



CASE STUDY

September 9, 2009

### **PierPASS Case Study – Ports of Los Angeles and Long Beach**

PierPASS is a not-for-profit organization created by 13 marine terminal operators to reduce congestion and improve air quality in and around the Ports of Los Angeles and Long Beach, California. The PierPASS Off-Peak program provides an incentive for cargo owners to move cargo at night and on weekends in order to reduce truck traffic and pollution during peak daytime traffic hours, and to alleviate port congestion.

Since July 2005, all marine terminals in the Ports of Los Angeles and Long Beach have offered Off-Peak shifts on nights and weekends. As part of the program, a Traffic Mitigation Fee is required for cargo movement through the ports during peak daytime hours, with certain exceptions.

In 2005 PierPASS awarded the initial contract for this program to a company with experience in the toll collection business. The reasoning was that the financial transactions of a peak pricing program are very similar to that of a toll road. This assumption proved to be correct for the financial transactions and period-end reports and reconciliation. However, the fatal flaw in this plan was that the parallel to toll collection proved to be half of the requirements. The nuanced requirements of trading EDI with 13 marine terminals and understanding the many permutations that exist for a single container or truck trip through a port proved to be equally as important.

In 2008 PierPASS, realizing the weakness in their solution architecture, posted requirements for a replacement solution. In May 2008, PierPASS awarded the Advent/VE Systems team a 3 year operations and system replacement contract.

Advent, with its newly developed Port Community System, together with VESystems' toll road and financial service experience provided PierPASS the solution they were looking for. The two companies joined forces with each organization providing the necessary experience and solution to create a program unlike any other in existence. The cargo owner and marine terminal interface required an extensive knowledge of container terminal and shipping operations. Advent's history with the container shipping customer base and systems implementations for these companies, as well as a full knowledge of the EDI message sets required to support such systems, provided PierPASS with the missing elements from their original solution. VESystems provided the knowledge required to map such transactions to the proper financial account and produce the required reconciled account statements. Since both companies had experience with volumes of transactions as high as the PierPASS system produced (over 4,000,000 per month), the system was converted without issue.

The 2008 RFP garnered responses from several companies, including: IBM, eModal, NAVIS (Zebra), Transcor, Tradegate, ACS and EDS. While each of these companies provided a piece of the solution, PierPASS understood that only the Advent/VESystems team covered 100% of the required services and architecture.

It is important to point out that the PierPASS organization is comprised of a CEO, CFO, Controller and small administrative staff. The Advent/VESystems software and support teams perform all day to day operational and financial tasks. Our support group is comprised of three teams:

1. Customer service and financial support group – This group manages the call centre and is the front line support for the shipping community regarding all PierPASS activities. In addition to supporting the PierPASS community, the service center manages collections and financial reconciliations at period end.
2. Financial system team – This team supports the VTX financial system and produces all financial reports for both PierPASS and the service centre.

3. Operational team – This team provides technical support for the web interface used by the PierPASS community as well as EDI support for all interfaces with third party and terminal systems. This team also manages the relationship with the marine terminals and helps to reconcile any exceptions between the systems.

While other third party companies provide ancillary services to the program such as a driver database feed from eModal and RFID tags from Wherenet, the Advent Port Community System (PCS) and the VESystems VTX software is utilized to manage the complete scope of the program. The scope of the software solution is as follows:

1. Web Portal – The Advent PCS website ([www.pierpass-tmf.org](http://www.pierpass-tmf.org)) is utilized by the cargo owners to claim cargo and pay the Traffic Mitigation Fee (peak pricing charge). This website is also used by the cargo owners to print financial statements and run operational reports. All transaction history can be queried on this site.

2. Customer Service Interface – The Advent PCS system also provides for a customer service module that allows the support team to impersonate cargo owners in an effort to assist them during support calls. This module also provides functionality such as transactional data correction, customer relations management (CRM), EDI monitoring and data correction, reports and KPI analytical tools.

3. EDI Subsystem and Business Rule Engine (BRE) – The Advent EDI system and BRE are truly the heart and soul of the PierPASS operational processes. The EDI system processes over 4,000,000 transactions a month from over 80 trading partners, including marine terminals and large cargo owners. This configurable system passes container activity, cargo claims and other live data into the business rule engine, where these updates and transactions are all processed within a single database. By driving much of the system's transactional logic and reference information through a series of database tables, Advent's architecture achieves a range of flexibility and speed of reconfiguration that is unrivaled.

4. VTX – The VESystems VTX application is a proven financial system that manages millions of financial transactions for toll roads throughout the United States. This system is well suited for managing the similar types of financial transactions generated by the PierPASS program. As these transactions flow from the operational database to the VTX system they are mapped to general ledger accounts and processed for invoicing and collections. The VTX system produces reconciled reports for all required audits.

### **Clean Truck Program – Ports of Los Angeles and Long Beach**

In 2009, the Clean Truck Program was implemented in the Ports of Los Angeles and Long Beach. This program is part of the Clean Air Action Plans (CAAP) of both ports, which have the goal of reducing emissions of harmful pollutants by 45 percent by 2012.

The success achieved by the PierPASS program using the software and services of Advent and VESystems left little doubt as to the logical choice of partners for the Clean Truck Program. In February of 2009, Advent and VESystems rolled out the Clean Truck Program as a smooth and seamless parallel operation alongside PierPASS. Because intermodal cargo is not exempt from the Clean Truck Program, the customer base for the Advent/VESystems service offering expanded from 18,000 companies to over 30,000 across North America. Despite nearly doubling its transactional volume, Advent's PCS did not experience so much as a moment of downtime during this process.

In addition to the expansion of the Advent PCS online user community for the Clean Truck Program, as more than 3000 trucks were outfitted with RFID tags for tracking and billing, the Customer Service centre and the PCS itself had to account for a vast new array of implementation issues. Pairing live data feeds with gate transaction information, the Advent system is able to monitor the movements of all of these trucks and apply correct charges to each one based on the condition of the truck's engine and emissions equipment. As the correct charge is applied to each truck, the Clean Truck Fee is processed through the VTX system and invoiced to the responsible party.

The Clean Truck Program and the PierPASS OffPeak program are the first of their kind to the port industry. Both programs have been a success for the PierPASS organization and the Advent/VESystems team.