

Transportation Optimization

Sales and Distribution - Transport Planning Systems Interface (SD-TPS)

Specialized software is becoming increasingly important as a way to optimize the efficient planning of transportation requirements. The SAP R/3 System does not offer automated support for optimizing transport planning, since the huge number of different possible transport processing procedures and optimization criteria require software that is exactly adapted to the customer's needs. To support transport optimization requirements, SAP provides the SD-TPS interface enabling integration of one or more specialized, external transport planning systems (TPS) with the R/3 System.

R/3 standard business processes enables customers to create a shipment with a selection of deliveries that need to be planned for shipment. This process is mainly carried out manually. When an external system is used for transport planning, a set of deliveries to be transported can be selected in the R/3 System and sent to the complementary TPS. Using TPS software, deliveries are combined into shipments according to different optimization criteria. The shipments created are then sent back to the R/3 System via the SD-TPS interface and used for generating shipment documents. Master data (such as customer address, goods receiving hours) must be the same in both systems for the shipment documents to be posted correctly. The creation and changing of shipments is managed by the 3rd party transport planning system. All other processing stages for the shipment (printing papers, transport processing, etc.) are managed by the R/3 System.

Communication between the systems is supported by transactional RFC techniques using IDocs as data transfer media. The SD-TPS interface supports the following functions:

SAP R/3 data communication to the transport planning system:

- Transfer of location master data
- Transfer of deliveries to be planned
- Transfer of status values for planned shipments

Transport planning system communication to SAP's R/3:

- Transfer of planned shipments

The two systems also exchange error status data covering the correctness of the documents transferred.

Certification covers the following tasks:

- Checking of correct data transmission for all messages sent
- Master data transmission for new and changed data sets
- Transmission of several deliveries for collective shipments, creation of several shipments, and return of scheduled shipments to the R/3 System
- Change of a delivery included in a collective shipment, transmission of the changed delivery, revision of the corresponding shipments and data return to the R/3 System