

## SUMMARY

Seven transit providers in the Central Puget Sound region came together to develop the ORCA fare card system. The providers include Community Transit, Everett Transit, King County Metro, Kitsap Transit, Pierce Transit, Sound Transit and the Washington State Ferry system. This case study provides an overview of the fare card system.

## FINDINGS

### Service Overview



Photo courtesy University of Puget Sound

**Figure 1. ORCA Regional Fare Card**

The ORCA regional fare card (Figure 1) provides a seamless fare system for use on Community Transit, Everett Transit, King County Metro, Kitsap Transit, Pierce Transit, Sound Transit, and the Washington State Ferry system. Passengers purchase the card and add value for use on the transit system. Passengers are able to maintain their ORCA “e-Purse” or pass products online, through the mail, retail outlets, phone, ticket vending machines, or ORCA customer service offices.

### History

The Central Puget Sound Region contains multiple public transportation providers and many transit patrons have a need to use more than one transit provider’s service on a daily basis. As part of the 1996 Sound Move Plan, a single-ticket fare system among local and regional transit providers was implemented. Sound Transit worked with the local transit providers to coordinate a shared fare structure. This plan required the transit agencies to honor paper transfers. In 1999, Sound Transit and the region developed the PugetPass, which was an unlimited trip pass honored by Sound Transit, Pierce Transit, King County Metro, Community Transit, and Everett Transit. In 2003, the seven agencies joined in an interlocal agreement as a commitment to implementation of a regional electronic fare card. The agreement also confirmed Vix Technology (formerly the ERG Transit Systems) as the vendor for the system. Figure 2 is a photo of the managers from the seven ORCA partner transit agencies on signing day. Electronic fare system infrastructure was installed throughout the region and ORCA was launched in 2009.



**Figure 2. Managers from the Seven ORCA Partner Agencies**

## **Interlocal Agreement (ILA) and Agreement with Vendor**

The seven agencies operate under an ILA, establishing a Joint Board to govern ORCA. There is an Operations and Maintenance Agreement with Vix Technology, formerly ERG. The agencies are currently negotiating revisions to the Operations and Maintenance Agreement with Vix. Vix charges a variety of fees to operate and maintain the ORCA system. The total estimated annual budget for the entire ORCA system is \$7.5 million. This cost is divided among the users based on ridership (percent use of the ORCA system). The agencies established a 10-year regional operating budget that includes regional service fees to be paid to the vendor. This allows the transit agencies to plan for annual ORCA vendor fees.

Several businesses within the region take advantage of the ORCA business passport. This allows for business to order ORCA cards for employees. The business accounts receive discounts for fares depending on the amount of ridership by the employees. The business rates for fares are negotiated based on prior year ridership. The first year the business may receive up to a 20 percent discount. The business may choose to pay for the ORCA fares as an employee benefit or the employer may deduct the cost of the transit pass from the employee's paycheck.

Each transit agency has the authority to set independently fares under some basic guidelines. Youth, senior and disabled riders must meet the same age/eligibility requirements and fare increases must increase in 25-cent increments. Notification of fare changes must be provided within 60 days and coordinated with service changes so there is no conflict in data being transmitted to/from devices.

## Revenue Allocation and Cost Sharing

The ORCA system records when, where, and the transit agency's service on which the trip was taken. Sound Transit serves as the region's fiscal agent and centrally manages revenue apportionment. All transactions first go from the card reader or point of purchase through a central clearinghouse, managed by Vix. The data from ORCA allows fares to be apportioned based on actual use.

ORCA users get a two-hour window to take another bus or train while getting credit for the fare they have already paid. For example, if an individual wants to take a Sounder Train with a fare value of \$2.75 and would like to transfer to a local King County Metro bus with a fare value of \$3.00, as long as the passenger's travel time is within a two-hour window, the passenger receives credit for the initial \$2.75 and pays an additional \$0.25 to transfer to the King County Metro service. The ORCA system uses a formula based on percentage of the trip taken on each provider's service to allocate the fare revenue to the providers.

For e-purse transactions: The total fare the rider pays is simply the amount needed to pay for the most expensive leg (ride from A to B on a single transit agency) of the trip. That amount is divided up among all the transit agencies ridden during the trip in proportion to the value of the services each provided. The agency's share is based on their percentage of the total of the adjusted trip value. The agency receives this percentage of the highest amount the cardholder pays. The amounts in red are what each agency would get for this example.

### How are PugetPass + E-Purse Trips Handled?

The pass is apportioned 30 days after the end of the valid month based on the total value of the ridership for the pass, by agency. The purse contribution is apportioned each day based on the agency's trip value divided by the total trip value all legs of the trip times the total purse used for that linked trip, which equates to the highest valued leg of the trip. Table 1 illustrates the calculations for apportionment.

**Table 1. Apportioning PugetPass + E-Purse Contributions**

Billable Linked Trip	Billable Unlinked Trip	Time	Agency	Trip Value	\$.50 PugetPass Discount	Adjusted Trip Value	Purse Contribution Calculation	Purse Value Deducted
1	1	7:00 A.M.	Everett Transit (ET)	\$0.75	\$.50	\$.25	=	\$0.25
	2	7:15 A.M.	Community Transit (CT)	\$3.00	\$.50	\$2.50	\$3.00 - \$.50 PP - \$.25 =	\$2.25
	3	8:00 A.M.	Sound Transit (ST)	\$4.00	\$.50	\$3.50	\$4.00 - \$.50 PP - \$.25 - \$2.25 =	\$1.00
Total				\$7.75	\$1.50	\$6.25		\$3.50

- ET  $\$0.25/\$6.25 * (\$3.50) = \$0.14$
  - CT  $\$2.50/\$6.25 * (\$3.50) = \$1.40$
  - ST  $\$3.50/\$6.25 * (\$3.50) = \$1.96$
- Total = \$3.50

## Challenges and Barriers

Coordinating and developing regional policy that seven agencies agreed on posed a large challenge for Sound Transit. Community Transit, King County Metro, and Pierce Transit have operating contracts with Sound Transit, and this proved to be beneficial when gaining regional support for the card. Sound Transit provided financial support to the three bus operating agencies when implementing the card.

The ORCA Regional Program Administrator provided insight when asked about keys to successful implementation and lessons learned. See the responses below:

### **What are the keys to successful implementation of a regional fare card?**

Communication early and often. We did a good job of this, but you still have many folks who are not aware of the system changes or are uncomfortable. The “big brother” element was a concern to some individuals, but the timing mitigated that issue since Starbucks, et al, introduced payment cards. It is critical to know how the vendor will be required to support and manage issues, especially security or financial issues. In addition, the agencies worked hard to have business processes in place so the staff had a regional resource for handling routine and emergent issues.

### **Lessons learned?**

Make sure the long-term plan is well established. We started the project several years ago so the technology was nearly outdated when we rolled it out. We are now trying to figure out how to move to mobile apps and other routine technologies but the system architectures was not designed to accommodate future so it will cost us.