Tri-County Metropolitan Transportation District of Oregon

Innovative e-fare system in Portland-Vancouver Metropolitan Area

init

The Future of Mobility

When it comes to cutting-edge technology, Tri-County Metropolitan Transportation District of Oregon (TriMet) rises to the top as one of the most progressive agencies in the country. Perhaps that is why they chose INIT as their partner to supply and implement a regional, multi-media e-fare system in the Portland-Vancouver metropolitan area.

TriMet / C-TRAN / C-VAN / Portland Streetcar

First-ever virtual transit fare card

Open payment

Multi-client structure

Region-wide project

Integrated ITS & e-fare systems

Integrated and innovative e-fare system in Portland-Vancouver Metropolitan Area.

TriMet has a reputation for being a thought leader in innovative ideas for public transit. In 2005, TriMet was the first agency in the world to release data to the public for the development of third-party transit apps. This action prompted numerous other transit districts across the country to open their data to developers as well.

When the agency went out for bid for an advanced fleet management and real-time passenger information system in 2009, INIT's Intermodal Transport Control System (ITCS) won out as the most modern and flexible solution.

After the success of that project, the agency marked another milestone by becoming the first in the US to implement mobile ticketing across bus and rail. The mobile ticketing launch was followed in 2014 by the contract with INIT for the implementation of an open payments and smart card e-fare system.

In 2017, the Hop Fastpass® e-fare system was successfully launched. A few short months afterwards, another milestone was announced. Through a partnership with Google, TriMet beta launched the world's first account-based regional virtual transit fare card within Google Pay™. Since 2019, many additions were made to the system, including the ability to pay through Android Pay™, Apple Pay®, and Samsung Pay®.

In 2020, the Clark County Public Transit Benefit Area (C-TRAN) paratransit service, C-VAN, was added to the system, allowing riders to enjoy safer accessibility to transit through contactless tap-and-go fares. In the future, smaller surrounding agencies can be easily added to experience all the benefits of a best-in-class fare collection system without the high cost of setup or long-term project management.

The task

Implementing a state-of-the-art electronic fare system is challenging – even for innovators. The project required a solution that would seamlessly integrate with TriMet's existing ITS system and infrastructure, and have multi-client capability. This aspect was needed for integrating the C-TRAN and Portland Streetcar for a region-wide e-fare structure within the Portland-Vancouver metropolitan area.

The most important requirement of the e-fare system project was the necessity for a comprehensive back-office system that could define individual agency parameters, automate clearing of revenues and secure individual fare and revenue data. The TriMet-led project also required implementation of an open payments fare structure so passengers could use debit/credit cards and account-based smart cards.

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We are excited to extend the benefits of the Hop Fastpass® to our paratransit customers. No-touch payments are safe, easy and efficient for everyone.

"

Shawn M. Donaghy,
CEO, C-TRAN

The project had to be built using Open Application Programming Interfaces (API) for easy integration of third parties. This open architecture approach helped ease the task of connecting passengers with retail outlets to purchase their fare media and incorporated more than 12 third-party vendors for a fully robust e-fare solution.

TriMet chose INIT to implement the e-fare project because INIT is the only ITS provider that combines the complete range of ITS requirements into one fully integrated system.

3 regional transit agencies

2 states

1 system

Hop Fastpass® e-fare system

The scope of the TriMet e-fare project included the implementation of an open payment fare structure for the use of contactless credit and debit cards, as well as smartphone wallets, account-based smart cards, and the first ever virtual transit fare card stored securely within a smartphone.
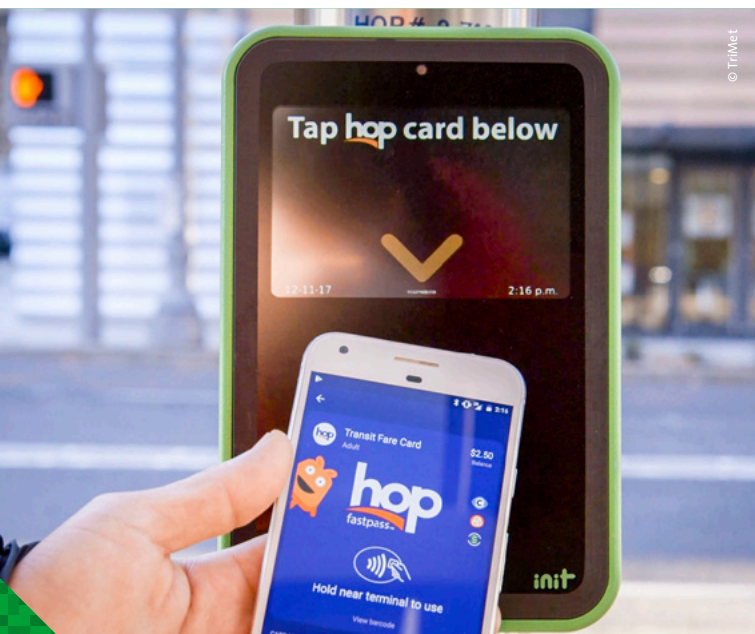

PROXmobil supports all forms of mobile payment including smart cards, mobile tickets, bank cards and NFC phones.

TriMet chose an account-based system because of the flexibility and security it provides for the regional transit stakeholders and their riders. With account-based systems, the card is linked to a rider's account where personal information and subsequent fare calculations are processed. If the card is lost or stolen, it can simply be blocked and reissued.

Account-based systems increase operational efficiencies by reducing the costs of cash handling, improving boarding times at stops, and giving passengers more control over their own accounts.

INIT's back-end processing system, MOBILEvario, serves as the core intelligence of the project. When a rider taps their device to any of the 1,100 INIT PROXmobil validators, MOBILEvario calculates the fare, validates the transaction against the back office account, and displays the fare validation result to the rider in real-time. Since all transactions are performed against the back-office, riders get accurate and up-to-date account information anytime and anyplace.

Since MOBILEvario is designed as a financial system, its main focus is to account for each and every transaction performed. The ease of interface to multiple off-the-shelf accounting software provides convenient integration into the existing accounting systems. This strong revenue package delivers sophisticated management of earned revenue, deferred revenue, revenue recognition, and revenue sharing. For the multi-agency, bi-state Hop Fastpass® system, automated clearing of revenues are securely performed.

The Hop Fastpass® system was designed following an open architecture approach. Thanks to this open design, more than a dozen partners associated with the project were integrated without changes to the core system. These partners included retail outlets, payment service providers, mobile and web applications, as well as third party suppliers.

Fare capping

With the Hop system, TriMet instituted fare capping – a structure which automatically offers riders the lowest possible fare for their journeys. For example, once the equivalent of a day pass is earned – normally after two trips in a day – the rider will not pay for the third or subsequent trips no matter how many times they ride. The same is true for the cost of a monthly pass. Fare capping relieves the rider of having to figure out the "right" fare, provides peace of mind that they are not paying too much, and delivers incentive and accessibility to all passengers.
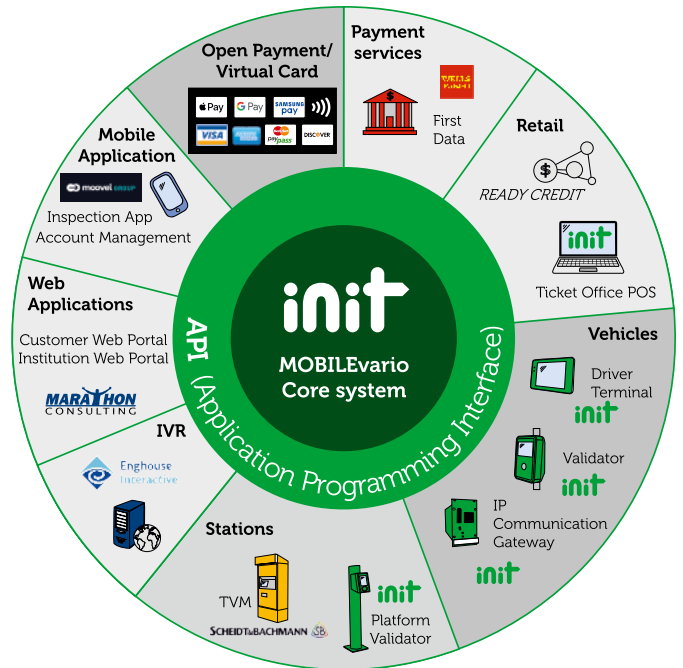
The TriMet Open Architecture System

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Fare capping introduces an equity-based incentive to frequent transit use. It eliminates the burdensome upfront cost of purchasing monthly passes, replacing it with smart, hassle-free, pay-as-you-go infrastructure.

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Rhyan Schaub,
Director of Fare Revenue and Administrative Services, TriMet

The conclusion

As TriMet continues to blaze new trails in public transit, the Portland-Vancouver metropolitan area will reap the advantages. Riders will benefit from more convenience and pricing equity, as well as the opportunity to easily use contactless bank and smart cards, and mobile phones to pay fares. The result is a smoother and more economically managed transit network, increased mobility and better transportation services. As a result of the e-fare project, TriMet is now the first US-based customer to benefit from a fully integrated operations management, real-time passenger information and e-fare system from INIT.

The project at a glance

TRI-COUNTY METROPOLITAN TRANSPORTATION DISTRICT OF OREGON

Fully integrated ITCS, RTPI and e-fare system

1st ever virtual transit card

800 fixed route buses

1,100 proximity fare readers

3 transportation providers

1 comprehensive back-end processing software

1 million smart cards

ABOUT TRIMET

TriMet provides bus, light rail, and commuter rail service in the Portland metro area. Their transportation options connect people with their community, while easing traffic congestion and reducing air pollution – making the region a better place to live.

TASK

- Implement EMV and account-based smart card electronic fare system

- Integrate with existing ITS system and infrastructure

- Provide a comprehensive back-office clearing and processing system

- Deliver Open Application Programming Interfaces (API) and third-party system integration

- Ensure multi-client capability for extension to other agencies

SOLUTION

- Fully integrated fleet management, real-time passenger information and electronic fare collection system

BENEFITS

- Better operational management through integrated operations and fare management structure

- More fare payment options through smart cards, mobile tickets, bank cards and NFC phones

- Greater security and pricing equity for passengers

- Incorporated functionality with driver terminals and fare processing

If you would like to know more about this project and featured INIT
products, please contact us at sales@initusa.com.
We look forward to hearing from you.

*More than 700 customers worldwide rely on our integrated solutions
to support them with their daily tasks*

- *Planning & Dispatching*
- *Ticketing & Fare Management*
- *Operations Control & Real-Time Passenger Information*
- *Analyzing & Optimizing*

*Moreover, public transit agencies can also master all requirements of electromobility
and set up a single sign-on mobility platform using our integrated solutions.
A robust package of operational services completes the INIT offer.*

INIT is the worldwide leading supplier of integrated ITS, planning, dispatching
and fare collection systems for buses and trains. For more than 35 years,
we have been assisting public transit agencies in making public transit faster,
safer and more efficient.

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