PROJECT

IPTOT

Integrated coupling of production and transport planning - Optimizing transport efficiency

Integrierte Kopplung von Produktions- und Transportplanung zur Optimierung der Transporteffizienz

Funding: National (Austria)

Duration: Feb 2017 - Jan 2018

Status: Complete

Background & policy context:

Currently, logistics in the production industry is dominated by production planning, whereas transportation planning is largely subordinated. Transport logistics (especially in the context of just-in-time and just-in-sequence strategies) is faced with strict requirements that are determined by the optimization of production processes. Thus, significant inefficiencies in the transport process have to be accepted. In many cases very strict time and flexibility requirements make the use of environmental-friendly transport alternatives like railway, ship or combined transport widely impossible.

Objectives:

The IPTOT approach aims at the development of an optimization tool that enables a synchronous, equivalent optimization of production and transportation planning as well as an integrative coupling of production and transport logistics. Thus, IPTOT shall provide the basis for a reorientation towards an innovative, holistic logistics concept that doesn’t suffer from an excessive dominance of production planning and thus contributes to a substantial efficiency increase in the transport sector. Besides an efficiency increase in truck transport, a special focus lies on an intended increase of competitiveness of the rail and combined transport sector.

IPTOT will show that the results of a sole optimization of production processes have not to be in line with the overall optimum derived through equal consideration of production and transport processes (neither regarding costs nor regarding environmental impacts and resource consumption). Through an intelligent planning of the production process and especially at the interface between production and transport an increase of efficiency of the freight transport system shall be achieved. Within the present exploration study, the general market potential, the technical feasibility and the marketability will be evaluated. Therefore, on the one hand a concrete application case (Internorm window production) will be analysed and on the other hand potentially appropriate industry sectors, target groups and application cases will be identified. Building on that, we will elaborate a requirements specification and evaluate the technical feasibility.

In order to be able to assess the economic feasibility of the concept already at an early stage, potentially suitable business models will be analysed. As a result of the exploration study, at least 5 concrete application cases (test cases) shall be identified in order to provide a starting point for a future F&E&I project.

Parent Programmes:

MOTF - Mobility of the Future

Institute type: Public institution

Institute name: FFG - Die Österreichische Forschungsförderungsgesellschaft

Funding type: Public (national/regional/local)

Other programmes: Gütermobilität 2016

Lead Organisation:

Traffix Verkehrsplanung Gmbh

Address:
Bogenmühlstraße 7
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Austria

Partner Organisations:

Eurotrans Speditionsgesellschaft M.b.h.

Address:
Saxingerstr. 1A
4020 Linz
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Profactor Gmbh

Address:
Im Stadgut A2
4407 STEYR-GLEINK
Austria

Organisation Website:
http://www.profactor.at

Technologies:

Infrastructure management
Web-based software tool for planning processes

Development phase: Validation

STRIA Roadmaps: Network and traffic management systems

Transport mode: Multimodal transport

Transport sectors: Freight transport

Societal/Economic issues,

Transport policies: Digitalisation

Geo-spatial type: Other