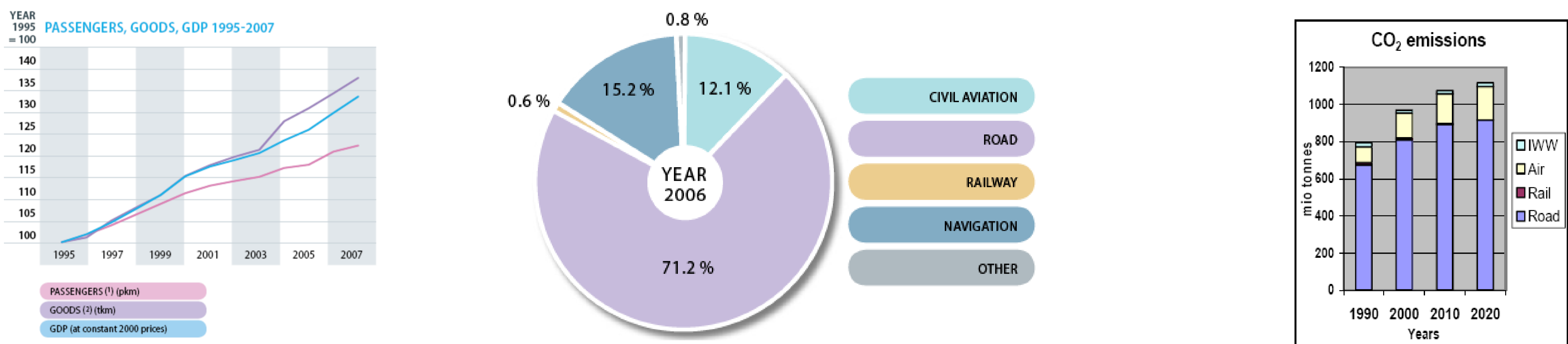


A web tool for planning environmental friendly freight combined transport operations

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1. Introduction

Road transport in particular, has become the last decade the dominant mode of freight movement across the EU as it represents the cheapest as well as the most flexible mode of transport. However, road freight transport is related to a number of negative impacts such as the severe threat of global warming, as well as issues like congestion, accessibility, safety and security. Indeed, road transport is responsible for a significant amount of CO₂ emissions as well as accident fatalities (Figure 1).



2. User requirements for ICT services in combined freight transport

The aim of the survey was to identify the current status and inefficiencies in intermodal operations and at the same time elicit user needs for online ICT services. Data was collected by means of a questionnaire, in order to standardize the results. The latter was structured in three sections that included various information about each company (e.g. type, size, staff, sales, etc), current status of operations, as well as a variety of online ICT services that the operators would like to adopt. We received 65 valid responses from 5 EU countries (Figure 2).

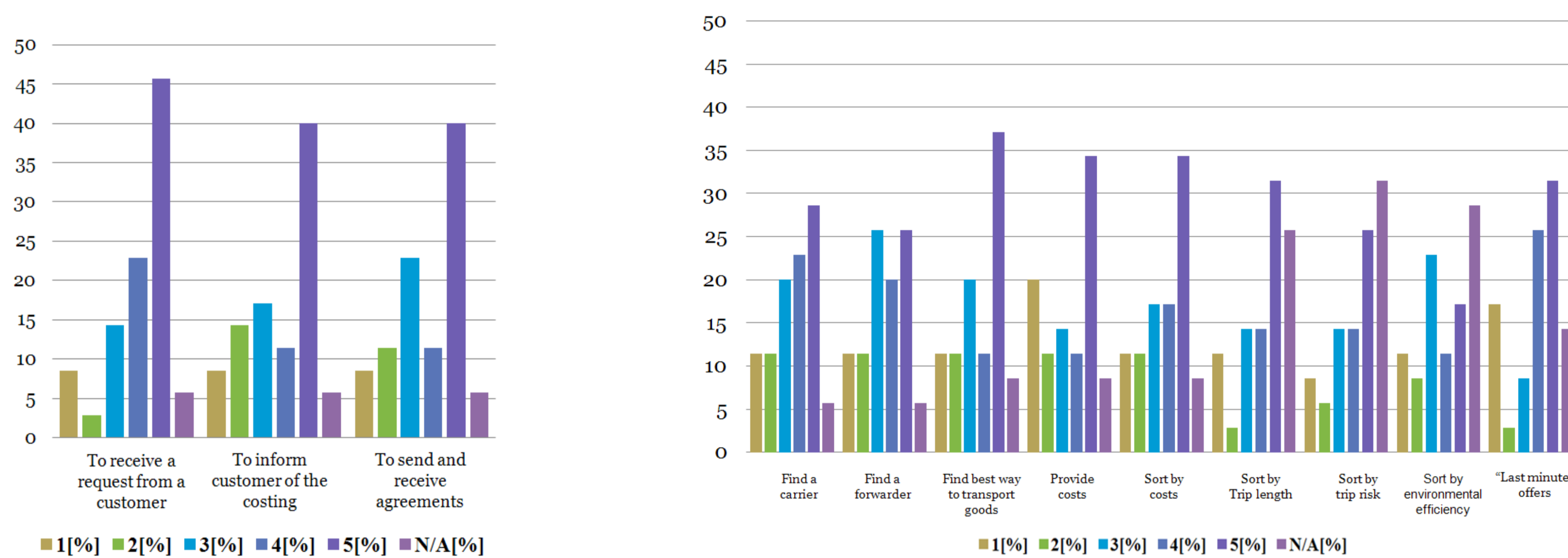
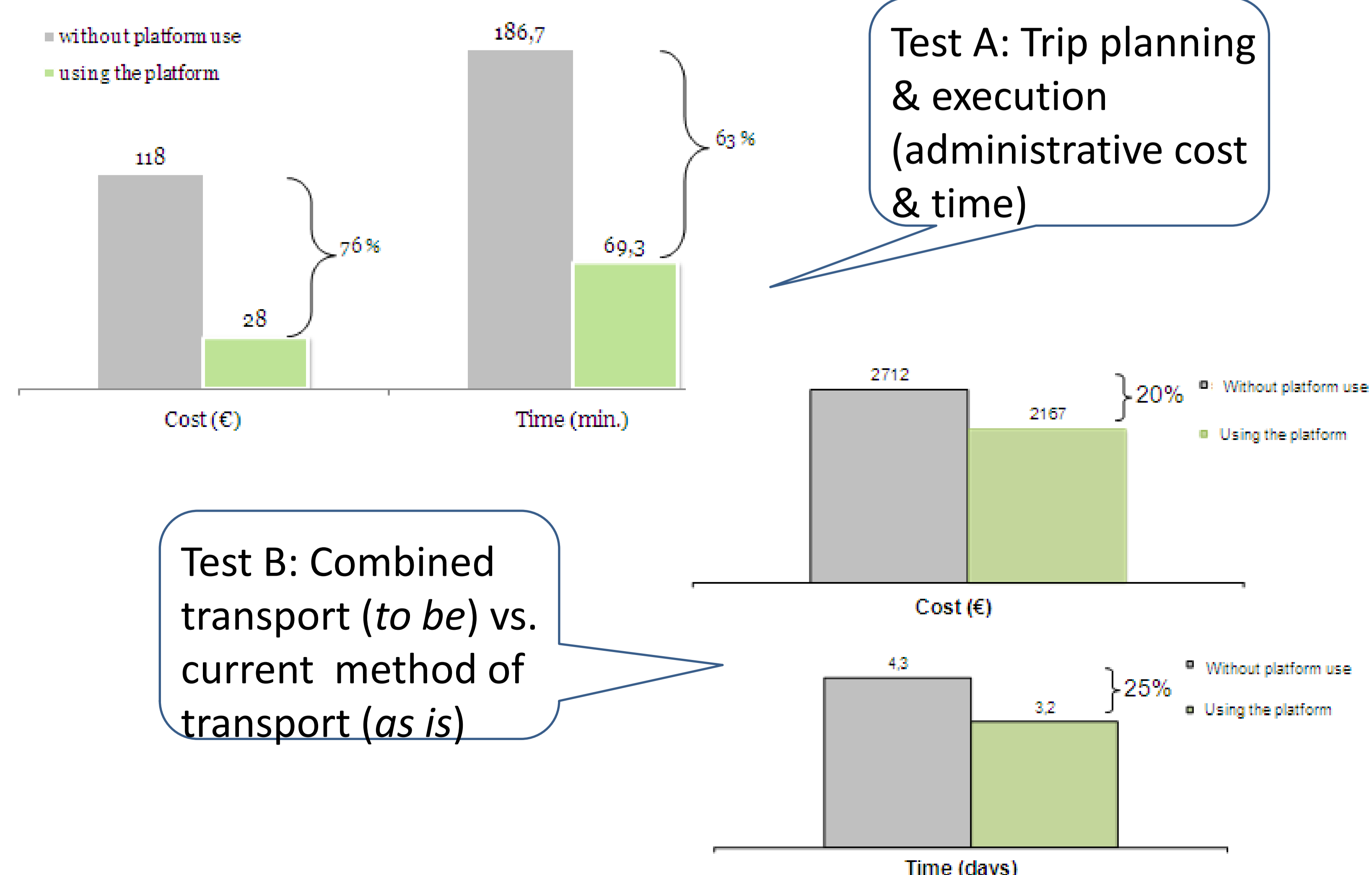
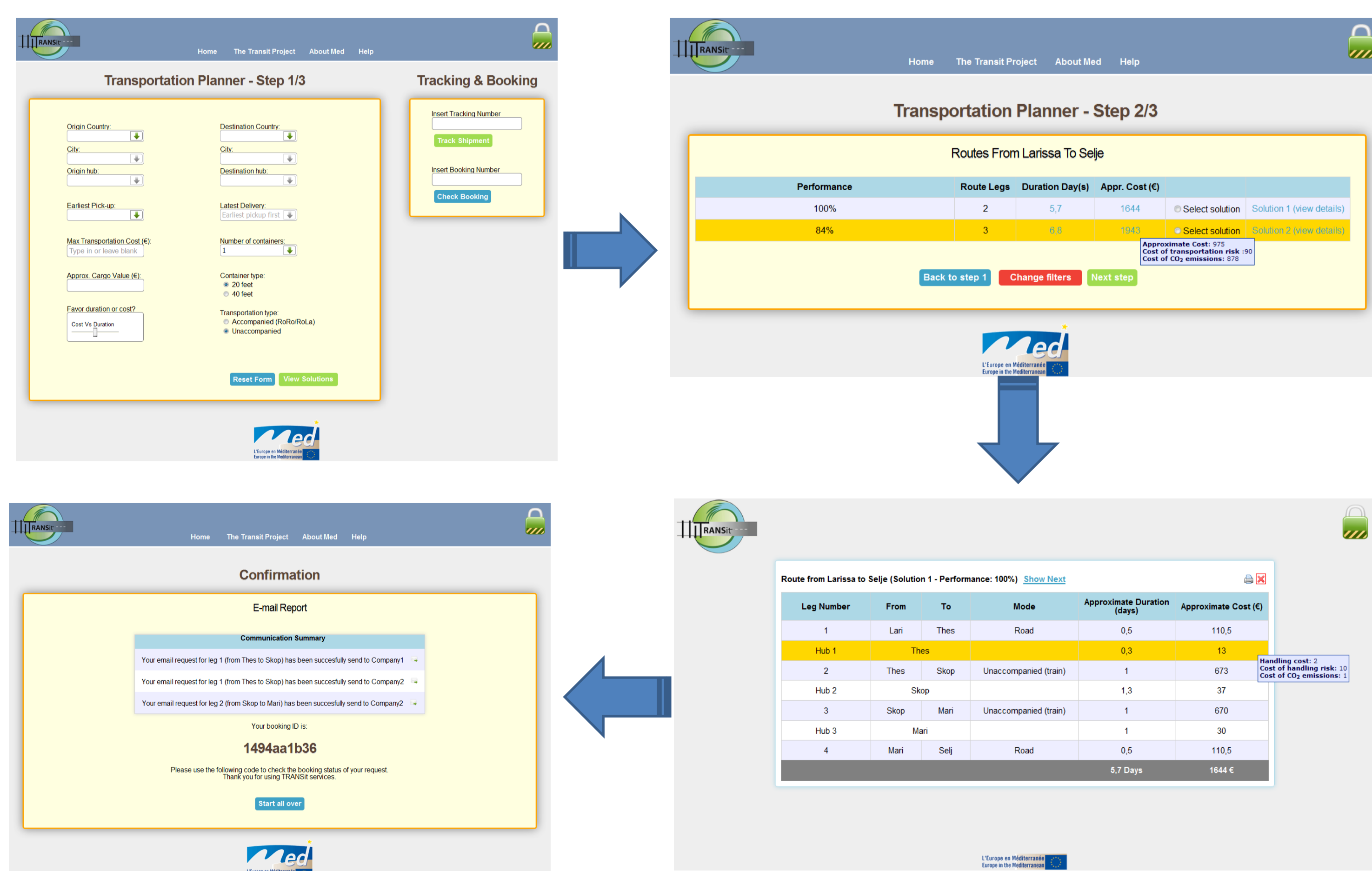


Figure 2. (a) Services between partners and customers, (b) Most popular platform e-services

3. TRANSit web platform evaluation and pilot testing results

The platform's front-end has 3 main functions as described below:

- Step A - Planning:** The shipper or forwarder identifies various good alternatives to transport a load from an origin to a destination. The main factors that are taken into consideration in order to evaluate the alternatives are: cost, trip duration, risk, CO₂ footprint
- Step B - Quoting-Booking:** After the shipper or forwarder has selected its preferred alternative, it requests quotes (from forwarders or carriers).
- Step C - Trip Execution/Tracking:** The shipper/forwarder uses a unique ID number in order to track/monitor the status of its load



4. Main conclusions and future research

The results obtained from some initial testing in real-life scenarios are very encouraging as the web tool seems to minimize operational costs and time when compared to current planning operations. Future steps include further testing of the web platform in various scenarios as well as possible inclusion of additional "green" parameters to promote greener routes.