

InformNorden & Kollektivkonferansen 2025
Parallel Session 2.2
"Transforming Ticketing: Experiments and Implementations"



HSL
HRT

Anything is possible

Account based ticketing in Helsinki region

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CASE STUDY: HSL Account based ticketing



CUSTOMERS

- Easy transactions
- Contactless payment enabled
- Ticket shop enabled
- HSL Account enabled



ACHIEVEMENT

- 4 ½ years of development
- 24 projects
- ~25 million costs



HSL

- Cost efficiencies
- New validators and ticket system
- Agile changes
- Increase in expertise

Account based ticketing in Helsinki region

HSL has just successfully concluded a multi-year development program.

The ticket account program was a significant, multi-phased system reform.



Account-based service model



How do you ensure that the service model meets these goals?

From the customer perspective,

fair, competitive pricing is especially important – public transport should be a competitive alternative compared to, for example, driving. In addition, the tariff, pricing and ticket products should support different mobility needs from high-volume consumers to occasional users.

From HSL's perspective,

the service model should be cost-effective and generate additional ticket revenue. The model should enable cooperation with other actors (MaaS) by offering open interface and be able to be updated quickly (e.g. in terms of the pricing model or ticket products).

From the societal perspective,

it is important that the attractiveness and service level of public transport develop into the future. This requires sufficient passengers (and ticket revenue), as well as data which informs, for example, new routes and route changes. In addition, the service model should avoid inequality among residents (both in terms of place of residence and accessibility).

PROGRAM GOAL

Program background and objectives

The program's goal was to reform HSL's ticket sales and payment so that tickets are stored in the customer's HSL account. The customer can use the HSL card, app or payment card (Visa, Mastercard) as an identifier for contactless payment. The new system replaced the old LIJ backend system and moved all tickets to a digital backend system. Customers can buy tickets from validators, with an app, online store and service points. The account-based service model combines all identifiers and enables more versatile data collection.

Program phases and implementation

The original six phases of the program were mainly implemented in phases 1-4:

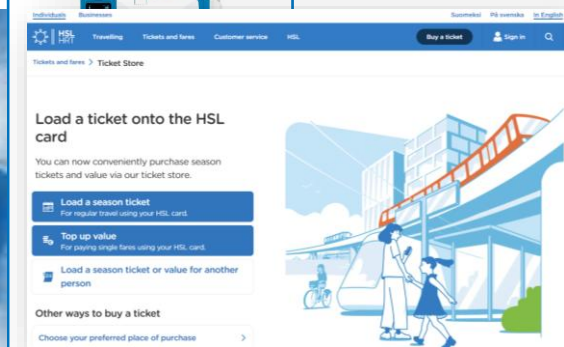
- Ticket store piloting
- Installation of renewing validators for transport
- Implementation of contactless payment
- Account-based travel

Phase 5 (migration of the HSL application to account-based) and phase 6 (payment card as identifier) were removed from the program for strategic and operational reasons.



LONG JOURNEY

2017	2018	2019	2020	2021	2022	2023	2024	2025
IMPLEMENTATION WAS MANAGED AS A STRATEGIC PROGRAM								
 In 2014, familiarization began.	Development underway Board of Directors 29.5.2018	Definition and background development preparations	New background service for work, Starting vision work	The flag program was launched	Program implemented the development	Reorganization of the Ticket Account Program.	New validators installed.	Contactless payment and Account-based payment available.
2017 Tieto and Parkeon presented an open loop / cEMV solution to HSL Cooperation between LMJ and With PLL . Market survey for device alternatives.	2018 Preliminary study on contactless payment 3 solution options 1. LIJ + AXIO update 2. LMJ BO+New reader 3. LMJ BO + AXIO Cooperation between LMJ+PLL. Board decision: passenger counting will be separated from equipment purchases. Projects Which we went to prepare 1. Tag-based travel 2. Contactless payment in means of transport 3. Contactless payment device PSP	2019 The ID-based travel program ended with an implementation that defined a new backend service, and the necessary purchases for the system backend were made and readiness was created to begin development of the backend system. On April 23, the first configuration documents for the reader device were completed.	2020 Vision work on an account-based ticketing and payment system. The new model (Entur OS cooperation 4-2020) will be started with the backend setup in Google capacity. Entur code base according to the agile development model.  In addition, it was decided to acquire a development team, whose work will be directed by HSL's Product Owner, and Google capacity where development work will be carried out.	2021 3/2021The work was expanded and a program was established to implement the desired Lippu account entity. Redefinition of goals. Development team under DevOps guidance for Digital Services, led by the Product Owner. On October 12, 2021, there was a reader competition in the final stretch, which however had to be repeated.	2022 Program plan and scheduling, to be completed in 2023. The repeat round of the reader competition ended on April 14, 2022. The concepts were refined and new development teams were added.	2023 The program results in getting readers into the warehouse. Step 1 The ticket shop was piloted and experiences were collected. Vehicle routers were installed and secured the transition of 3G communications to 4-5G devices.	2024 As a result of the project, new readers were exchanged and acted against LIJ . Step 2 The readers' software for LIJ is working and the installations have been completed.	2025 Step 3 Contactless payment available. Step 4 9/2025 an account-based background was introduced and LIJ Lippu will be discontinued . Ticket sales and others channels in use. In production transition and ending the program.



TIMELINE FOR CUSTOMERS

2021 - 2024

Development work in several projects of the Lipputili-program and procurement through competitive bidding.



REPLACEMENT OF VALIDATORS

4,000 new validators were replaced in various means of transport as well as in metro stations, Suomenlinna and connection stops.

June – December 2024



2025

ACCOUNT-BASED TICKETING LAUNCHED IN SEPTEMBER 2025

Account-based ticketing for everyone will expand in the HSL.fi ticket shop, as well as at service points and sales points.



Registration of the HSL card as an identifier begins.
Ticket sales for the HSL card and single-use cards end in old ticket system LIJ sales channels.

The rollout was implemented from September 21 to 24, 2025, during which the service interruption for our customers lasted just over 2 days.



CONTACT PAYMENT INTRODUCED IN MARCH 2025

Single tickets for all zones can be purchased with contact payment on all means of transport.



2026 FURTHER DEVELOPMENT

Implemented through the objectives defined through the 2026-2029 strategic targets.



ABT FOR CUSTOMERS

HSL Customer
service

Municipal
service point

Validator

Business portal

Ticket
inspection

HOK POS
R POS

Ticket
Store

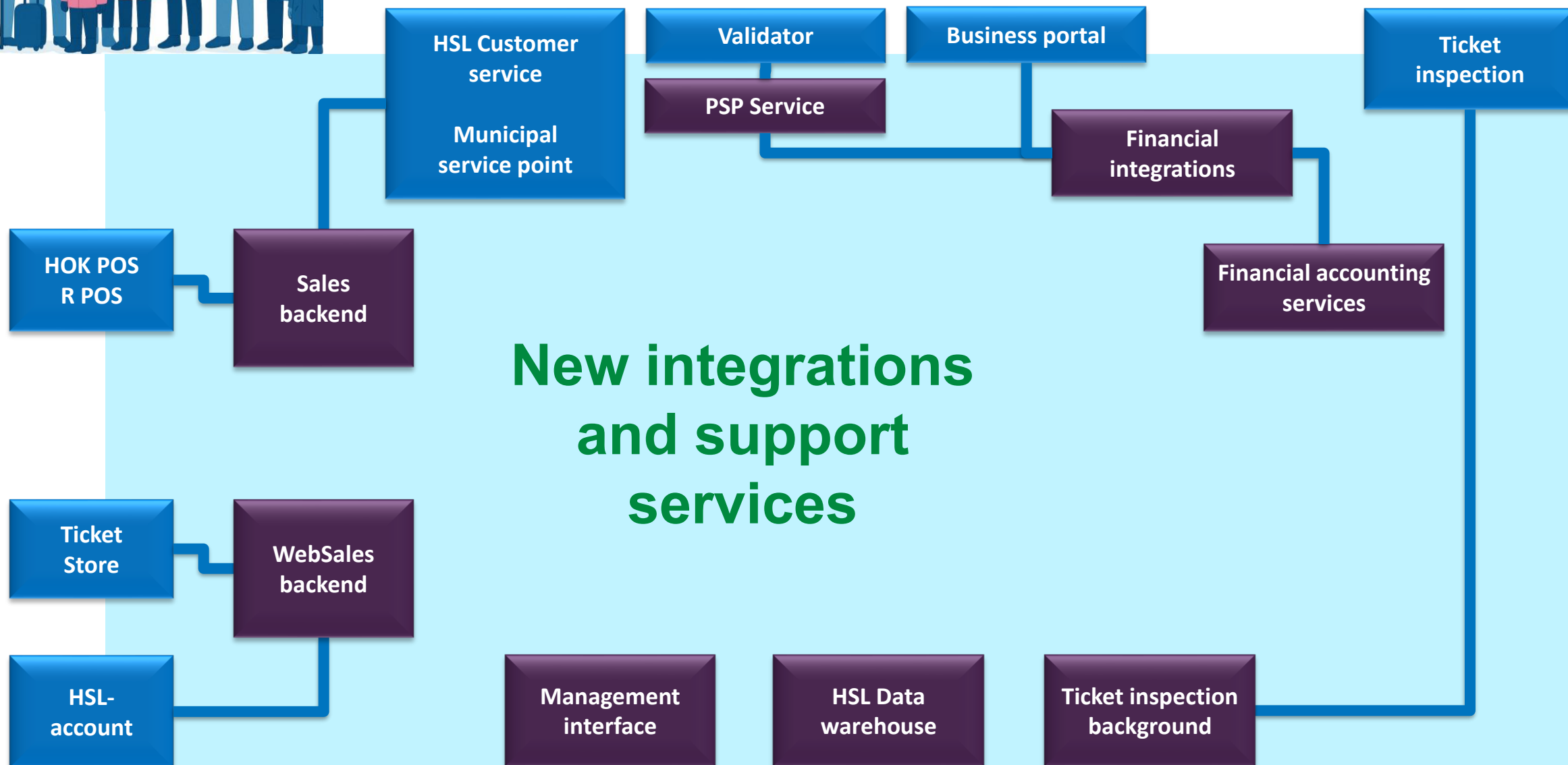
HSL-
account

Renew channels and new way to buy tickets for customers

This has been
a significant and multi-phased system reform
that has succeeded in
implementing an account-based service model
and the introduction of contactless payments,
renewing reader devices,
and digitalizing ticket sales channels.

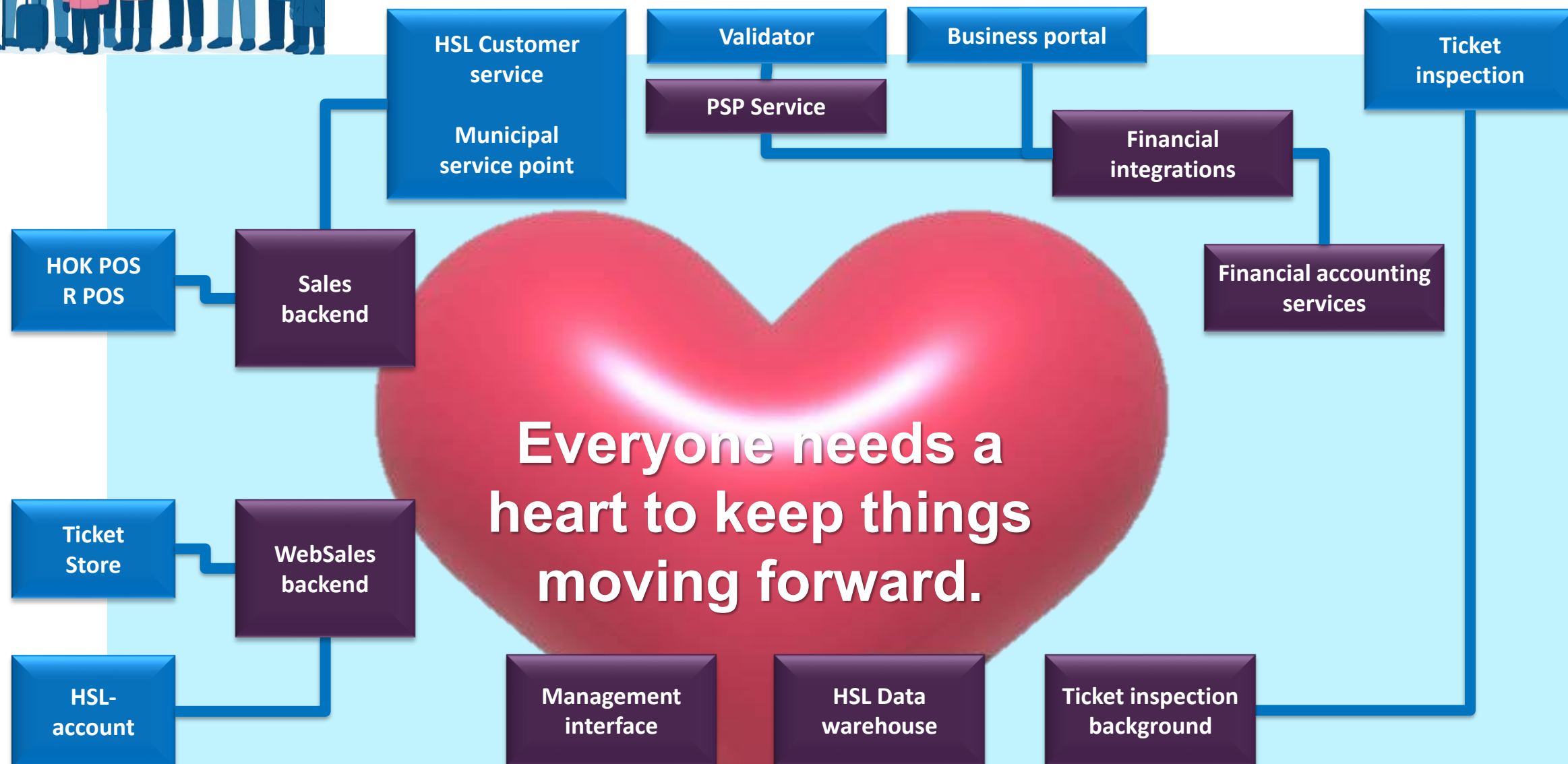


ABT BO INTEGRATIONS



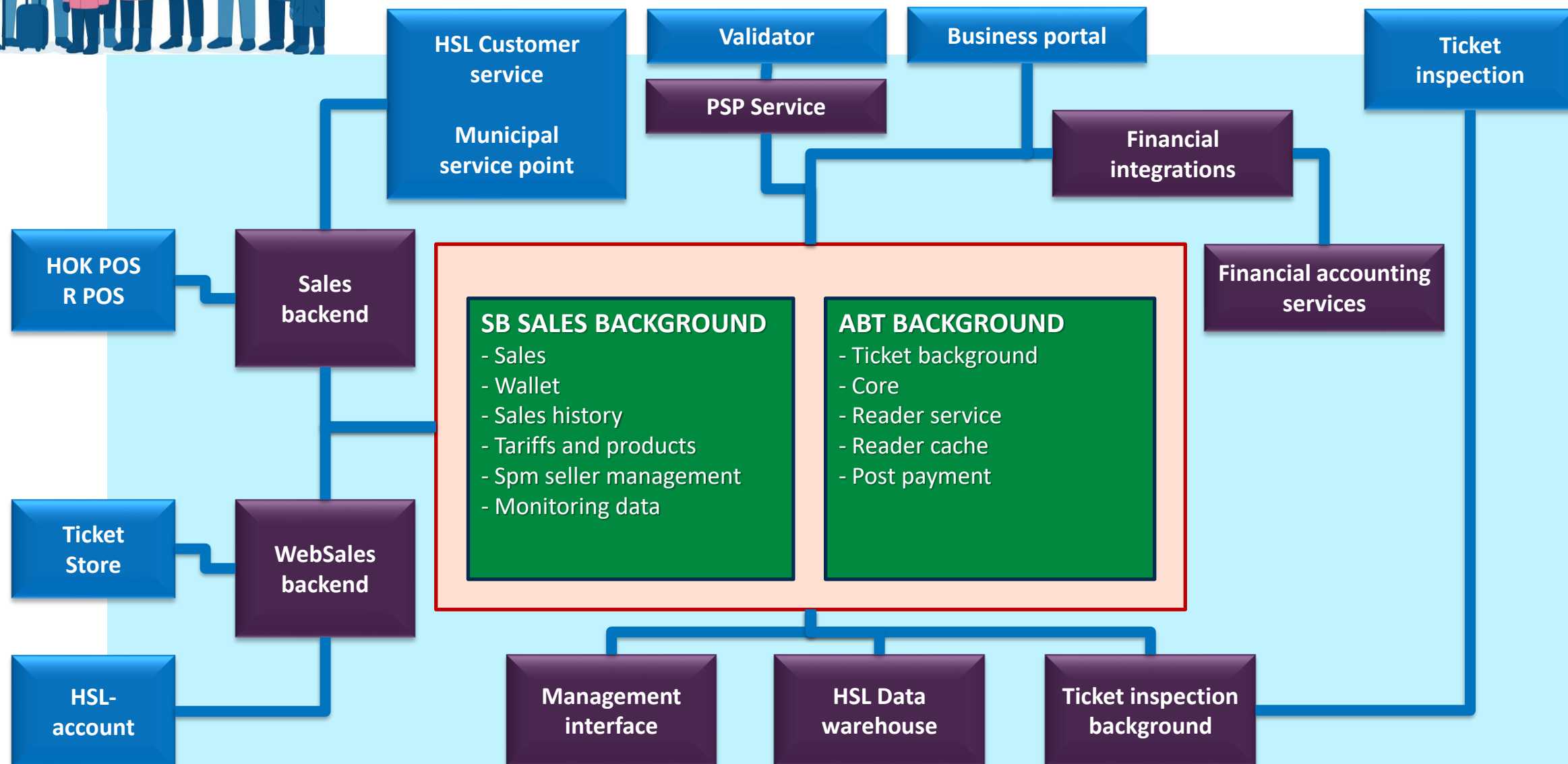


ABT HEART





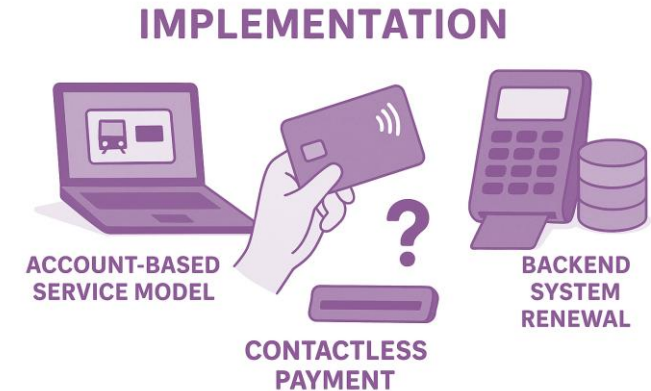
ABT ARCHITECTURE



RESULTS

The key operational goals of the program were achieved:

- Implementation of an account-based service model in travel card sales channels and services
- Implementation of contactless payment
- Renewal of validators and implementation of a new backend system.



Quantitative goals, such as increasing ticket revenue and halving costs, will be assessed in more detail at the end of 2026. The program budget was originally €16.4 million, but the actual costs were approx. €23 million, and the program took two years longer than planned.

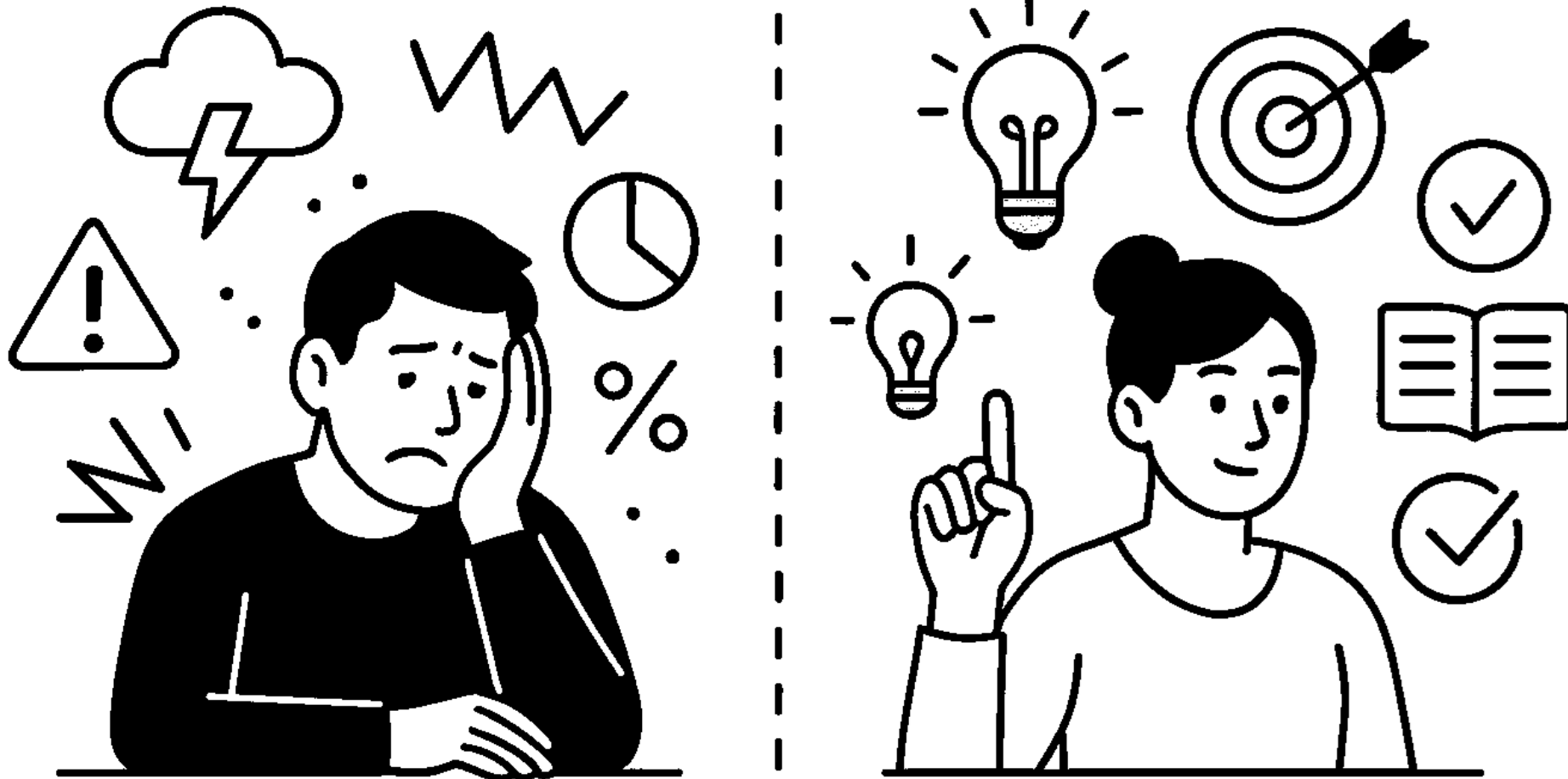
CUSTOMER SATISFACTION



An early estimate is that approx. 12,000 person-days have been spent on programs tasks, at HSL personnel investment of est. €5.3 million in the work input.

Qualitatively, customer panels and customer satisfaction were maintained at a good level, and contactless payment and ticket sales have worked well since the implementation.

PROGRAM CHALLENGES AND LESSONS LEARNED



Program challenges and lessons learned 1

1) In the early stages of the program, **there was a lack of sufficient understanding of the overall requirements**, which led to difficulties in managing schedules and costs.

2) **The acquisition of validators and integration challenges** were key reasons for the delay. The tender had to be renewed, and deliveries of the validators were delayed.

3) The introduction of contactless payment was **delayed by about two years due to software development failure**, which caused financial losses both in terms of planned new sales lost and in terms of increased development costs.

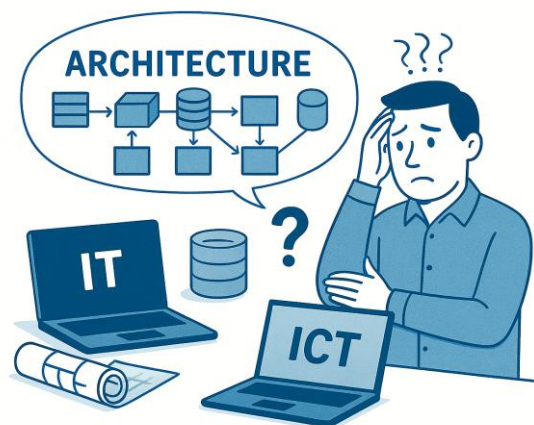
4) **Delays in point-of-sale applications prevented full implementation in the summer of 2025**. At the same time, we also made a crucial decision to ensure customer satisfaction and did not want to go into production without our significant partners sales channels, where R-kiosks and HOK stores act as points of sale. By moving the schedule, we were able to include the sales channels in the autumn implementation.



Program challenges and lessons learned 2

The program was restructured during February 2023, and a new Ticket Account Unit was established, which improved resourcing and division of responsibilities. The changes enabled realistic progress to achieve program aims.

Communications highlighted the need for early and targeted information provision and staff involvement.



Risk management was systematic, but risk visibility could have been better.

The architecture work was not fully efficient, and roles and responsibilities were sometimes unclear. These challenges were present throughout the program.

KIITOS

Finally, the most important thing.

Customers -

we exist for our customers,
we do things for our customers.

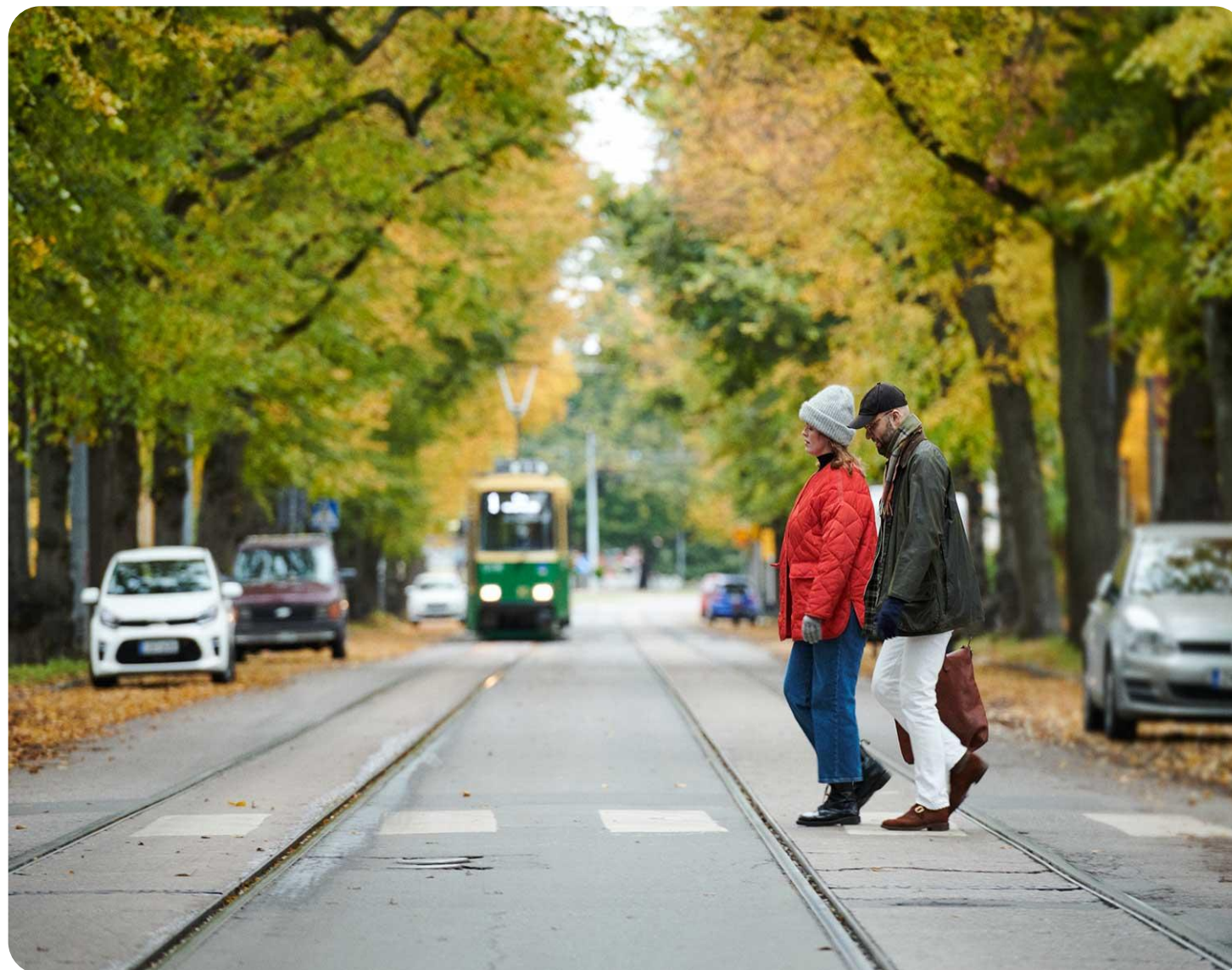
CUSTOMER SATISFACTION

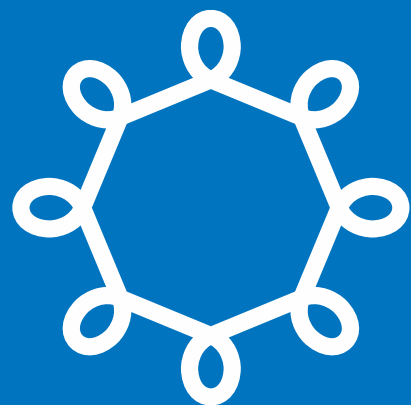


CUSTOMER PANELS



SATISFACTION
TREND





HSL
HRT