Project Fact Sheet

Stargate within EU Green Deal

Digital Green Lane

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	Digital Green Lane
Partners involved	ACB with BRUcargo freight forwarders, trucking companies and ground handling agents.
Implementing airport / site	BRUcargo at Brussels Airport, covering cargo pick-up and delivery flows.
Period tested	Entire Stargate project period (2022-2026)
Project lead / contact	ACB

02 OBJECTIVE

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

Digitise and standardise the cargo pick-up and delivery process between freight forwarders, trucking companies and ground handlers at BRUcargo in order to reduce paper, waiting and idle times, uncertainty and optimize personnel planning.

The project addresses inefficient cargo handovers, fragmented information, congestion and limited transparency in cargo readiness.

Success criteria

Reduce truck waiting times, improve transparency and efficiency, increase stakeholder satisfaction, and prove that digital slot booking and data sharing can streamline cargo handover processes.

03 APPROACH (HOW WE TESTED)

Test set-up & method

The Digital Green Lane allows freight forwarders to reserve a time slot at the ground handling agent and communicate upfront timing and cargo information of what will be pick-up or dropped-off.

By sharing this information upfront, ground handling agents can prepare themselves better on the scheduled trucks.

Users were interviewed and surveyed to compare operations with and without booked slots and to identify process, planning and adoption barriers.

Data & measurement

KPIs: truck waiting time and partner satisfaction/efficiency.

- Freight forwarders reported around 20 minutes less waiting time when using a pre-booked slot and the ability to better plan their truck movements.
- Ground handling agents indicated that they can better plan their resources and handle freight more efficiently, with an efficiency increase of 5-10%, with opportunity for further.

Risks & mitigations

Risks include inconsistent slot booking by freight forwarders, inaccurate slot duration estimates, informal prioritisation by warehouse employees, staff turnover, missing cargo/flight information, voluntary adoption and lack of live warehouse-floor visibility.

Limitations

Impact depends on broad, consistent and correct use by the entire cargo community.

The current scope focuses on BRUcargo freight and does not cover all airport-to-airport transport.

Missing integrations and voluntary uptake limit full process optimisation.

04 RESULTS & IMPACT

Key results

Digital Green Lane delivered a fully digitalised, standardised pick-up and delivery process for the BRUcargo freight forwarders, trucking companies and ground handling agents.

Freight forwarders reported about 20 minutes less waiting time per pick-off or delivery when using a pre-booked slot compared with arriving without one, while ground handling agents indicate that they could optimize their personnel planning. Interviews and surveys indicate higher efficiency by reducing driver waiting time and faster process.

The project improves transparency between forwarders and handlers, but full impact depends on consistent booking behaviour, accurate slot planning, broader cargo scope and better real-time visibility in warehouses.



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

For other airports, the main lesson is that digital cargo tools only work if stakeholders use them consistently. Benefits grow when slot rules are clear, data is complete, warehouse teams have live visibility and training supports drivers and operational staff.

06 NEXT STEPS / RECOMMENDATION

Recommendation

Scale with conditions: continue DGL rollout, but strengthen adoption, data integration, slot discipline and warehouse visibility.

Next steps

1) Improve integrations to capture more cargo and flight data automatically.

2) Add warehouse-floor visibility screens.

3) Automate more process steps and readiness predictions.

4) Provide simple training materials for drivers and new staff.

Links: https://brucloud.com/about/digital-green-lane