

LG Display Reduces Manufacturing Downtime by 50% with Oracle E-Business Suite R12



LG Display
Seoul, Korea
www.lgdisplay.com

Industry:

High Technology

Annual Revenue:

US\$13 billion

Employees:

27,000

Oracle Products & Services:

Oracle Financials
Oracle Manufacturing
Oracle Warehouse Management
Oracle Master Data Management
Oracle Human Resources
Oracle SOA Suite
Oracle BPEL Process Manager
Oracle Solution Support Center

Oracle Partner:

LG CNS
www.lgcns.com

“By standardizing on a single global instance of Oracle E-Business R12, LG Display has increased efficiency by 30%, reduced manufacturing downtime by 50%, and improved collaboration across the enterprise. We also expect to reduce costs by 30% to 50%.” – Hyun Byung Tak, Executive Director, Business Innovations, LG Display

Established in 1999, LG Display is a leading manufacturer and supplier of thin film transistor liquid crystal displays (TFT-LCD) panels. The company makes panels in a wide range of sizes and specifications for use in televisions, monitors, notebooks, cell phones, and other applications. It has customers in a wide range of industries, including the multimedia, medical, automotive, and aerospace sectors. LG Display operates eight fabrication facilities and five back-end assembly facilities in Korea, China, and Poland.

With competition increasing in the TFT-LCD market, LG Display had to increase efficiency, improve quality control, and enhance risk management if it wanted to meet customer demands for quality, cost, and prompt delivery. This required a comprehensive review and restructure of the company’s business processes and systems.

In January 2009, LG Display went live on Oracle E-Business Suite Release 12 after an 18-month project to standardize its global operations on the platform. The Oracle system has increased productivity by 30%, reduced manufacturing downtime by 50%, and is expected to lower costs by 30% to 50%.

Need to Improve Competitive Edge

With demand slowing as a result of the global economic crisis, LG Display had to find ways to maintain competitiveness and prevent Japanese and Taiwanese rivals from taking a larger share of the market. The company needed to increase efficiency and improve risk management if it was to meet customer demands for quality, cost, and reliable delivery.

Key Benefits:

- Improved productivity by 30%
- Reduced manufacturing downtime by 50%
- Increased the percentage of automated workflows from 46% to 73%
- Cut the number of unnecessary processes by 31% during a process innovation project
- Expected to reduce costs by 30% to 50%

LG Display recognized that information technology would play a major role in achieving these goals. The right IT system would enable the company to manage production, analyze performance, and alert staff to process and quality control issues before they impacted the business.

In May 2007, LG Display launched the “7 Mega Project” to upgrade seven of its core applications, including the enterprise resource planning (ERP) system, manufacturing execution system (MES), master data management (MDM) system, and a data warehouse. The company elected to standardize its global operations on a single instance of Oracle E-Business Suite R12, ensuring all offices and manufacturing facilities were following the same processes and using the same applications.

Improved Productivity, Lower Costs

As part of the 7 Mega Project, LG Display reengineered its business processes, increasing the percentage of automated workflows from 46% to 73%, which led to a 30% increase in productivity.

The company was also able to improve risk management through regular process monitoring and performance analysis. This reduced manufacturing downtime by 50%, a critical achievement in an industry where manufacturing takes place around the clock.

In addition, LG Display developed an integrated global payment system and standardized data formats across the world, ensuring head office did not have to spend time and money consolidating information for reporting.

As a result of these and other business improvements, LG Display expects to reduce costs by 30% to 50%.

Promoting master data management

LG Display set out to improve the master data management to improve the reliability of the base information. This required the company to standardize data formats and processes, as-is analysis, and to-be process designs. From April to December 2008, it deployed Oracle Customer Data Hub and Oracle Product Data Hub and launched the system in January 2009.

The Oracle solution improved the reliability of data that forms the basis of decision making. It also supported data refinement, standardization of company names and addresses, and the

detection and management of duplicate data. To manage LG Display's historical data, the company implemented functions, such as data history audit management, hierarchy and relationship management, and data enrichment functions.

Moreover, the extension framework does not require hard coding, allowing the company to easily add more than 20,000 properties to support expansion.

After implementing Oracle Master Data Management, LG Display experienced improvements in data quality and significantly enhanced communication across the enterprise.

Using SOA to Standardize Business Processes

LG Display used Oracle BPEL Process Manager, a component of Oracle SOA Suite, to build and deploy business processes as part of a process innovation project. The company also integrated the new business processes with existing systems to ensure smooth workflows. As a result, LG Display reduced work processing time.

Oracle Support Ensures Smooth Implementation

LG Display used the Oracle Solution Support Center to ensure it had access to assistance during the implementation. From July 2008, the Oracle Solution Support Center undertook tests to verify the new infrastructure and ensure the performance and availability of the ERP and MES systems, the two most critical components of the infrastructure. The Center also completed patch analysis and performance testing. A 24-hour hotline service was in operation to help LG Display if it ran into any problems during the project.

Just before and after the go-live date, the Oracle Solution Support Center provided on-site support to monitor and stabilize the system. This minimized technical risks and allowed LG Display to focus on its core business of manufacturing and sales.

Focus on Business Intelligence

To further improve efficiency and competitiveness, LG Display will upgrade its business intelligence capabilities in the near future. The company also plans to strengthen its research and development and sales and marketing capabilities.

LG Display is also keen to optimize supply chain management, as it will enable the company to acquire further channels for customer collaboration and ensure customers' needs are accommodated.

Why Oracle?

LG Display selected Oracle E-Business Suite R12 because the solution was scalable, easy to integrate, and offered a range of functions that supported global operations, including multi-language and multicurrency features. The Oracle suite also included best practice processes that would help LG Display improve efficiency across its financial, manufacturing, and supply chain operations.

Implementation Process

LG Display engaged Oracle Certified Partner LG CNS to design, develop, and implement the Oracle platform. LG CNS provides IT outsourcing services to affiliate companies in LG.

The first step in the implementation was to map LG Display's to-be processes. The company grouped more than 1,200 processes into 14 main categories, such as sales and marketing, production, and accounting. More than 30,000 employees and 80 team managers participated in this process, reducing the number of unnecessary processes by 31%.

LG Display committed more than 500 staff to the 7 Mega Project. The implementation took around 18 months to complete and the system was launched in January 2009.

"A project of this magnitude usually takes around three to four years to complete," said Hyun Byung Tak, executive director, business innovations, LG Display. "However, because we took the time to establish the to-be process model, we had a clear project roadmap to guide us. We completed the implementation with minimal resources and without missing any deadlines.

"We also had the full support of the CEO and CFO and other senior executives, which reduced the burden and ensured the system was accepted by our staff."

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