

Finland Post Improves Roll-Cage Asset Management Using State-of-the-Art RFID Technologies

New RFID track-and-trace solution at Finland Post maximizes utilization of roll-cage assets, improves operational performance and customer service for real ROI

The Situation

Finland Post (Posti) is the leading provider of delivery and logistics services in Finland and selected markets in Northern Europe. Each year Posti replaces thousands of its roll-cage transport units due to damage or losses across its logistics supply chain. This annual recurring cost totals millions of euros.

Posti was keen to assess if Radio Frequency Identification (RFID) technology could provide it with a track-and-trace solution that would improve its roll-cage asset management issues. This would help Posti to ensure that its roll cages were in the right place at the right time, understand internal/external operational bottlenecks and ultimately improve customer service.

The Solution

Using a tried and tested approach based around a controlled RFID lab environment, Capgemini worked with selected partners including BEA Systems to apply its deep experience in RFID engineering and supply chain management. This helped to develop an open-standards-based best-of-breed “passive UHF” RFID track-and-trace solution.

The lab evaluation, testing and solution design resulted in a robust operational pilot solution developed specifically to meet the needs of a challenging environment at Posti, meeting a 100% read-rate performance.

“The project was a success and our next step will be upgrading the devices and the whole environment to the gen2. Our target is to improve our own process and create new value-added services to our customers based on the RFID technology.”

Heljä Salomaa,
Director, Finland Post



The Result

The track-and-trace solution will enable Posti to ensure that roll cages are in the right place at the right time. It will also reduce management overhead for roll-cage assets, improve internal operational processes and ultimately improve customer service. Posti also expects to realize a good ROI from a full implementation and realize longer-term supply chain benefits through improved operational efficiency and differentiated service potential.

How Finland Post and Capgemini Worked Together

Finland Post was established in 1638. The existing business was created when Finland Post Corporation became a public company in 2001. The company operates as three divisions:

- Messaging for letter, magazine/newspaper and mail delivery
- Information logistics
- Logistics.

The group had net turnover of € 1.3 billion in 2005 and employed more than 24,400 people.

Posti engaged Capgemini to help it develop and implement an RFID track-and-trace solution to significantly improve its roll-cage asset management issues, enabling visibility of roll-cage movements and a reduction in asset overhead costs associated with damage and loss. Capgemini applied its proven phased approach for RFID implementation projects.

Establishing Fundamentals

The initial phase of any RFID project is divided into three key work streams that run in series:

- Business case
- Process capture
- Hardware definition.



The business case was developed to enable a financial understanding of the potential technology investment versus the benefits, both financial and operational. RFID education was also undertaken at this stage to ensure that Posti's expectations were realistic and achievable.

Process capture enables deep understanding of the operational processes and procedures that will be affected by the RFID hardware/software technology integration. The hardware definition study enables the operational environmental and integration requirements to be considered in order that specific RFID technology requirements can be established. Once detailed RFID technology requirements are established, the most appropriate technology can be selected and tested. In this instance, passive UHF RFID technology was selected.

Lab Testing and Technology Pilot

A wide range of passive UHF RFID vendor technologies were evaluated in controlled laboratory tests. This enabled a best-of-breed open-standards technology to be selected for the proof-of-concept (POC) technology pilot based on empirical lab test results. The POC pilot solution was then preconfigured in the lab environment ready for installation into Posti's operational environment.

The RFID lab activity was undertaken using Capgemini's Collaborative Business Experience, with senior Posti managers and operators fully involved and encouraged to participate during the lab testing. This participation brought significant valued experience and challenge to the project. The lab will also be used to develop the longer-term RFID solution for Posti by evaluating and testing a range of future RFID technologies and new client requirements.

Training was essential to ensure that the operational users were familiar with, and understood, all aspects of the pilot. Experienced Posti delivery drivers were involved early in the pilot development phase. Key user requirements were built into the RFID-enabled handheld application software.

Portal readers automatically detect the movement of roll cages into and out of the Helsinki Sortation Center. The portals vary in size and also have different scanning requirements (i.e., one way and multi-directional). The pilot also extended to Posti customers, with customer RFID tags placed in strategic locations on customer premises. This allowed the Posti delivery driver to confirm his presence at the customer site by a simple scan of the RFID tag with an RFID-enabled handheld device.

The Posti delivery vehicles and drivers are provided with RFID tags enabling vehicle tracking/secure access to site and operator secure access to the RFID handheld application software. This also allows RFID data to be associated with driver/vehicle delivery and collection events throughout the Posti internal and external operational processes.



“For Posti, the best aspect of the whole pilot project was the structure to go ahead. After every phase we went through all the results to decide if we wanted to continue with the pilot project.”

Most important of all was that as a result we got the definitions for the portal readers, handheld readers and the tags that will work in our environment: our premises, processes and ICT architecture.”

**Heljä Salomaa, Director,
Finland Post**

The track-and-trace data is accessible via the BEA Systems' RFID Track and Trace Portal. The portal provides a totally flexible way to access the data and allows Posti to present RFID data in both report and screen formats. The value of the RFID tracking data is only just being realized.

The key architecture elements for the strategic adoption of RFID for Posti are now understood and a flexible, scalable platform is available to Posti for the next phase of this project.

Realizing Benefits

The RFID track-and-trace solution will enable Posti to ensure that roll cages are in the right place at the right time, as well as reduce management overhead for roll-cage assets, improve internal operational processes and ultimately improve the customer service.

For the first time Posti has accurate data relating to roll-cage movements, such as actual delivery times and locations for specific roll-cage assets. This data can now reveal roll-cage "total" cycle times and dwell times (into and out of the Posti premises and the premises of its customers). This data will help Posti focus management resources efficiently, better understand its supply chain processes, and ultimately improve the quality of service statistics and roll-cage repatriation data.

A key spin-off benefit is the opportunity to analyze RFID tracking data, which can provide full visibility into operational supply chain processes. This is expected to help Posti realize longer-term supply chain benefits through improved operational efficiency and differentiated service potential.

In addition, driver incentive schemes can be put in place as it is now possible to accurately measure individual driver repatriation of empty

roll cages (for example, those collected at client premises and returned to Posti operations). This is a significant operational benefit.

The capture of this critical operational supply chain data, not previously available to Posti managers, will allow Posti to focus resources in the right place at the right time, enabling the organization to make the best possible use of its assets and people.



About Capgemini and the Collaborative Business Experience

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Backed by over three decades of industry and service experience, the Collaborative Business Experience is designed to help our clients achieve better, faster, more sustainable results through seamless access to our network of world-leading technology partners and

collaboration-focused methods and tools. Through commitment to mutual success and the achievement of tangible value, we help businesses implement growth strategies, leverage technology, and thrive through the power of collaboration.

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