



Reference Case NSB, Norway

NSB: exploring new horizons



Unspoiled nature and picturesque fjords – a trip with NSB, the Norwegian State Railways is a very special experience. The NSB rail network, responsible for some 90 percent of rail traffic in Norway, stretches from the south of Norway to the north of the polar circle, to Bodø on the northern coast. To expand its range of self-service ticketing options for passengers and reduce operating costs, NSB is relying on interoperable e-ticketing with a comprehensive, networked fare collection and control system from ACS.

The NSB rail network is characterised by long distances and remote railway stations. Until 2005 ticket vending machines were only in use in the Oslo region, while large parts of the country still had to make do with the traditional ticket counter or to

buy the ticket aboard the train. NSB drew up plans for modernisation and a shift towards self-service ticketing, to make the railway fit for the future. Their first choice as a partner for this complex project was ACS (then still part of Ascom): “We were convinced by the know-how, state-of-the-art technology and the high quality of the ticket vending machines and especially ACS’ ability to plan and execute a project in close co-operation with their customer”, explains Emil Eike, NSB Project Manager.

Tight schedules, high-end requirements

The project kicked off in September 2004, and within a year a complete national system for Norway and the Oslo metropolitan area had been developed, built and installed. The main aim was to comply with the custom-

Project scope

- Arcos Management System
- 164 ticket vending machines
- 345 validators
- 40 service terminals
- 80 video servers
- 141 video cameras
- 11 deposit machines
- 22 coin change machines

The success factors

- Adherence to a tight schedule
- Commissioning of a national system within a year
- High-end requirements in terms of product quality and availability due to extreme weather conditions and geographical factors
- Integration of the existing complex fare and reservation system
- Integration of third-party systems (e.g. CCTV system)
- Flexible, modular and scaleable system and machines
- Close, mutual and well co-ordinated project execution

Customer benefits

- Ease of access to public transport for passengers
- Reduction in distribution costs
- Broad range of self-service ticketing, timetable consultation and online reservation services for rail passengers
- High-level ease of use
- 24-hour availability
- Integration into the interoperable e-ticketing system in the Oslo-Akershus area
- 2007: issue of ultra-light tickets and contactless smart cards





er's high-end requirements in terms of quality, availability and reliability. The machines had to cope with special climatic conditions and still be able to function correctly during heavy snowfalls and low temperatures. In view of the large distances between remote locations, high availability and reliability were a must.

“We were convinced by the know-how, state-of-the-art technology and high-end quality of ACS machines.”

At the same time, the machines had to guarantee maximum protection against vandalism, enable implementation of a highly complex tariff system, and ensure seamless connectivity with the NSB servers. In addition, the system will be integrated into the Oslo-Akershus interoperable e-ticketing system which is being run by the three main public transport operators in the Greater Oslo area, NSB, Oslo Sporveier (OS) and Stor Oslo Lokaltrafik (SL). The integration will be

realised during the second phase of the project in 2007. Emil Eike is happy with the services provided by ACS: “From October 2005 we were able to put the fully-functioning, ultra-modern ticket vending machines into operation. ACS succeeded in adhering to our demanding schedule.”

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High-level passenger comfort

Passengers can now follow a simple procedure on the user-friendly touchscreen machines and choose from a range of payment options to purchase paper tickets for short and long-distance rail travel including reservations for long distance travel. During the course of 2007 passengers in the Oslo Akershus area will be able to take advantage of the interoperable e-ticketing system and can buy contactless smart cards and ultra-light disposable tickets as well as reload and validate the contactless smart cards at NSB's ticket vending machines. Even now

the ticket vending machines act as a genuine information terminal, with an interface to the NSB sales system that allows passengers to view the NSB timetable and reserve their seats or sleeper tickets quickly and easily.

Last but not least, passenger safety is a key criterion: All of the 71 stations equipped with ticket vending machines have round-the-clock CCTV surveillance. “Thanks to ACS, our passengers enjoy a first-class range of self-service ticketing options”, says a highly satisfied Emil Eike.

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No surprise, then, that another 35 machines including CCTV equipment have since been ordered.



The customer

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