

## Port of Los Angeles: Billing System Conversion and Analysis

### ➤ The Client

The Port of Los Angeles is the nation's largest port, encompassing 7,500 acres, 43 miles of waterfront and featuring 26 cargo terminals, including dry and liquid bulk, container, breakbulk, automobile and omni facilities. Combined, these terminals handle nearly 150 million metric revenue tons of cargo annually. Last year, the Port moved 7.4 million TEUs, establishing a new national container record.



### ➤ The Challenge

The challenges that necessitated this large-scale project encompassed both business process, as well as technical elements. On the business process side, the Port was facing a projected threefold increase in volume over the next 15 years. Because the current 33 year-old legacy billing system evolved organically over time without deliberate planning, it had become burdened with older applications, outdated paradigms (Tariff vs. TEU), inefficient system architecture, disparate technologies, manual intervention points and a lack of system standards.

While marginally sufficient for its current throughput, this system lacked the efficiency necessary to absorb any significant changes in volume. From a technical standpoint, the system was running on VSE 2.3, which was no longer supported by IBM. Operating such a mission-critical system on an unsupported platform was deemed too high a risk. Compounding this challenge was the fact that Port management needed to implement a scalable and adaptable solution quickly.

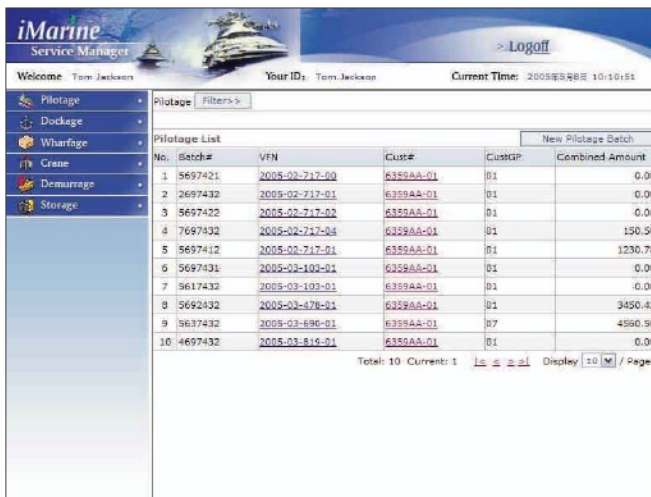
### ➤ The Solution

Saga Technologies called upon key members of its Mainframe Team to focus on completing the critical conversion phase of the project. By designating 4 on-site consultants at the Port, the Saga team was able to successfully upgrade the mainframe billing applications within 5 months – representing more than a 50% reduction in time from the original 12 month plan. The immediate result was a high quality conversion that mitigated the risk of operating on an unsupported platform, achieved without increasing the original project budget and without interrupting business operations.

Concurrently, members of the .NET and Business Intelligence teams performed an analysis on Keymaster, the primary data entry tool within this system. The objective of this project was to formulate a plan and recommendation for replacing Keymaster with a web-enabled alternative, thus laying the groundwork for future upgrades as required by the Port's ever-increasing throughput. As part of the analysis, the Saga team interviewed all levels of users on-site to conduct gap analysis between the "as-is" process and "to be" process flow. Off-site, the project team leader attended AAPA (American Association of Port

## Port of Los Angeles: Billing System Conversion and Analysis

Authorities) meetings in Los Angeles and Chicago to gain a deeper understanding of technical and process issues, trends and solutions related to the port industry in general. The efforts culminated in a working proposal to re-architect the overall system utilizing a milestone-based implementation approach. The team also presented a prototype of an envisioned portal that could be adopted to support the processes included in the analysis.



No.	Batch#	VFN	Cust#	CustCP	Combined Amount
1	5697421	2005-02-717-00	6359AA-01	01	0.00
2	2697432	2005-02-717-01	6359AA-01	01	0.00
3	5697422	2005-02-717-02	6359AA-01	01	0.00
4	7697432	2005-02-717-04	6359AA-01	01	150.50
5	5697412	2005-02-717-01	6359AA-01	01	1230.78
6	5697431	2005-03-103-01	6359AA-01	01	0.00
7	5617432	2005-03-103-01	6359AA-01	01	0.00
8	5692432	2005-02-678-01	6359AA-01	01	3450.42
9	5637432	2005-03-696-01	6359AA-01	07	4560.56
10	4697432	2005-03-819-01	6359AA-01	01	0.00

system like that envisioned by Saga Technologies would help to solidify the Port of Los Angeles as one of the leading ports in the world.

### Technologies Utilized

COBOL LE, Report Writer, CICS/VSAM, Vollie, DataCom, VSE 2.6, Visual Studio.NET, MS SQL Server 2000 and Infragistics NetAdvantage 5.1

### The Benefits

By updating the billing system upon which it operates, the Port has accomplished one of its most critical initiatives. Of all systems in the Port, the billing system is the one directly responsible for the revenue that supports its day-to-day operations. Having converted to an updated and supported platform, the Port has achieved the immediate benefit of improved stability for the system as a whole, while drastically reducing the risk of down time in the event of a system problem or failure. At the same time, this project represents the first step in preparing the Port for future growth. Re-engineered with scalability, adaptability and automation as the focal points, a web-enabled billing