Case Study

# VIX

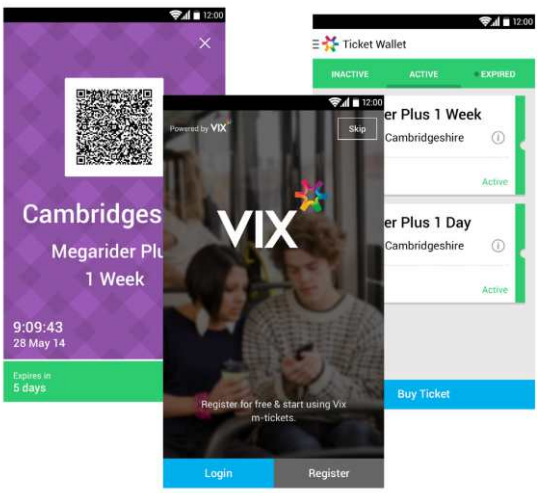
# Creating an Intelligent Transport System for Commuters Around the Globe

## The Challenge

As a global leader in transportation technology, VIX was looking for a partner it could trust to deliver its vision of the future – where travelers' lives are transformed by a seamless travel experience. This vision embraces the latest mobile and contactless payment options. VIX is not only a transportation company, but also a technology company transforming commuting and creating a delightful travel experience that makes a real difference to the economy, the environment and the people on the travel network. Whether it's transport by train, bus, car, ferry or bike, VIX provides useful, delightful and ingenious tools along the way.

VIX is a leading provider of front and back-office software for Intelligent Transport Solutions (ITS) and Automatic Fare Collection (AFC). Its products enable ticket issuance, smart card issuance, smart card loading, and fare processing applications in buses, trams, ferries, station platforms, point of sale sites, and ticket offices across the globe.

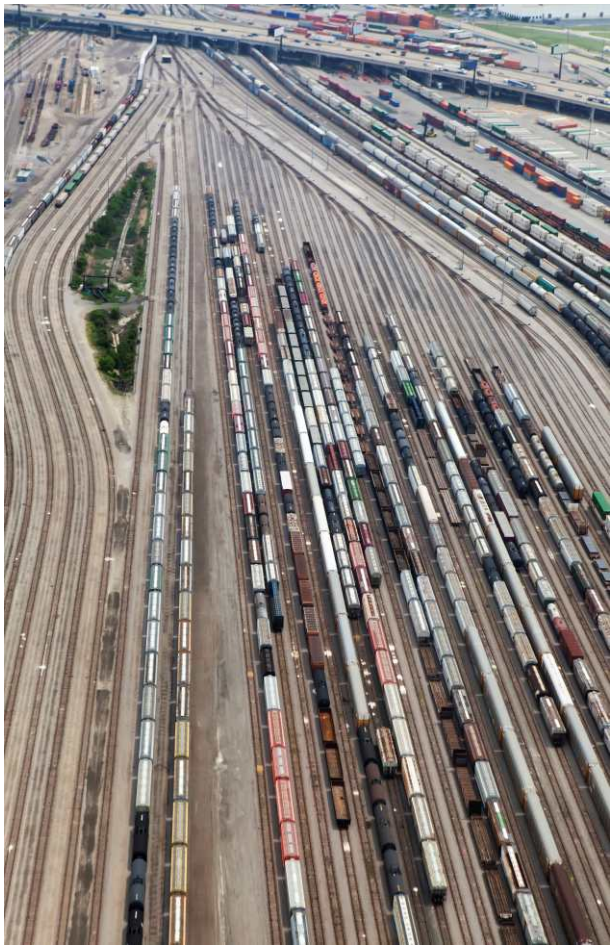
The company also offers open payment, integrated payment, single/multimodal transit, and turnkey transport solutions to travel operators from Beijing to Berlin, Sweden to Singapore and New Zealand to Norway. VIX needed to innovate, to differentiate its offering and attract customers looking for the next generation of transport solutions. VIX turned to Ness to be its partner of choice in this requirement for innovation.



# Solution

In 2011, Ness became the primary software engineering partner to VIX. Ness conceived and delivered a series of key roadmap projects in the ITS and AFC area and provides ongoing sustenance and services for the existing platforms and products.

The following are two examples of key solutions delivered by Ness to help VIX realize its vision of the future:



## Central Rail Booking Engine

This mission critical solution offers the next generation travel reservation, operations and distribution management system for rail providers. Ness created an advanced and intuitive rail operations system to manage services, schedules, inventory, fares, and fare rules. It features a channel agnostic API enabling rail providers to improve customer service. The solution is hosted on a private cloud infrastructure and provides ticket and train information to client applications through an API layer that enables ticket sales, reservations and fulfillment. The Central Booking Engine has a 99.93% availability SLA and interfaces with several external systems including, journey planning, fares, schedules, real time network updates, fulfillment, loyalty and payment channels.

Ness provides all technical services, from high availability architecture services, technical architecture to design, development and testing services. The project was delivered using Agile Development Methods across three releases over an 18-month schedule from the Ness Technology Innovation Center in Kosice, Slovakia.

## Mobile Ticketing System

The Mobile Ticketing System (MTS) is a SaaS multi-tenant platform that provides value to both regular and incidental transit riders. It offers an easy to use, convenient sales channel for purchasing and storing fares, as well as access to real-time information about the transit system. The solution includes the following features for a traveler:


- Easy purchase of mobile tickets
- Access to real-time arrivals, trip planning, alerts via agency APIs
- One less card in the wallet / no exact change needed
- Access to promotions and loyalty program opportunities
- Increased safety (no cash or credit card handling)

Transit agencies benefit from mobile ticketing's cost-competitiveness compared to other sales channels such as Fare Boxes and Ticket Vending Machines (TVMs). By reducing cash-based transactions and paper-based tickets, mobile ticketing introduces operational efficiencies into overall collection efforts. The MTS also provides agencies with data related to system use and commuter behavior. Location-based services open up a new way for riders to navigate and agencies to interpret a wealth of untapped customer data that can aid in service planning.

The client mobile apps are available on both iOS and Android platforms and the back-office application can be hosted on Amazon EC2 or Amazon Azure Cloud platforms.

# The Result

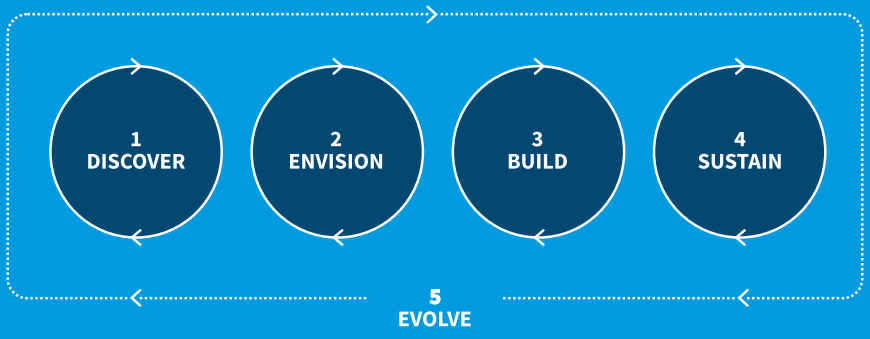
Ness provides end-to-end capabilities, including Experience Design, Development and Test Services. Ness delivered an initial MVP to validate assumptions and attract pilot customers and used the Ness Connected framework across multiple projects to support VIX with the full rollout to clients across the globe.

Expert understanding of the user experience and possibilities within technology has allowed Ness to define the roadmap and be a valued partner to VIX. Ness's collaborative approach, Agile processes and development skills have created tangible financial benefits for VIX. The flexible API approach ensures VIX is able to easily scale its offering as new clients come on board.

## How We Ensure Successful Outcomes for Our Clients: Ness Connected

Our transformational digital engineering framework seamlessly integrates User Experience Design, Software Product Engineering, and Big Data Analytics to bring compelling Digital Products & Services to market. The framework helps companies define and develop the right Digital Products & Services faster to significantly accelerate time to market, improve customer engagement and reduce business risk.

### Ness Connected




**1 DISCOVER**
Frame a common understanding of the need, the context of usage and the calls to action that will deliver the required business outcomes.

**2 ENVISION**
Develop a preliminary design of the platform as a product. Create experience prototypes to set stakeholder expectations and validate assumptions.

**3 BUILD**
Implement an iterative roadmap using the right technology and world–class engineers to drive execution excellence.

**4 SUSTAIN**
Maintain robust discipline to deliver consistent performance. Analyse and adjust features for continuous improvement.

**5 EVOLVE**
Leverage detailed operational analysis to reveal insights that point towards new opportunities for growth.



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