Green Rail – FloraHolland

**Key Words:**
Access to transport networks, infrastructure and nodes; ICT (e.g. routing, guidance), transport optimisation; Business to business (B2B) solutions, cooperation; Value added services, development (or extension) of services; Interoperability and standardisation: vehicles, equipment, loading units, infrastructure; Monitoring and benchmarking of processes; Rail transport; flowers; temperature controlled; ornamental plants; reefers; synchro-modality.

**Description**
Green Rail, an initiative of FloraHolland and VGB, organizes rail transportation of floriculture products via conventional rail links. Rail transportation is a suitable and cheaper option for the long-distance transport of temperature controlled ornamental plant and flower products. Through this initiative, FloraHolland and the VGB aim to strengthen the pivotal international position of the Netherlands in the production and sale of ornamental plant and flower products.

**Benefits**
- High reliability performance (96%)
- Less labour costs and limitations in terms of driving and rest periods
- Decrease of transport costs for long distance travel increase competitiveness and market share (due to better accessibility by rail to South/Eastern Europe)
- Less traffic congestion
- Environmentally friendlier transport mode
- Marketing instrument: environmentally/socially responsible

**Starting point/objectives/motivation:**
The main identified problems were:
- rising costs of road transport
- the increasing limits around driving and resting times
- the increase in road traffic jams and therefore unreliability
- lack of pro-active development and product/service development within the rail sector
- objective of reducing the carbon footprint of the floricultural transportation (CO2 emissions of rail transport are up to 50% less)

Before Green Rail was implemented, the transportation of floricultural products from Netherlands to Italy was mainly done by road (99%).

Both FloraHolland and VGB believe that rail freight transport can be a viable, reliable and cheaper alternative for long-distance transport. The reasons for choosing the route from the Netherlands to Italy is because of the maturity of the railway connection, the availability of the rail freight services to Italy, and the big export market for the floricultural industry in Italy. This secures Green Rail for the minimum threshold for piloting.

**Solution**
- A special designed 45ft pallet-wide reefer container
- Container’s with built-in GPS/GPRS system
- For road transport: conditioned trailers
- For rail transport: shuttle trains.

The practice originates from the Netherlands. It covers currently routes to Italy (Milan), Hungary and Romania, Poland (Poznan) and Switzerland.
The consortium consists mainly of private companies: floriculture companies (exporters), logistics service providers, knowledge institutions, a rail operator and an independent chain manager. The government was also engaged in the GreenRail initiative. Their roles served as the facilitator in policy making and stimulator for innovation in market sectors.

The transferability of the Green Rail solution depends on the available rail transport infrastructure and motivated rail partners. The solution could potentially be used for other types of agricultural products or temperature controlled commodities.

More information:

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Specific technical characteristics of the practice:
- The special designed 45ft pallet-wide reefer container have an energy efficient built-in cooling system (diesel-electric engine), offering maximum capacity for the flower roll cages and constant temperature control for successive ten days.
- The container’s with built-in GPS/GPRS system allows shippers to monitor the real-time location of their containers and adjusting the condition inside the containers whenever needed.
- The conditioned trailers for road transport are certified for transport of fresh products like flowers and plants.

The entire logistical operation consists of three layers:
- 3PL operations: truck transport and rail transport
- 4PL operations: chain coordination carried out by E-Logistics Control
- 5PL operations: FloraHolland has developed the chain and runs all the contracts.

Main actors involved: FloraHolland, VGB, Bunnik Plants, FPP (Disva), Fresh Export, HamiPlant, Hydroplant Westland, Lemkes, Lievaart Export, Quattro Plant, Vida Verda, Waterdrinker, Zurel Planten, Van der Slot Transport, Te Baerts Transport, Unit45, GPA Trans, RSC Rotterdam, HUPAC Intermodal, E-Logistics Control and Wageningen University.