

# Port of Göteborg gets results with new staff and equipment planning system

**Maria Renman**, IT Coordinator, Port of Göteborg and **Robert Brown**, Marketing Director RLT, Jeppesen, Göteborg, Sweden

The complexities in balancing the productivity of a terminal operation, in relation to the level of service required by its customers and the cost efficiencies required to stay competitive, demand a high level of decision support. Borrowing some capability from the airline and rail planning businesses can turn out to be a strong move. And when a global economic slowdown starts to affect volumes of goods being shipped, it becomes all the more important to use this technology to continue to deliver a high quality of service, yet run a terminal in the most efficient way possible.

## A critical Nordic port chose innovation

The Port of Göteborg is the largest sea terminal in the Nordic region, handling a container throughput in excess of 860,000 TEU, 23 million tonnes of oil, and 272,000 new cars annually. The RO/RO terminal, handling 700,000 units annually, includes ca. 300 stevedores in its payroll. Among the factors governing the port's success is the ability to deliver its operation according to the levels of service contracted with its customers at a competitive price, while at the same time maintaining employee satisfaction.

Lena Holmsten, Vice President at the RO/RO Terminal, needed a way to prevent personnel costs from growing in proportion to her operation. "With our operation dependent on staff who possess a wide range of machinery and vehicle qualifications, the need to model complex labour rules governing work duties, and our need to respond to last-minute changes

quickly, we needed a vendor who was used to handling this kind of decision speed and complexity", she said. "We chose Jeppesen as they already possessed strong experience in handling complex planning solutions for airline and rail clients. Whether in a period of growth, or in a situation such as the current world economic slowdown, it is important that we can run our business as flexibly and efficiently as possible".

In 2006, Jeppesen began developing the solution that would assist planners to optimally allocate stevedores and their equipment to the ships on call. The resulting system, REKO, was put into production trials at the end of 2007, ca. 18 months after initial design was started. After several months of fine-tuning the planning functions and enhancing performance, final acceptance was given at the start of 2009.

## Creating speed and flexibility to match changes in customer demand

The REKO system is now the critical nerve centre for staffing the RO/RO terminal operation. "Information for all personnel resources, competencies, duty qualifications, overtime bids, as well as their work rotations, are now modelled and handled in REKO", says Hanna Bergvall, Operation Planner at the Port of Göteborg and one of the project staff responsible for specifying system requirements to Jeppesen. "Personnel availability is combined with machine resources at hand, and matched with the timetables for ship calls and terminal services work". Ease of use, plus gaining



Source: Port of Göteborg

The Port of Göteborg handles a container throughput in excess of 860,000 TEU, 23 million tonnes of oil, and 272,000 new cars annually. The RO/RO terminal includes ca. 300 stevedores in its payroll.



Lena Holmsten, Vice President, RO/RO Terminal: "With operations dependent on staff who possess a wide range of machinery and vehicle qualifications, the need to model complex labour rules governing work duties, and our need to respond to last-minute changes quickly, we needed a vendor who was used to handling this kind of decision speed and complexity."



Hanna Bergvall, Operation Planner: "REKO gives planners a birds-eye view of our operation, and they can get an immediate understanding of the total resource picture." Roger Lönneroth, production supervisor adds: "Before the new system was installed, it was difficult to get a quick and clear view of what workers and equipment were allocated to which ships and which duties. Now, we can see very clearly where everything is at a glance."

an overview of a resource situation quickly and accurately, are critical factors for acceptance of a new planning system, and Hanna Bergvall is happy with the result: "REKO gives planners a birds-eye view of our operation, and they can get an immediate understanding of the total resource picture. The Gantt views are particularly powerful, allowing us to quickly see where resources are needed and what can be allocated in an effective yet less costly way. One key advantage with the system is to be able to receive immediate feedback regarding the legality of staff allocations – that people with the right qualifications are allocated to the right tasks, yet ensure that we are not violating legal or union rules, such as those that govern mandatory rest periods between shifts. The ways in which the schedules are displayed, plus the legality checks, create ease of use that we have not found in any other planning software".

Lena Holmsten comments on the value derived from REKO, in terms of maintaining a consistent quality of service to the port's customers: "Our understanding of what resources we have at a given moment and matching them with a demand that can change at short notice is a challenge to us but something our customers expect us to meet, without impacting their schedules. REKO is the tool for us to achieve our time window goals yet be more efficient in terms of both slack and overtime". In addition, the port's staff could benefit from the system's capability to offer them more flexibility in choosing their shifts, as well as ensuring fairness between staff, regarding how work is distributed.

Roger Lönneroth, production supervisor at the Port of Göteborg, has over 20 years' experience with transport operations, during which time he has built a clear picture of what today's staff and resource planning systems should be able to do. "Before the new system was installed, it was difficult to get a quick and clear view of what workers and equipment were allocated to which ships and which duties. Now, we can see very clearly where everything is at a glance, and can immediately see the effects of dynamically reallocating staff between ships if we, for instance, need to compensate for a late arrival". Roger also notes the strategic value of the software as well: "There are other capabilities in REKO that help us increase our productivity. For example, we can track KPI's across several months of operation, such as the number of units loaded per work hour. Having historical data allows us to choose an optimal mix of resources for upcoming ship calls. In addition, there is great potential for us to develop our staff planning expertise: if we need to train up new production supervisors, we can give them access to data from previous ship calls and the resources used, to shape new staffing assignments. Finally, I can spend more time supervising and supporting my team in their work, since I do not have to spend as much time planning the shifts and doing follow-up".

ABOUT THE AUTHORS



**Maria Renman** is the IT Coordinator for the Port of Göteborg Ro-terminal, and has worked with logistics solutions at the RO/RO terminal since 2004. She has worked as a Project Manager for IT solutions such as REKO as well as ROTOS, a new Terminal Operation System for RO/RO operations.



**Robert Brown** is the head of marketing for Jeppesen's Rail, Logistics and Terminal solutions since 2004. He has worked for 30 years with marketing, decision support solutions, business management, software engineering, and has driven a large number of change management projects within the transportation, telecom, and pharmaceutical industries.

ENQUIRIES

Maria Renman  
IT Coordinator  
Port of Göteborg  
SE-403 08 Göteborg, Sweden  
Email: maria.renman@portgot.se

Robert Brown  
Marketing Director RLT  
Jeppesen  
Odinsgatan 9 (Box 192)  
SE-411 03 Göteborg, Sweden  
Email: robert.brown@jeppesen.com