# “Enhanced Galileo Green Lane platform”

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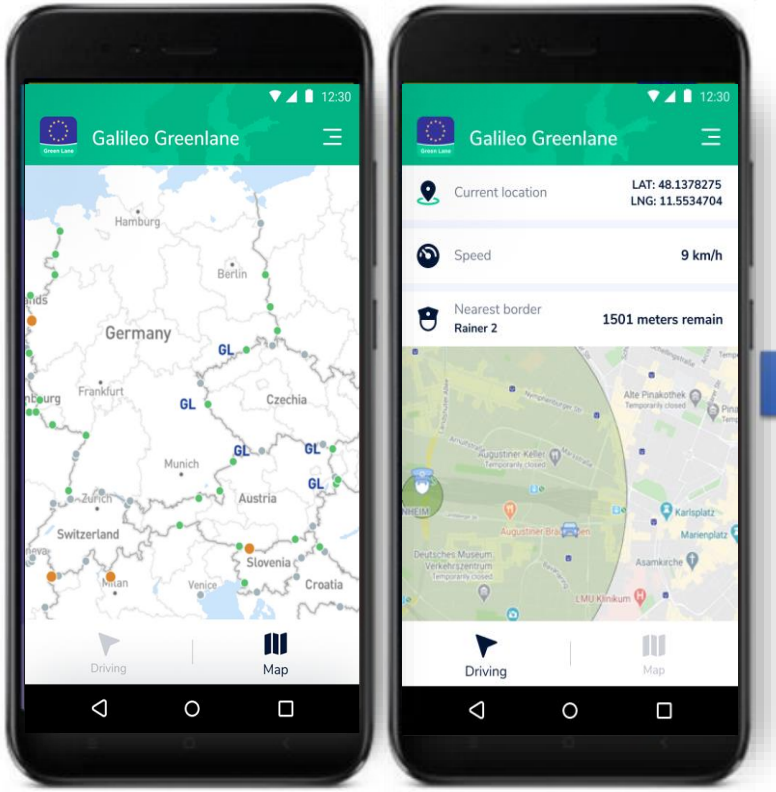
*Alberto Fernández Wyttenbach*

29 March 2022

# 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

*https://www.gsa.europa.eu/enhanced-galileo-green-lane-design-and-implementation

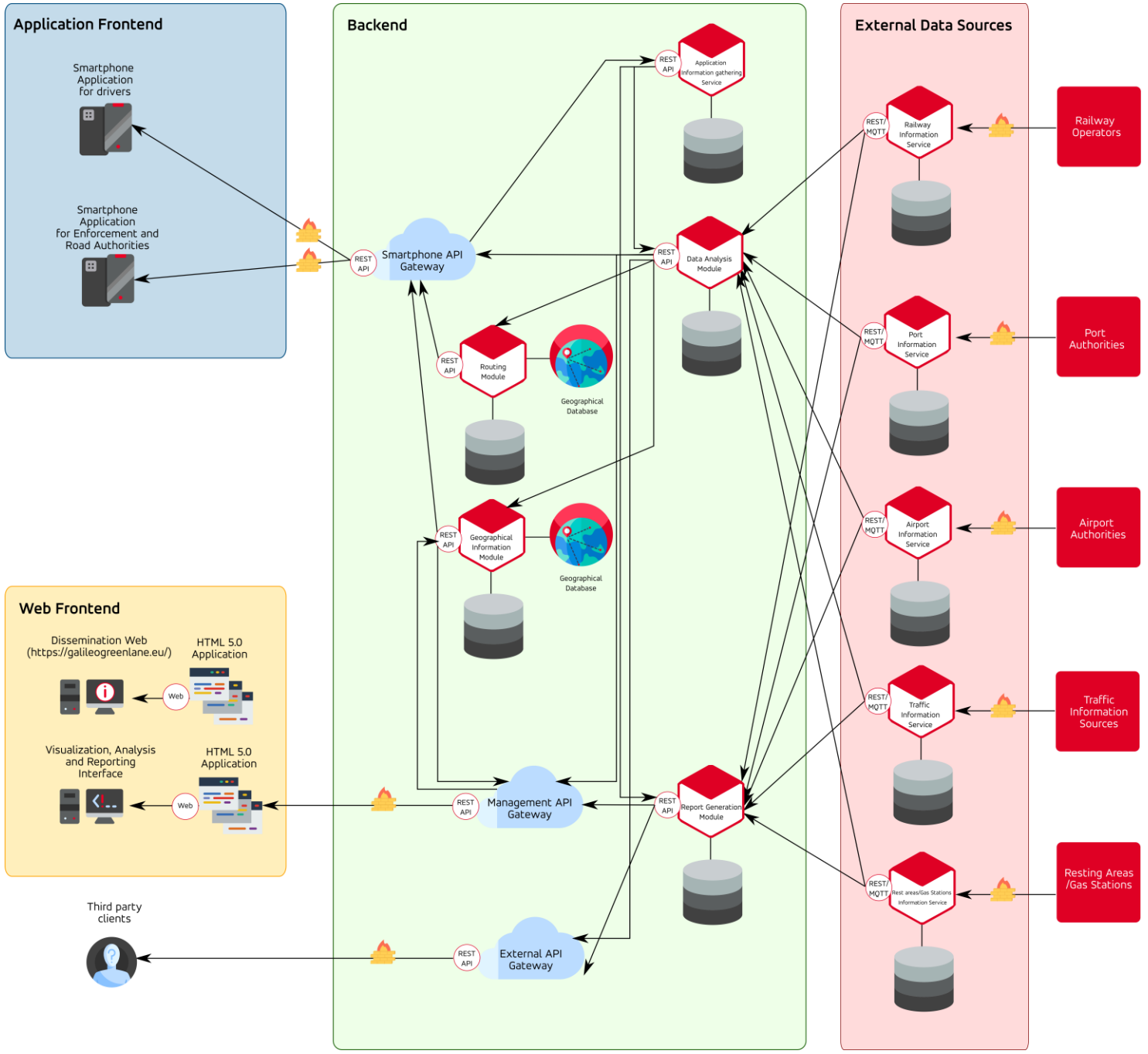
# New platform under testing, operational by mid-2022

PRIORITY

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)

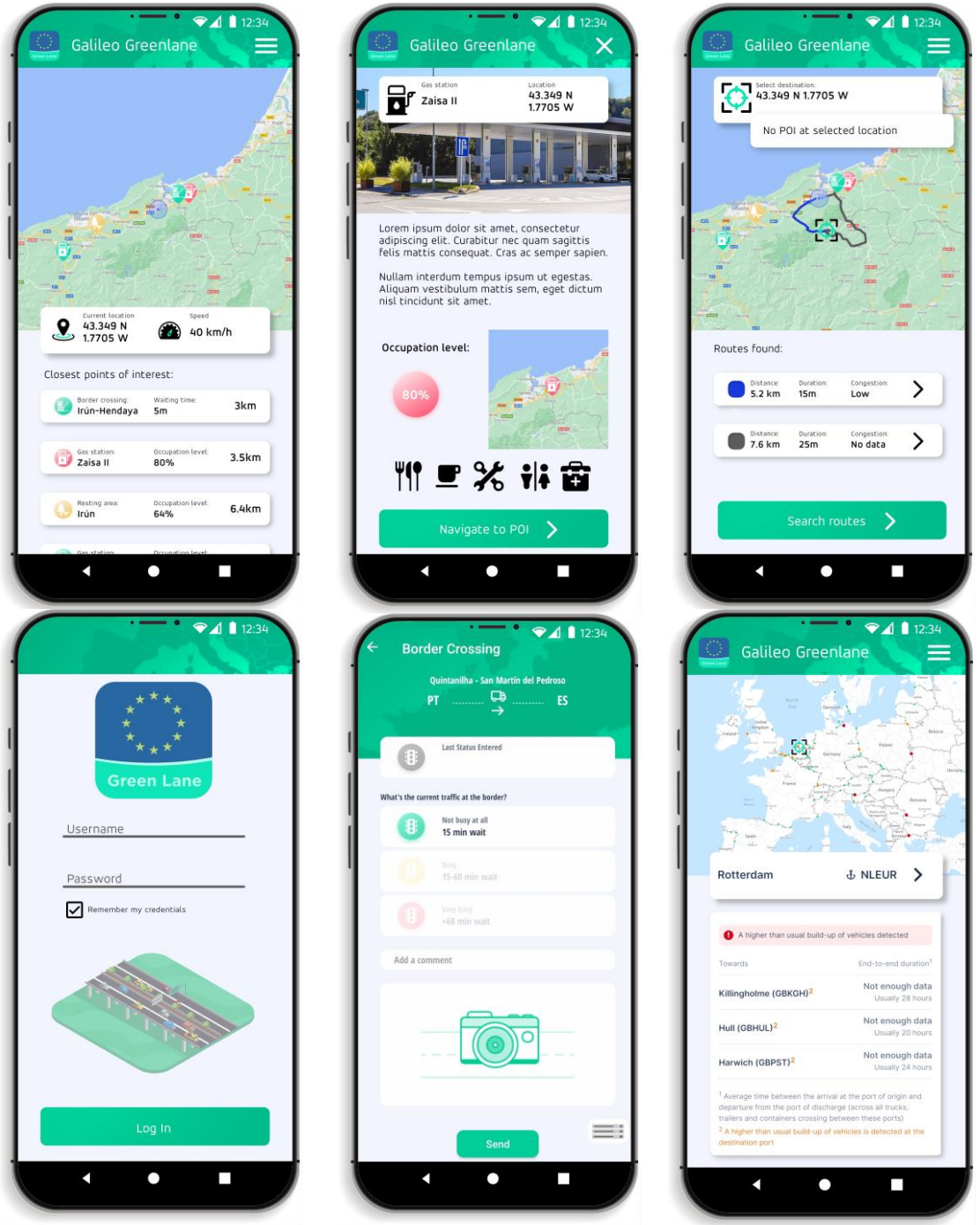
# Solution overview

- 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

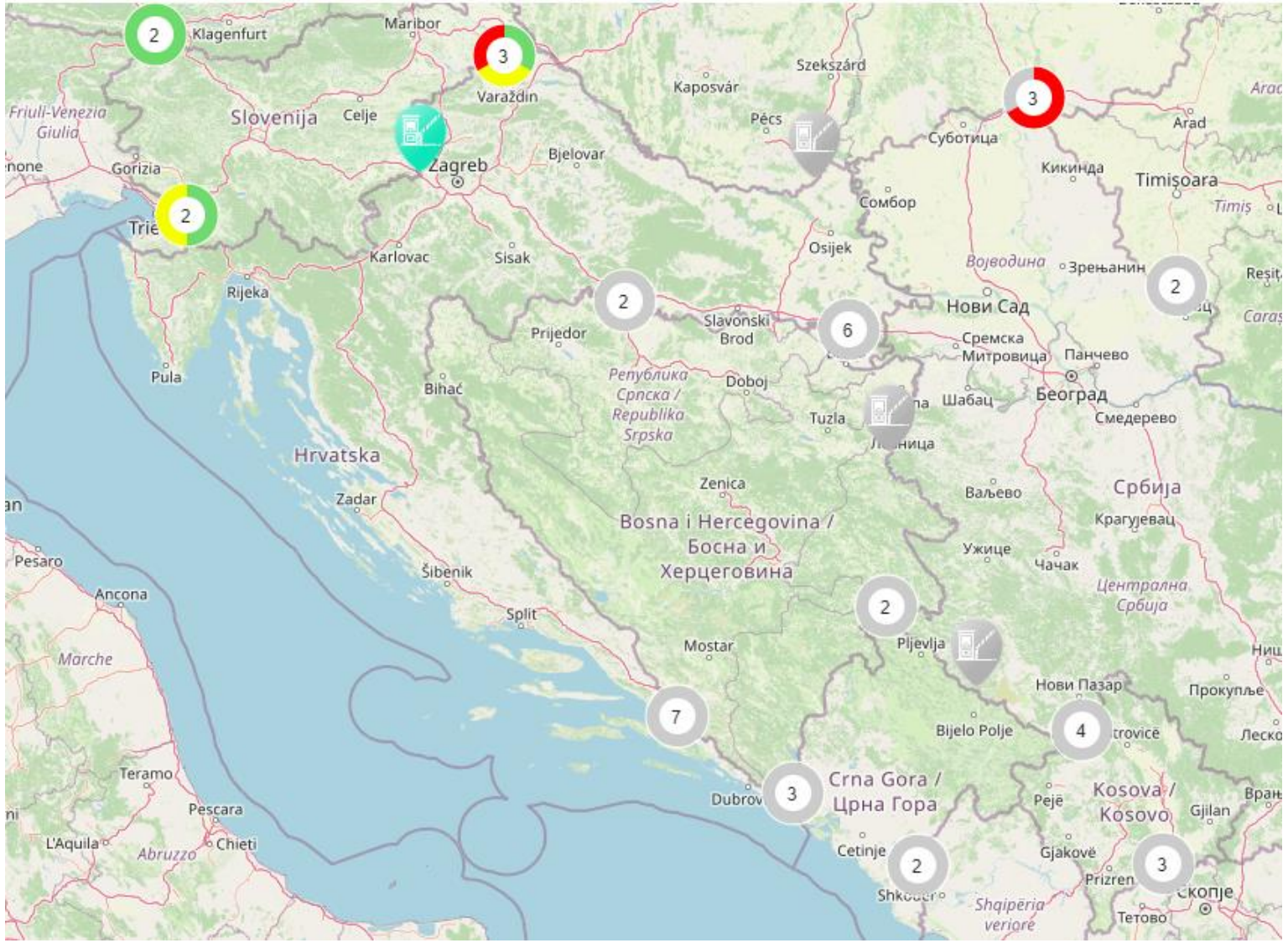
- Driver application: informs drivers of border crossings and POI status
  - ✓ Anonymous
  - ✓ Locates nearby POIs
  - ✓ Provides POI details
  - ✓ Calculates routes
  - ✓ Receives messages from borders
  - ✓ Uploads information near borders
- Enforcer application: separate application for officers at the border
  - ✓ Authenticated
  - ✓ Updates border crossings delay status
  - ✓ Checks border crossing status
  - ✓ Sends messages to nearby drivers



# Data acquisition modules

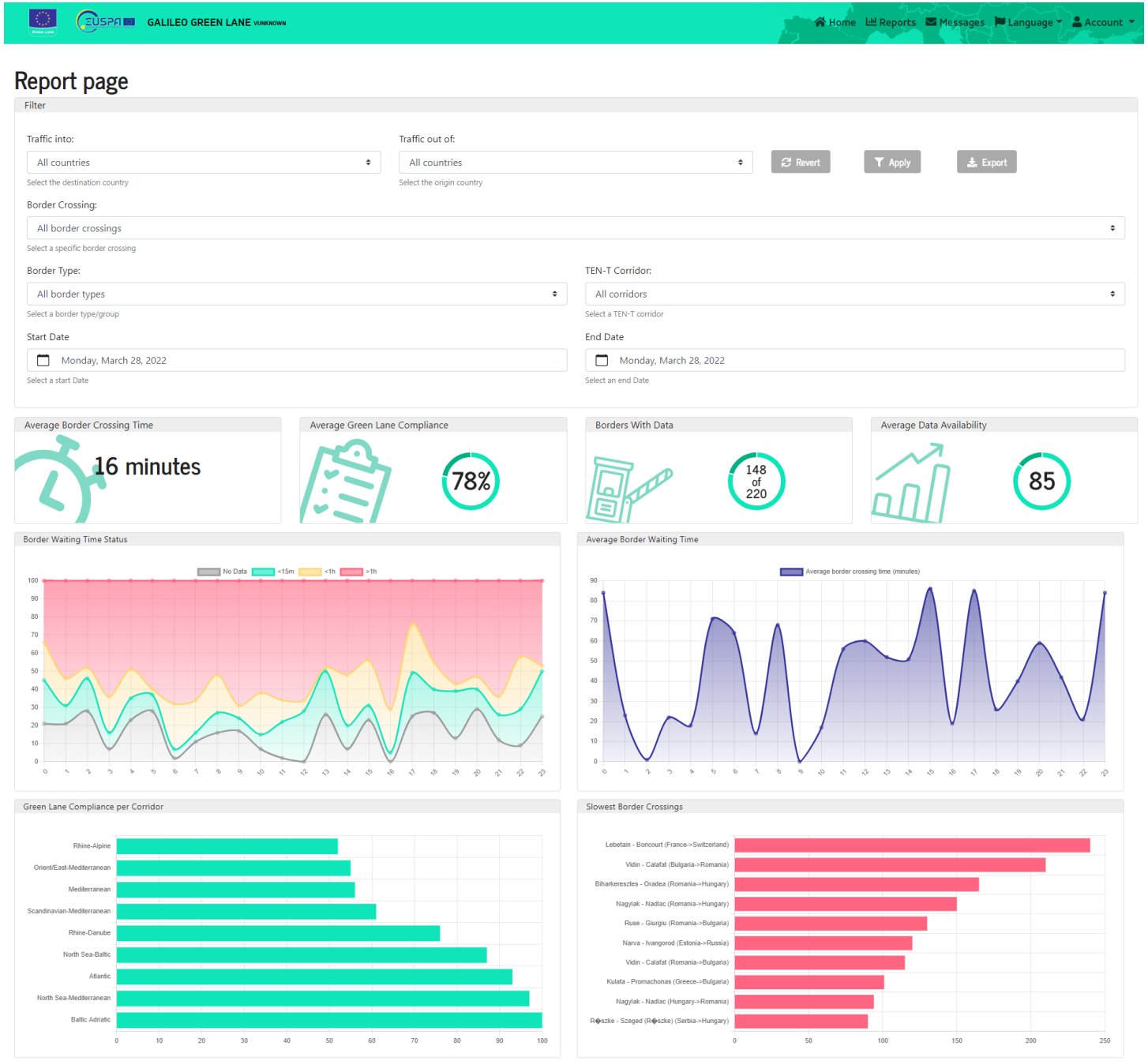
- Integration of heterogeneous data sources from external data sources and provides standardized interfaces

  - ✓ 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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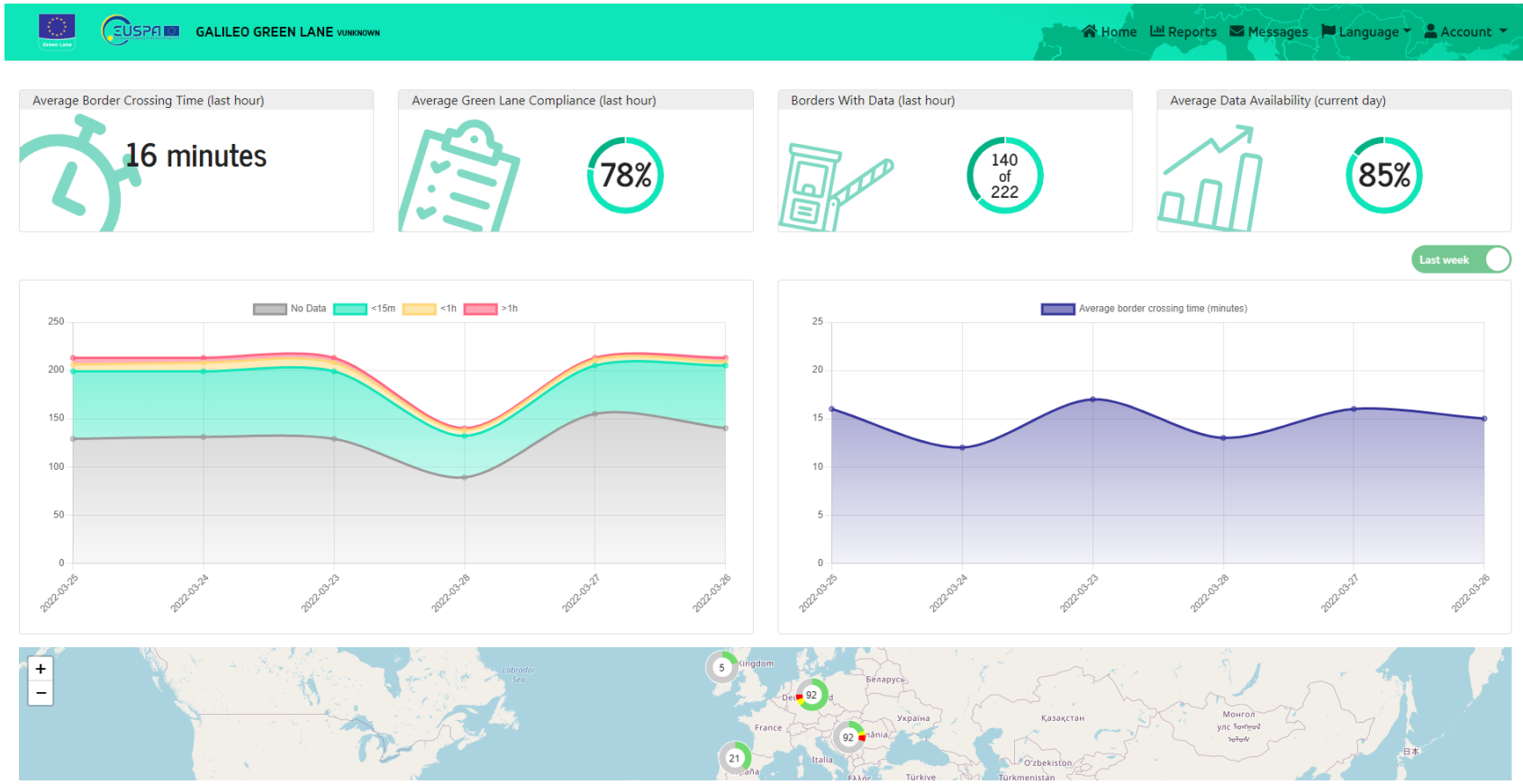

# Pilot testing with potential users

- 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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