Case logo or picture

Benefits

• Financially: Increased company profitability
• Economically: Increased efficiency/productivity of logistics processes
• in the field of services: Increased competitiveness and quality of services
• for the society: Ideal utilisation of infrastructure, highest safety and security, efficient public spending
• Environmentally: Reduced emissions, limited climate change, conservation of resources

Success factors

• space accessibility and frequent availability of the service offer
• high flexibility concerning bookings
• centralised management and co-ordination of the transport service
• close co-ordination with shippers and with shippers and logistics associations
• road competitive transport chain planning
• more reliably and sustainable than road transport

Supported strategic targets

• efficient public spending
• ideal utilisation of infrastructure
• competitive logistics/transport
• acceptance and influence
• highest safety and security
• modal shift policy
• increased efficiency
• increased company profitability
• increased competitiveness
• increased quality
• image
• increased safety and security
• limited climate change / emission
• conservation of resources

Description

A pendel train with hybrid power operating as a liner train through Switzerland serving both production plants and intermodal terminals. Slots of passenger trains are used, distances between terminals is down to only 90km and stopping time at terminals down to just 1h. It is foreseen to establish other simple transhipment points along additional routes that are currently being implemented. The trains are either multi-user trains with multiple stops (called ‘InterregioCargo’), or company trains running point-to-point (‘OnestopCargo’) dedicated to one client. The purpose of the train system was to provide solutions for rail freight operators or logistics service providers looking for ecological intermodal transport logistics solutions in the distance range of 50-400km.

Starting point/objectives/motivation:

What was the main problem, idea or motivation that led to the development and introduction of the new practice?
There is intense competition for rail from the road transport sector, especially with regard to price and transit time. This could only be overcome by designing a rail-based transport service product that is competitive with regard to cost and time.

What was the common practice before the implementation?
Shippers feel more comfortable when just ordering door-to-door road haulage, because it is convenient. Rail is chosen for bulk, long distance high volume and time wise uncritical cargo. Low density high value goods as consumer goods are therefore almost completely transported by road.

What was the purpose and the sustainability objective of the case?
This best practice case is transferable to other regions and has a high impact of the competitiveness of rail freight transport in a market where rail could not compete until now. The accessibility of rail transport can drastically be reduced while pre- and post-haulage on road can be cut down to a minimum.

Solution

The RailXpress Cargo-Shuttle pilot liner train of railCare AG operates bidirectional on a daily basis. The train runs between the East part of the country (Landquart) and West part at the Geneva Lake (Daillens). The train also halts at two more stops in between at the Swiss Post intermodal terminals (Frauenfeld and Härkingen), so that loading units can be exchanged at several points. The shares of the rail operator and forwarder railCare AG have been taken over by the Swiss retailer Coop AG 1st September 2010. In 2012 the liner train is being extended by further branches to other distribution centres of Coop.
Major shipper COOP demanded a cost-efficient and eco-efficient, reliable transport solution by rail for the domestic carriage of standard containers and swap bodies in Switzerland using horizontal transhipment (see also case N° 2-055 ‘Containermover 3000’). The pendular train concept avoids shunting and manoeuvring procedures and saves time. Serving intermediate terminals as well as the combination with the horizontal transhipment technology enabling fast drop-off and pick-up of loading units maintains the use of railway transport over the longest possible stretch of the door-to-door route. Further components as ‘Containerstation’ for quick parking of swap bodies and ISO containers at a yard or at the loading dock, or electrical power supply to reefers during rail transport are under development and testing.

The central transport unit is a compact train with dual mode (hybrid) power consisting of an electric locomotive at one end and a diesel powered driving trailer at the other end. In between there are 5-10 permanently coupled container wagons, designed for standard intermodal transport units like swap bodies and ISO containers, but not semi-trailers. The shuttle train has a length of 250-300m and is a push-pull train, capable of operating in either direction. It can either run on the electrical main track at speeds of up to 120 km/h, or drive into a private railway siding or in a loading track of an intermodal terminal by using its diesel power. The train behaves like a passenger train in terms of speed, acceleration, braking and momentum, allowing full scheduling on urban suburban and regional passenger train networks.

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