

BKU: CONNECTED, MOBILE PDA FOR PUBLIC TRANSPORT



BACKGROUND



Modul-System Sweden AB is a market leader in ticketing and payment systems used primarily in public transport and parking.

For over 30 years, Modul-System has been delivering dependable turnkey solutions to the transport industry and authorities across Scandinavia.

BUSINESS CHALLENGE



Storstockholms Lokaltrafik AB (SL, or Greater Stockholm Local Transit Company) needed to replace 400 obsolete conductor devices, in particular because of handheld weight concerns of the Swedish Work Environment Authority. In addition to weight reduction, SL sought a future-proof solution capable of handling various means of payment besides SL Access/MIFARE Classic. Hence, connectivity via NFC, WiFi, GPRS/3G, and Bluetooth as well as mobile imaging and GPS were welcomed features.

In a public tender conducted by SL, this challenging project was granted to a joint bid by Modul-System and Edvantis Software. Throughout the project, SL has installed and commissioned about 1,100 new units.

PROJECT DESCRIPTION



The newly developed device **BKU (Bärbar KonduktörsUtrustning,** or Portable Conductors Equipment) is the first 3rd-party product fully integrated into the SL Access ticketing system. In a synergetic effort, Modul-System contributed a wealth of product knowledge and leadership while Edvantis designed and implemented the xBKU mobile app that runs on the GMX YouTransactor SK20 platform as well as helped to integrate the solution into the SL Access infrastructure.

Great emphasis was put on making BKU user-friendly via ergonomic studies and adherence to requirements by the Swedish Work Environment Authority. Edvantis applied its expertise in UI/UX design and agile development, communicating closely with SL and target users of BKU.

In the course of the project, Edvantis also worked with the hardware vendor GMX S.A.S. to custom-tune SK20 firmware. To extend application areas, Edvantis architected xBKU to be easily adaptable to new requirements of other public transport operators. Going beyond project specs, Edvantis engineered a series of valuable extensions such as handling EMV Chip&PIN and Chip&GO credit cards (undergoing certification) and reading 1D/2D bar codes (Aztec, QR) to handle SMS/MMS tickets, automatic gate openers, etc.



■ BUSINESS VALUE DELIVERED

Edvantis helped Modul-System successfully render a much-needed innovation to SL. Due to its business success with an end-client that runs all of the land-based public transport systems in Stockholm County, Modul-System was able to gain interest of other important market players, in particular:

► **Waxholms Ångfartygs AB (WÅAB)**, a shipping company responsible for seaborne public transport in Stockholm archipelago and harbor). WÅAB-BKU is already used on-board small boats as the main device for handling tickets and cards while on large boats it is used as part of the portable sales equipment (paired with a mobile printer).

An expected feature is to have it implement credit card payments.

► **BIMS AB (Biljettsystem i Mellansverige)**, the second largest public transport operator in Sweden) has expressed its interest in BKU technology. While commercial discussions are subject to confidentiality, at this time it can be stated that xBKU software engineered by Edvantis for extensibility is technically capable of supporting BIMS ticketing needs.

An **added benefit** of this multi-year cooperation is that IT teams at Modul-System and Edvantis have mutually enriched their excellence by sharing best practices in distributed, agile, and cost-effective software engineering.

■ ABOUT EDVANTIS

Since 2000, Edvantis has been working to ensure our clients' business is future-proof. Our software engineering and consulting, tailored to custom needs with EDVANTIS80/20SM and EDVANTIS100/50SM service lines as well as our key technology enablers (Mobile with UI/UX; Cloud; Connected Systems; Collaboration Platforms; and Big Data) help our clients always be on the competitive edge. Learn more at www.edvantis.com.

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