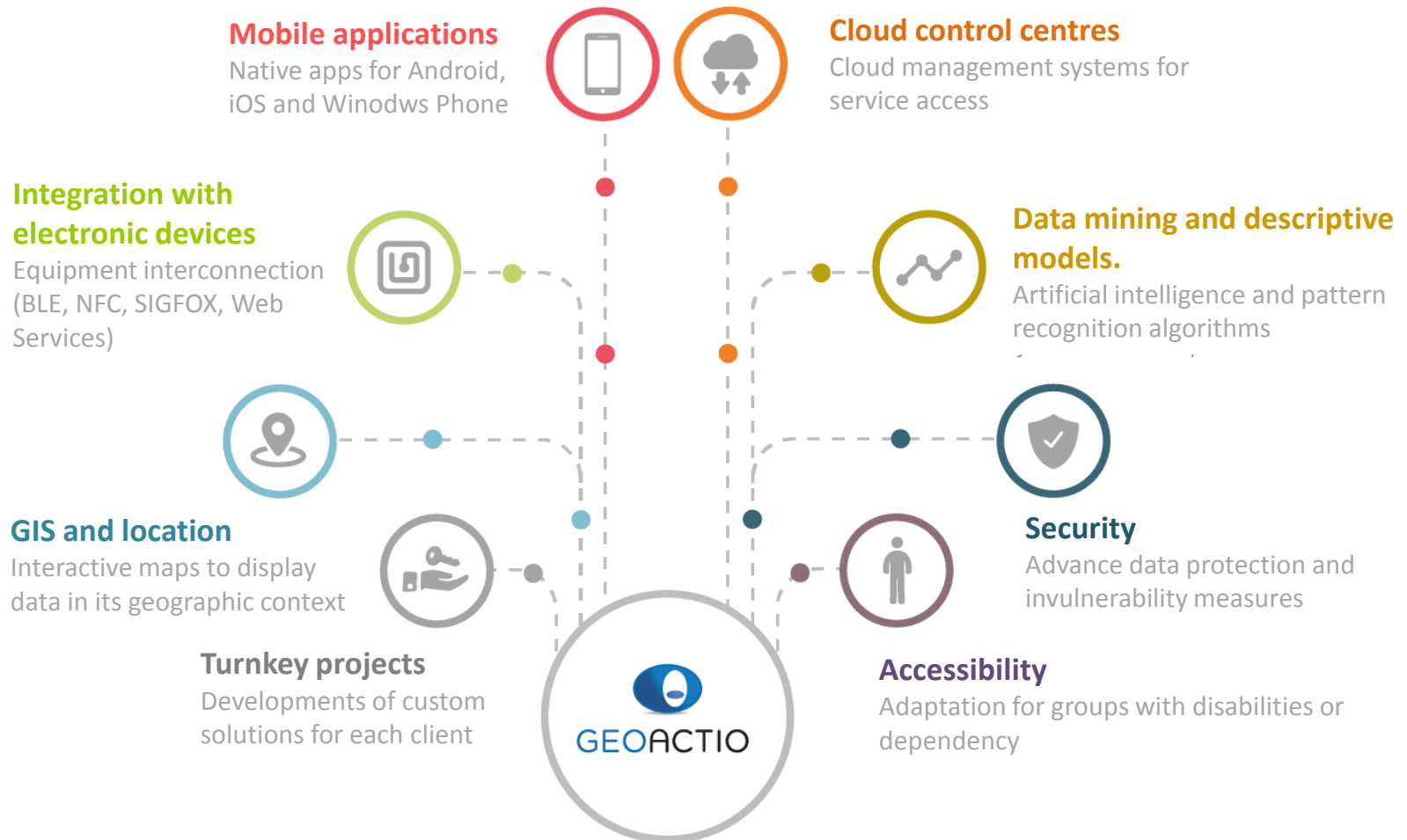
Integratable: It must be possible to integrate the solution into ERPs and other on-board systems.

Transparent: The appropriate Public Authorities must be able to access the aggregate and disaggregate service information.

Universal: Operational for any line type, regardless of its nature.

GEOACTIO





3. PREREQUISITES (I)



Native Cloud: Applications designed with specific cloud computing architectures to divide tasks into separate services at different locations.



Modular: Data model for progressive scaling in the use of the different system components: Operational Control Centre, Apps, On-board equipment, etc.



Interoperability: Data architectures designed for the easier exchange of information between different data sources and the integration of external services.



Data exploitation: Automatic extraction of statistics, reports, quality indicators and activity maps for the services provided.

3. PREREQUISITES (II)



Usable and attractive: Graphic interface with visual components to guarantee a positive user experience when interacting with the platform.



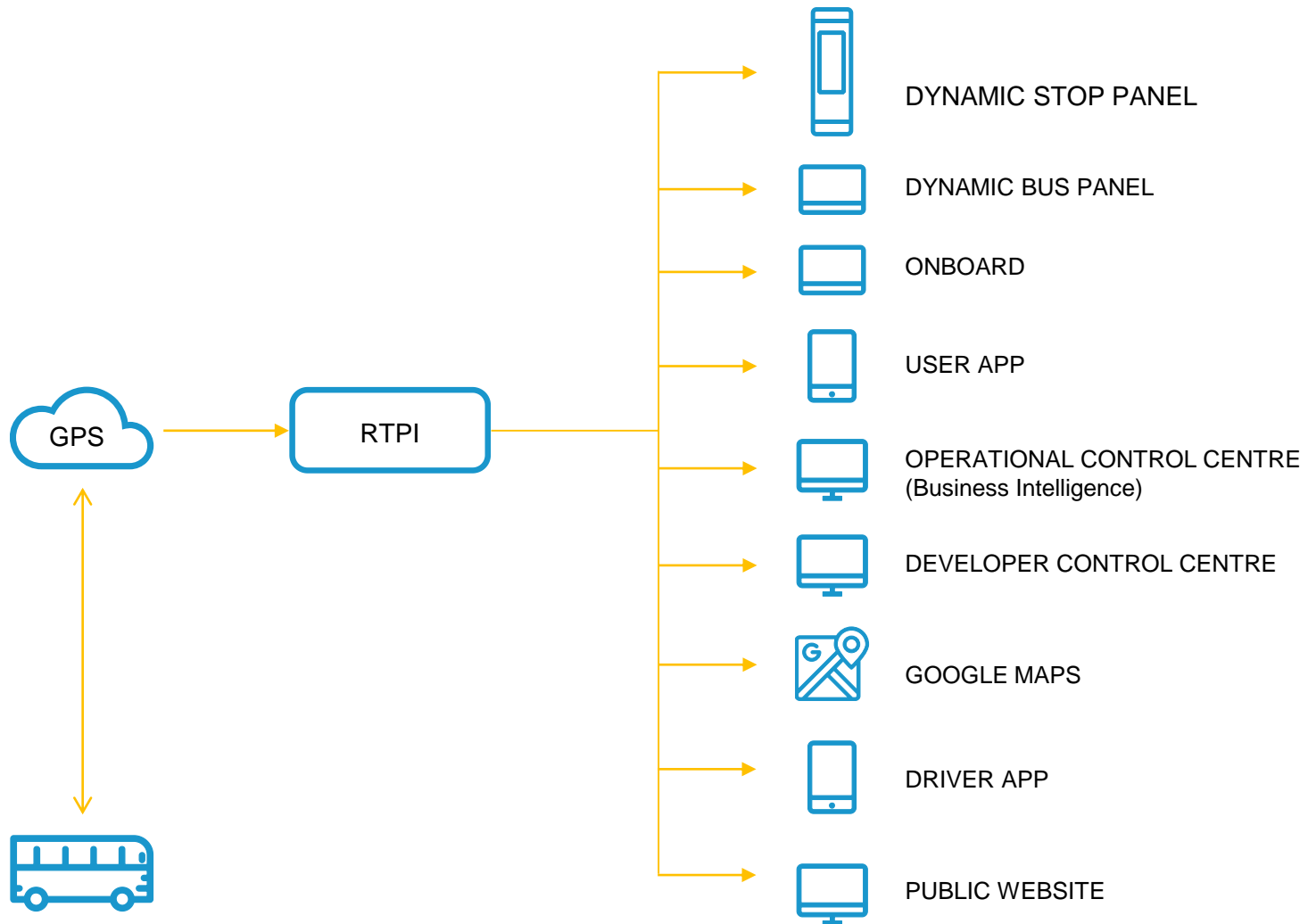
Data protection: Communications with high security levels and adaptation to the new General Data Protection Ruling (data encrypting, two-factor authentication, etc.).

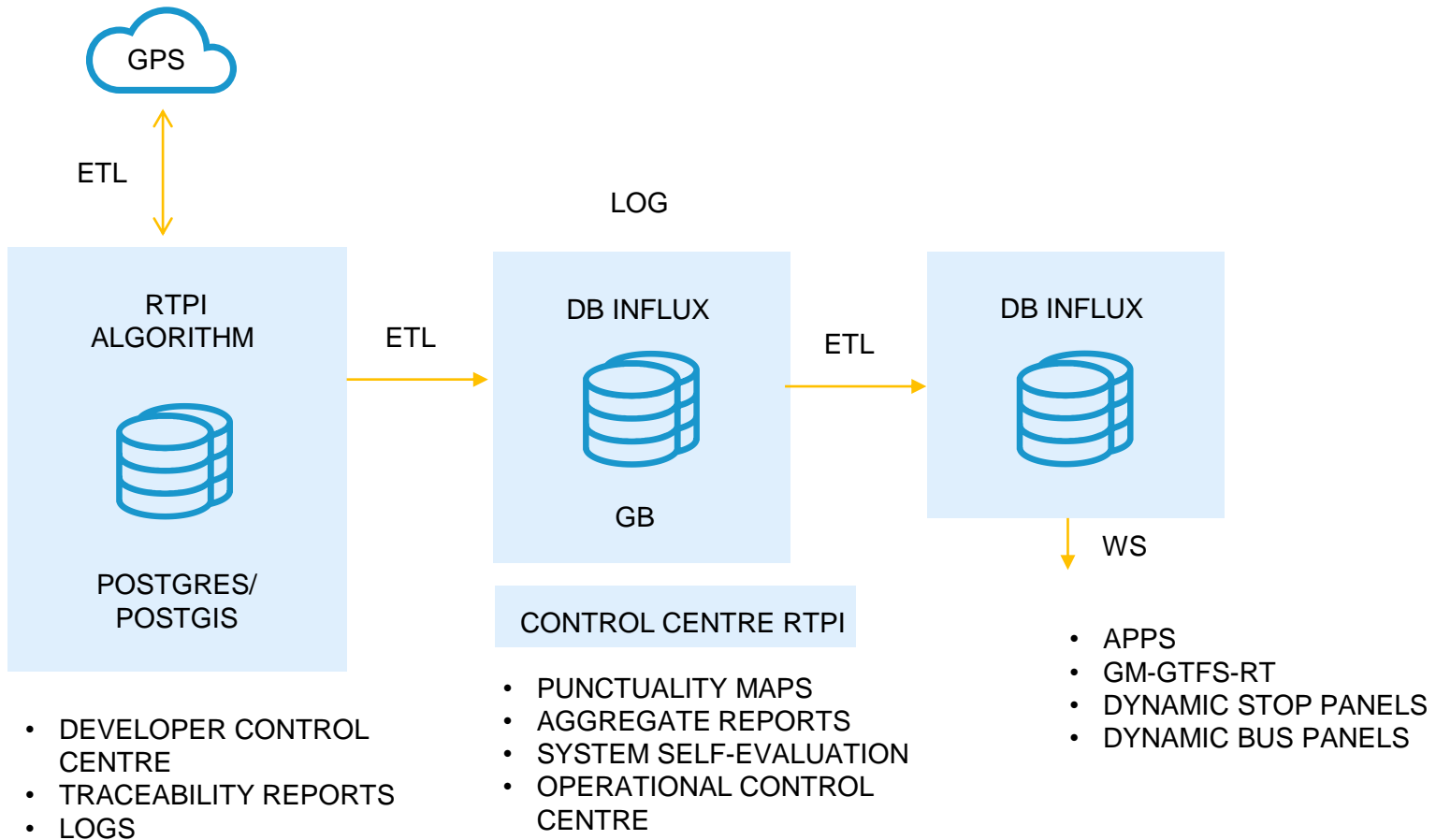


User roles: Access permission control of the different application user profiles (Public Authorities, Operators or Users).

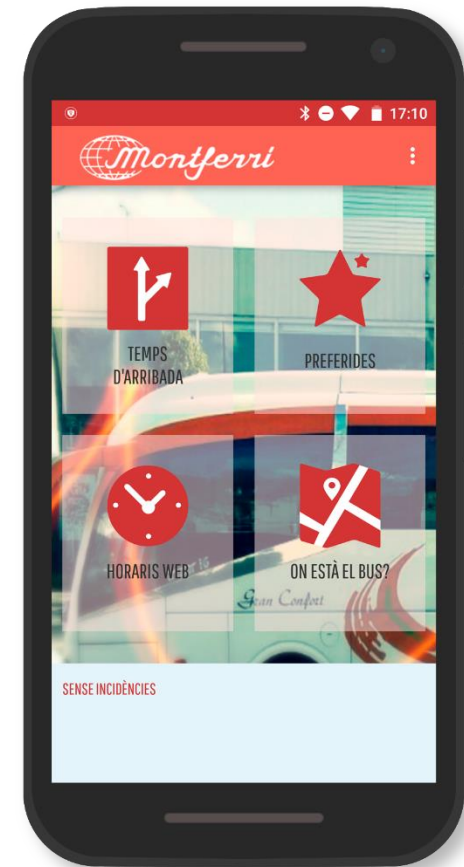
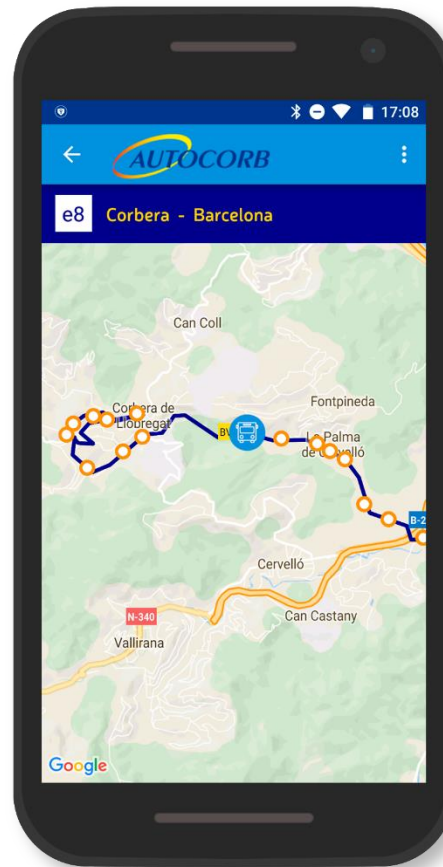


Operating speed: Real-time access to information for greater visibility of the situation and easier decision-making.





4. USER APP



4. USER PLATFORMS

Wearables

Dynamic stop panels

On-board bus panels

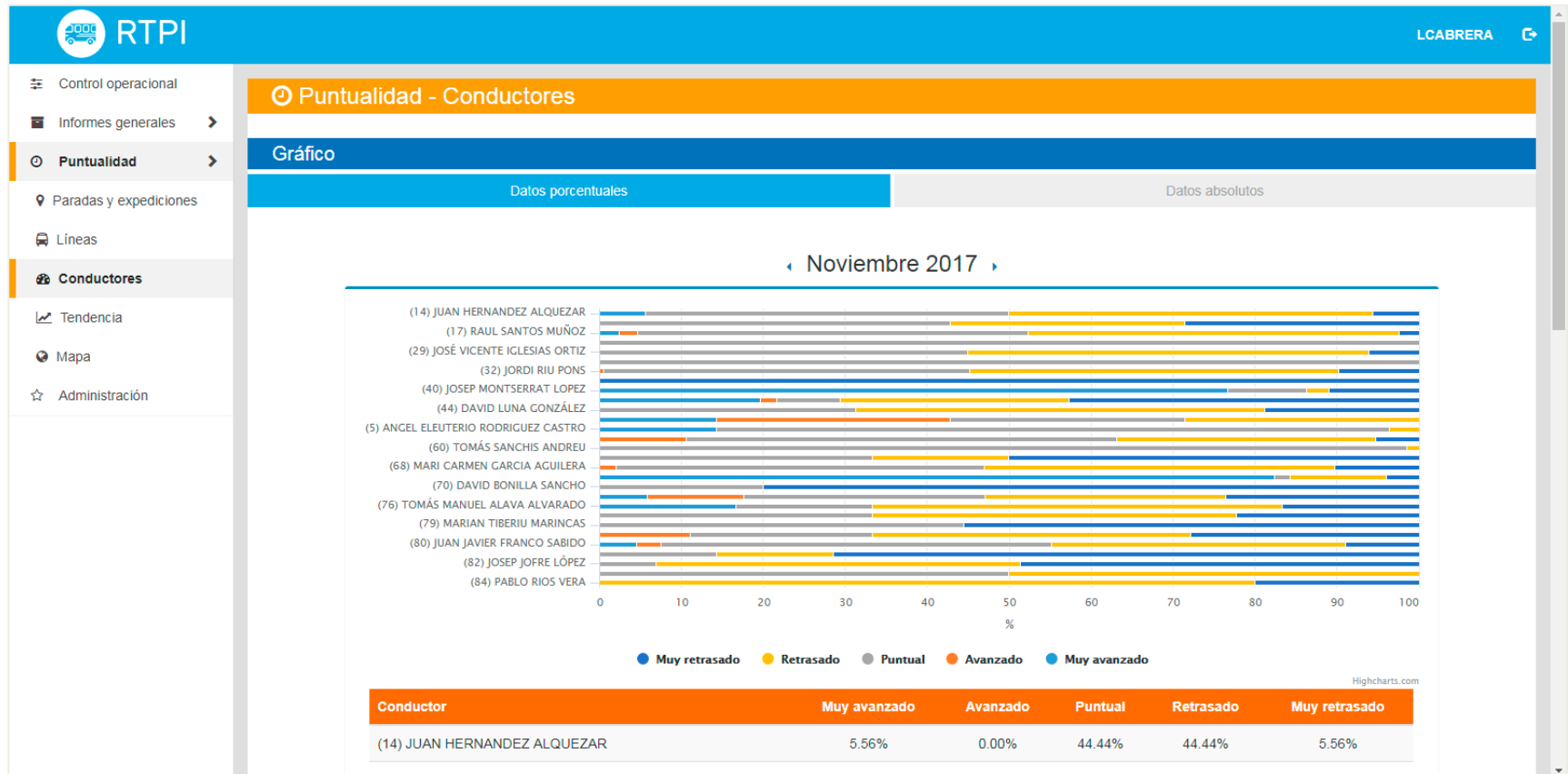
Website



5. OPERATOR

The screenshot displays the 'Control operacional' interface for RTPI. The interface includes a navigation menu on the left with options: 'Informes generales', 'Puntualidad', and 'Administración'. The main area shows a map titled 'Mapa' with various bus routes overlaid. Key routes include 7930 JYF (35), 1088 JVC (35), and 1013 KF (30). The map covers areas such as URBANITZACIÓ EL BONREPOS, CAN MARGARIT, Santa Maria de l'Avall, Fontpineda, La Palma de Cervelló, La Magina, Molins de Rei, LES CONSERVES, CAN ROS, Sant Vicenç dels Horts, URBANITZACIÓ L'ACAMPAMENT, and Can Castany. Major roads like N-340, B-24, and A-2 are also visible. The interface is branded with 'Google' and includes a footer with copyright information: '© 2018 Google, Inst. Geogr. Nacional'.

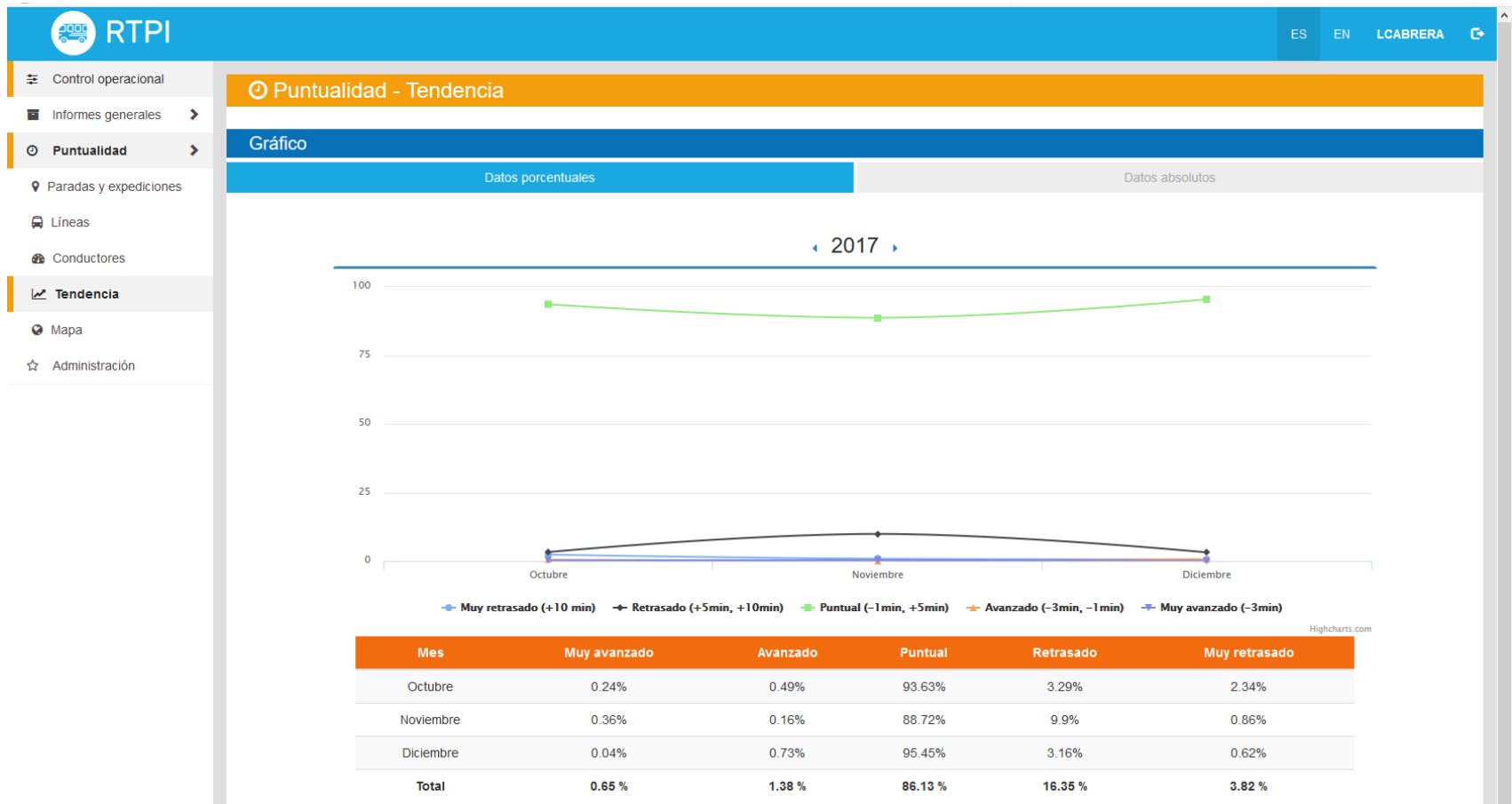
5. OPERATOR



6. PUBLIC AUTHORITIES

The screenshot displays the RTPI (Real Time Public Information) system interface. The main area is a map titled "Mapa" showing a network of bus routes and stops in the Sant Vicenç dels Horts area. The routes are color-coded (blue and green) and marked with bus numbers. Key locations on the map include CAN MARGARIT, Santa Maria de l'Avall, Fontpineda, PALMA, Santa Rosa, PUIGMONTMANY, LES ROVIERES, URBANITZACIÓ L'ACAMPAMENT, and LES CONSER. The interface includes a sidebar with navigation options: Control operacional, Informes generales, Puntualidad, Paradas y expediciones, Líneas, Conductores, Tendencia, Mapa, and Administraci3n. The user's name, LCABRERA, is displayed in the top right corner. The map is powered by Google, with a copyright notice for 2018.

6. PUBLIC AUTHORITIES

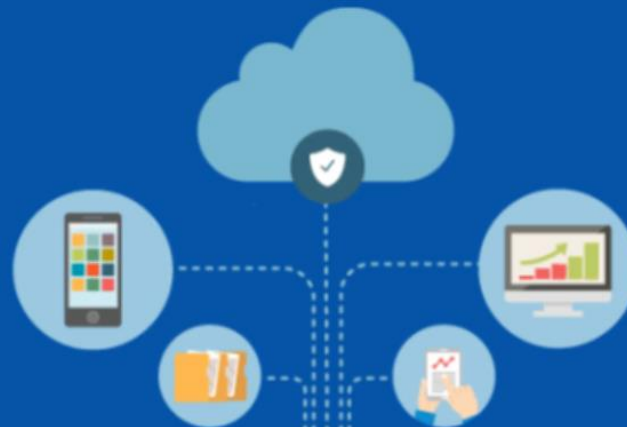




SOLUCIÓN RTPI + BUSINESS INTELLIGENCE

28 de Febrero de 2018

10:00





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