



CASE STUDY

FINNISH BORDER GUARD

The Smart Borders Pioneer



Overview

Twenty-six Schengen member states will introduce the EU's Entry/Exit System (EES) in 2022 – a landmark initiative set to replace traditional border controls of Third-Country Nationals with fully digital passenger processing and automated biometric data collection.

Finland started this process with Vision-Box in 2018, at Helsinki Airport.

Preparing Finland for EES Implementation

Our goal was to deliver a scalable system that allowed Finland to best implement Smart Borders at Helsinki Airport, keeping track of EU and non-EU travellers, ensuring compliance towards EU regulations on biometric and biographic data capture at entry and exit of Schengen, supporting personnel and enhancing operational efficiency. The long-term partnership between Vision-Box and the Finnish Border Guard (RAJA), as well as our long-term vision to provide the world's go-to solution for the international border control community, were key factors of success that enabled Finland to become the Smart Borders pioneer.

Background

Back in 2009, RAJA and Vision-Box worked together to pioneer a new generation of automated border control (ABC) solutions that were gradually delivered until 2012. The ABC solutions supported EU border crossing operations at Helsinki Airport, Helsinki Seaport and Vaalimaa, a land border between Finland and Russia. Given the existence of agreements between countries, travellers from other nationalities were also authorised to use the ABC eGates at Helsinki Airport: Japanese and Korean travellers at entry and exit, and travellers from the USA, Canada, Australia, and New Zealand at exit.

The Approach

In 2018, with EES on the horizon, after a successful tender award, Vision-Box and RAJA worked towards a united vision. Together, **we defined the concept of complete interoperability between the existing border control infrastructure and the new architecture of the solution**, guaranteeing compliance with Smart Borders standards and the Schengen Borders Code. Thus ensuring fair and responsible management of Third-Country Nationals (TCNs).

With a user-centric mindset, we used pre-COVID statistical data to break down expected peak hours and volumes of EU/non-EU passenger types entering and leaving the airport. By completing extensive journey mapping, and flow modeling, we covered every possible use case and scenario to ensure a smooth and sustainable implementation.



The Solution

Helsinki Airport and RAJA will operate in a transitional protocol up until the EES go-live date in 2022. We are currently in the second phase of implementing the infrastructure, having already installed fifty last-generation Seamless ABC eGates, and half of the Self-Service System EES Totems and Manual Border Control Booth Solutions. RAJA has already started using the solution with transitional workflows which also include the processing of physical visas for TCN-VH (Visa Holder). We plan on executing the last phase of the programme during the second semester of 2021, ensuring that Helsinki Airport will be fully ready for the 2022 deadline.

In the meantime, **RAJA's pioneering approach enabled them ample time to develop adoption, apply lessons-learned and ultimately, has positioned them as a role model for EES best-practices.**

It was critical to create conditions at Helsinki Airport where border personnel could manage travellers in a safe, fast and effective manner, while providing them with an enjoyable and stress-free experience. Vision-Box provided last-generation hardware for pre-enrolment, automated and manual border crossing, sustained by our Orchestra platform, which is "Privacy by Design" certified. This enabled RAJA with an end-to-end solution, that is human-centred, including automatic and assisted capture of regulatory information, ingest, process and control of all required data while guaranteeing GDPR compliance at every step of the journey.

Our vision of enabling contactless transactions became a reality through the operational concept we jointly agreed to implement. Travellers are able to pre-register at the arrival at the Airport, provide their biographic and biometric data, combined with the necessary EES questionnaire. This helps assess passenger risk profiles through the interrogation of national and EU central instances. **A key enabler of this process is the secured and encrypted Passenger Data Envelope.** The PDE is a digital token, **powered by our Orchestra platform**, that accompanies passengers throughout their arrival journey. It enables the use of facial recognition as a reconciliation key to automatically retrieve their pre-registration profiles without having to present travel documents again at the ABC eGate or manual counter.

In light of the challenges brought by the pandemic of COVID-19, enabling touchless transactions has become even more important in today's world, and a pre-requisite for establishing trust in cross-border travel.

Orchestra Platform & Passenger Touchpoints

Orchestra™

Orchestra Service Platform for Inbound/Outbound

50

Self-Service ABC eGates, spread between Arrivals and Departures

40

Self-Service Pre-Enrolment EES Totems for TCN-VE and TCN-VH

56

Kits of Facial & Fingerprint capture for Manual Border Control Booths



By acting upon several observational studies regarding traveller behaviour (including the study *Designing Happy Flows* conducted by the University of Delft, having Vision-Box touchpoints part of the passenger journey) we developed and launched an avatar-based technology that interacts with the passenger and mimics their movements, at the ABC eGate.



Studies have proved that creating an emotional link with the traveller leveraging AI based technology could substantially relieve stress levels, and largely improve natural collaboration to deliver best possible data quality. This comes instead of the traditional text, graphical and or audio-based instructions to guide passengers through the process.

For diversity & inclusion purposes, the customised avatar designed was a modified version of the Finnish Border Guard bear emblem, being also a visual reference of Finavia's nature theme at Helsinki Airport. Given that there is no minimum age in Finland to cross the border using ABC eGates, this design solution also contributes to a child-centred experience .

Key Benefits:

- > **Digitisation of the process, enabling contactless border crossing**
- > **Strict compliance with EES regulation for biometrics capture**
- > **Interoperability at national and EU levels, only possible through data flow Orchestration**
- > **Less delays by minimising processing times**
- > **Streamlined passenger flows by optimising infrastructure and processes**
- > **Reduced congestion, preventing border bottlenecks**
- > **Enablement of data rich reporting to measure operational and technical efficiency**

The Result

The 1st EES Project Implemented

Finland has become the Smart Borders pioneer by implementing the first EES project inside the Schengen space, leveraging Vision-Box's expertise and innovative solutions. The country is now the reference for a successful, secure, safe and fully compliant solution for EES programme enablement at air borders. This helped to modernise and expand their existing border control infrastructure and increase operational efficiency at Helsinki Airport. Vision-Box is committed to deliver end-to-end data orchestration at borders, safeguarding the quality of biometric data capture, while maintaining a risk-based approach. By leveraging a scalable system, Finland is uniquely positioned to ensuring compliance of EU regulations, enabling the future of Seamless travel at HEL, and to being recognised as best-in-class when it comes to Smart Borders.

Pre-Enrolment

self-service
1 min



2400

pax processed
per hour

Border Control

self-service
15 sec



13 440

pax processed
per hour

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This challenging and in many aspects a ground-breaking project has required dedication and hard work from both parties. Vision-Box team has in time proved its dedication and professionalism to deliver as agreed.

The EES solution for Helsinki airport has been developed in close-knit cooperation. Defining the processes together has given us all a deep insight and technical abilities to implement a solution compliant with the EES processes and legislation. Equally, the hardware installation teams have made a great effort and deliveries have been completed on time. Our mid-term solution prior to the EES Entry into Operation gives us the opportunity to fully deploy the system in the current border checks and the system platform opens opportunities for future solutions to facilitate the border crossings. With the solution and devices, we are looking forward to the future challenges with confidence.

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For more info visit:
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