“Enhanced Galileo Green Lane platform”

Alberto Fernández Wyttenbach
Previous “Galileo Green Lane” solution

- Technological solution to support the freight transport community, operational since the 1st wave of the pandemic
- Monitor the EU Green Lanes: max. 15 min. to cross borders
- Real-time visualization crossing time in 187 border points

Problems remain in specific (and NEW) borders!

New contractor* selected at the end of 2021 aiming to develop a more ambitious solution and data by mid-2022

New platform under testing, operational by mid-2022

1. **Addition of new border crossings (in addition to the TEN-T map) and testing:** for instance, Western Balkans countries requested the addition of their main internal border crossings.

2. **Automatic PDF generation** of the daily reports to EC

3. **Addition of other points of interest (e.g. resting areas, refuelling stations):** Member States expressed interest to extend the crossings for other purposes, linked to monitoring of traffic in logistics hubs

4. **Addition of National Traffic Information Datasets:** they provide key information and are accessible on a national data point, typically operated by the police, and are easily accessible and integrated.

5. **Addition of Floating car data:** real-time traffic information retrieved from passenger cars and trucks through from private entities: Google Waze, HERE Technologies, INRIX,...

6. **Development of iOS app version** for Apple smartphones

7. **Develop an application interface (API):** in order to permit other relevant stakeholders to access and distribute Galileo Green Lane data

8. **Engagement activities** for border authorities, freight carriers and automotive clubs (passenger cars)
Solution overview

- **Microservices architecture:** separate components deployed individually
  - ✔ Isolates functionality
  - ✔ Simplifies re-use and composition
  - ✔ Best technology for each purpose
  - ✔ Expandable

- **Platform independent:** integrates Open-Source components and ad-hoc code
  - ✔ Deployment on cloud or on premise
  - ✔ Based in Java stack
  - ✔ IA components in Python
  - ✔ Web applications in pure HTML
Mobile applications

- **Driver application:** informs drivers of border crossings and POI status
  - Anonymous
  - Locates nearby POIs
  - Provides POI details
  - Calculates routes
  - Receives messages from borders
  - Uploads information near borders

- **Enforcer application:** separate application for officers at the border
  - Authenticated
  - Updates border crossings delay status
  - Checks border crossing status
  - Sends messages to nearby drivers
Data acquisition modules

- Integration of heterogeneous data sources from external data sources and provides standardized interfaces

- National Access Points / Traffic auth.
- Port / Airports / Railway operators
- Border management agencies
- Open datasets
- Highway operators
- Transport companies
- Traffic data providers
Web platform/reporting

- **Dissemination Website**
  - Static HTML + interactive map
  - OpenStreetMaps
  - OGC standards (TBD)
  - Report generation
  - Messaging

- **Administrative Website**
  - Pure HTML
  - Can be hosted in any server
  - Integrated through JSON REST
  - System settings and POIs / static information monitoring
  - User management
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Pilot testing with potential users

- Very basic pilot testing in basic operational capacity along the Atlantic corridor
  - Several borders and points of interest for the Transport Community already identified:
    - Maritime ports
    - Railway Hub
    - Cargo Terminal intern. airport
    - Border crossings
    - Logistic Hub
    - Parking
    - Service stations
  - Effort reduced in order to increase data sources (Sixfold, HERE, TomTom)
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