



SUMMARY

Customer



Metroselskabet I/S

Partners



Diebold Nixdorf A/S



Globeteam A/S

Industry

T&L

Challenge

Metroselskabet needed a reliable, future-proof Enterprise device for speedy ticket checking by guards on Copenhagen's metro

Solution

- Zebra TC56 Touch Computers
- Range of Zebra accessories including Zebra Soft Holsters, Hand Straps and 5-Slot Share Cradles (in hubs)
- Zebra PowerPrecision™ batteries
- 3-year Zebra OneCare Select
- SOTI® MobiControl
- Rejsekort MARK E-ticketing application
- MobilePeople EKA inspection fee application
- ID software

Results

- 400% efficiency improvement when scanning tickets ensures significant time savings and subsequent productivity gains for guards, so they can focus on service and customer support
- Future-proof solution helps to ensure fluid movement of passengers, in line with Danish transportation objectives
- All guards now have access to the same data information in real time so are better equipped to deal with any issues, for example if a child is separated from parents
- The reliable Enterprise device has an ideal design for guards and is supplied with the accessories they need, with excellent user adoption and feedback
- The easy deployment, configuration and remote management, including software updates and battery management, are driving time and cost savings for Metroselskabet

Copenhagen Metro Enjoys A Staggering 400% Increase In Ticket Control Efficiency With Zebra Enterprise Devices

Metroselskabet is responsible for the 24/7 operation and infrastructure of the Copenhagen Metro and the Copenhagen Light Rail system. It is a partnership, owned jointly by the City of Copenhagen (50%), the Danish Government (41.7%) and the City of Frederiksberg (8.3%). The 20.4-kilometre system opened between 2002 and 2007 and currently has two lines, M1 and M2, and 22 stations, of which 9 are underground. The driverless metro serves the capital and the municipalities of Frederiksberg and Tårnby; trains run every 3 minutes at peak times and carry over 60 million passengers every year. A further two lines are opening in the near future. The driverless light metro supplements the larger S-train rapid transit system and is integrated with DSB local trains and Movia buses.

Challenge

A key aim for Metroselskabet is to maintain fluid passenger movement. As such, the metro does not have ticket barriers, just a check-in and check-out booth for users to activate and register their cards or e-tickets; guards then conduct regular ticket controls on the trains or platforms, to check users have actually registered their tickets for that journey.

When Metroselskabet updated its ticket system to an e-ticketing system to include Mifare Rejsekorts (similar to London's Oyster cards), it needed mobile devices to scan the tickets. It had previously deployed a selection of Zebra MC75A and MC67 Mobile Computers; however, these devices had to communicate with a Bluetooth reader, with subsequent issues with certificates and secure data transfer. When it came to refreshing this fleet, Metroselskabet saw the value of investing in a long-term, fully supported, future-proof Enterprise Android solution. It was looking for a single, ruggedised, touchscreen mobile computer with an integrated NFC (near-field communication) scanner and GPS. It also wanted a device it could remotely manage and which would offer very fast processing and scanning speeds, so guards could process tickets quickly, to ensure optimal passenger flow. Filip Dichmann from Metroselskabet explains the outcome of the selection process: "With all our requirements, Zebra's TC56 Touch Computer was absolutely the obvious choice."

Diebold Nixdorf, a global strategic partner of Zebra Technologies and who has a long-standing relationship with Copenhagen Metro and deep experience in the Danish T&L sector, is responsible for delivering the TC56s to Metroselskabet. Globeteam, meanwhile, provides ongoing IT support and integration, to ensure all the applications, systems and hardware, such as the beacons, are working optimally and interacting seamlessly.

Solution

Guards now use Zebra's TC56 Touch Computers to make random, regular ticket inspections, scanning, checking and validating traveller's cards via the Rejsekort MARK E-ticketing application. They can identify and register any fare evaders using the ID software and MobilePeople EKA inspection fee application, taking high resolution photos of proof of ID with the TC56's



13MP integrated camera if necessary. Guards can also quickly and easily access and download all relevant data and safety information in PDF files, stored on each TC56, so they can give correct information to customers and ensure they are following the correct procedures, in case of any incidents.

Metroselskabet tracks its guards and devices above ground via the TC56's integrated GPS and in the stations below ground via the TC56's Bluetooth reader and auto-indoor positioning software in conjunction with Estimote LTE beacons. The central IT department uses SOTI® MobiControl to remotely configure, control, troubleshoot and update the devices, with new software releases, for example. The PowerPrecision™ batteries meanwhile provide critical intelligence about their health and the on-device Battery Management application gives Metroselskabet the visibility to anticipate and avoid issues. It also accesses Zebra's Access Point Name (APN) MX feature via SOTI; APN acts as a network bridge and stores preferences for services such as security. Martin Roland Rasmussen, IT Administrator, Metro Service, comments: "SOTI MobiControl allows us to have full control and know-how of the TC56s' status and configuration; another advantage of deploying an Enterprise solution. Moreover, the devices are protected by a Zebra OneCare Select service contract, which, above and beyond essential support, provides capabilities such as 24x7 live-agent technical support and same day shipment of any replacements. These are just a few of the advantages of deploying an Enterprise solution."

Solution

The 400% increase in ticket control efficiency and real-time information availability enables guards to provide better customer service. One guard summarises: "I love working with my TC56. It has really fast scanning and processing speeds and an excellent battery life. It's reliable, robust, stable, easy to handle and navigate around and has a really responsive touchscreen. My TC56 makes my job easier, so I can spend more time speaking to and serving passengers. It's my must-have work tool." Indeed, guard productivity and job satisfaction have both significantly increased since deployment.

However, the deployment is not just driving efficiencies and advantages for the frontline users. Metroselskabet is really seeing the benefit of having deployed a future-proof Enterprise Android device; it knows the devices and software have a very long shelf life and the solution is fully supported, so it has made a wise long-term investment and can budget accordingly. Indeed, Copenhagen's metro is expanding, with two new lines opening shortly. Which mobile devices will guards be equipped with? Zebra's latest addition to its touch computer portfolio, the Zebra TC57, of course.

"We have a reliable, robust system, which is excellently supported by Zebra, Diebold Nixdorf and Globetam; I would especially like to mention Bo Snitkjær Nielsen for his amazing work ensuring a smooth deployment and integration. However, even more importantly, Zebra gives us phenomenal tools to ensure our solution is successful in the long term, guaranteeing a good return on investment. The mobile devices have a long life cycle too, and are really user-friendly and ergonomically designed, with the right accessories and human interface all being key; quite simply, we need our guards to love using the solution. They do; and a 400% increase in ticket scanning speeds speaks for itself. This efficiency improvement enables our guards to do what they enjoy: to focus on serving passengers. And the TC56s make all this possible. We are reaping all the benefits of having deployed a flexible, future-proof Enterprise solution. We are totally delighted"

Filip Dichmann,
Project Consultant,
Metroselskabet

**For more information,
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