Project Fact Sheet

Stargate
within EU Green Deal

Road Feeder Services (RFS)

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement GA101037053

01 BASIC PROJECT INFORMATION

Project name	Road Feeder Services (RFS)
Partners involved	ACB, Nallian, Essers, Jan de Rijk and Aviapartner.
Implementing airport / site	BRUcargo, Brussels Airport; intended for long-haul, airport to airport trucking flows.
Period tested	Concept development during Stargate, 2022-2024. Project placed on hold before operational testing.
Project lead / contact	Project lead: ACB Content owner/reviewer: Davide Scatorchia

02 OBJECTIVE

What are we trying to solve or tackle with this project?

The Road Feeder Services (RFS) project aims to resolve the unpredictability, lack of real-time visibility, and operational inefficiency of airport-to-airport trucking flows arriving at BRUcargo. Traditional, manual e-mail and local booking procedures fail to scale across multiple operators and airports. This causes severe congestion at ground handling facilities, long truck waiting times, and suboptimal resource planning. The proposed platform addresses these challenges by enabling trucking companies to book flexible handling slots that dynamically adjust based on live truck ETAs.

Success criteria

Enable external trucking companies to book flexible slots across ground handlers, automatically update them when ETAs change, reduce waiting, improve partner satisfaction and prove a scalable approach for airport-to-airport road-feeder operations.

03 APPROACH (HOW WE TESTED)

Test set-up & method

A dedicated central web application was designed to connect external Road Feeder Service trucking operators with BRUcargo ground handling agents. The platform's core architecture aimed to link flexible dock handling slots directly to real-time estimated arrival times (ETAs). When traffic conditions or route delays shifted, slots were designed to automatically update and reschedule to optimize dock throughput.

The collaborative setup involved ACB, Nallian, various trucking companies, and a ground handler.

Data & measurement

The primary KPIs defined for evaluation were truck waiting-time reduction and overall partner satisfaction. Planned input data included live truck location tracking (GPS/telematics), ETA calculations, and dynamic traffic updates. Due to the project pause, no empirical measurement values were collected during this phase.

Risks & mitigations

Main risks were:

- traffic and driver-hours uncertainty
- inaccurate ETAs
- difficult integrations across trucking companies
- reluctance to share location data
- privacy/competitive concerns and low uptake of a Brussels-only tool.

Proposed mitigations include aggregators, traffic data and geofencing.

Limitations

The primary limitation is that the solution remains unvalidated in a live operational environment, leaving theoretical waiting-time reductions unconfirmed.
Furthermore, the conceptual framework proved that a standalone, single-airport application creates operational overhead for cross-border truckers; full effectiveness requires cross-company data sharing, reliable ETAs, and a standardised multi-airport solution that truckers can adopt seamlessly across their entire network.

04 RESULTS & IMPACT

Key results

The Road Feeder concept aimed to connect airport to airport truck ETAs with flexible booking slots at BRUcargo ground handlers. When traffic changed, slots would automatically move to the recalculated arrival time, improving planning and reducing avoidable waiting.

However, the project was placed on hold before operational testing, so no waiting-time or satisfaction results are available. The work identified critical scale-up conditions: interoperability across European airports, integration through telematics aggregators, dynamic traffic/weather data and geofenced arrival alerts.

05 RATINGS (QUICK ASSESSMENT)

Deployment Approach

How standardised is the solution: can it be deployed off the shelf, or does it require extensive customization?

Off The Shelf — Custom-Built

Investment Magnitude

From low-cost deployment to major investment.

Low Investment (less than €10k) — High Investment (more than €15mio)

OPEX — CAPEX

Sector Readiness

From non-existing or emerging standards, regulations, and certification pathways to fully established industry practices.

Emerging Framework — Established Framework

Innovation Maturity

How does the solution score in terms of maturity, from low TRL experimental/pilot-stage to high TRL market-ready.

Experimental — Market-Ready

Operational Impact

Does the innovation deliver targeted improvements or rather drastically transform processes and/or operations.

Incremental Improvement — Transformational Change

Notes

The business need is clear, but a local airport-only application is unlikely to gain sufficient trucking adoption. A viable solution should serve multiple hubs, minimise manual driver input, protect commercially sensitive location data and integrate with existing telematics.

06 NEXT STEPS / RECOMMENDATION

Recommendation

Hold pending redesign: restart only with a multi-airport, interoperable approach and viable access to reliable truck ETA data.

Next steps

1) Build a multi-airport use case with major European cargo hubs.

2) Integrate telematics aggregators rather than individual fleets.

3) Add traffic/weather-adjusted ETAs.

4) Use geofencing for arrival alerts and define trusted location-data governance.