

# Case Study: ERP Selection

DMA Systems Inc.

Bill Neaves, M.Sc., M.Eng., PMP

**The Situation:** This manufacturer of process equipment was seeking to upgrade its core information systems. The existing system was a mixture of off-the-shelf and custom software, including an ERP system that had been installed in the mid-90s. A combination of aging technology and a proliferation of single-purpose databases had led over a period of years to a system that was losing its effectiveness in supporting the information management needs of the firm's 400 employees.

There was a growing awareness by senior management that the age and complexity of the system was becoming a barrier to business strategy. Specific concerns included:

- Risk of business disruption due to technical limitations of existing systems.
- Absence of a single source of accurate consolidated data was limiting access to information for decision support.
- Manual re-entry of data from one system to another was recognized as a source of order error and business process inefficiency.
- Delays in plans to standardize the product offering and move to a predominantly Configure-to-Order business.

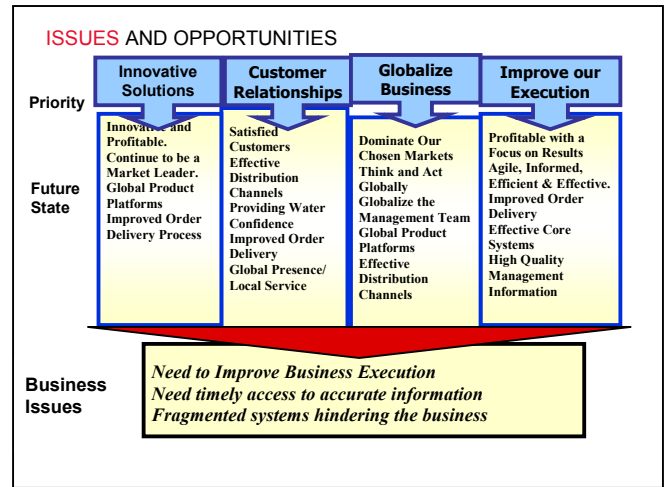
In planning how to undertake a major system overhaul, management chose an investigative approach with strong leadership from within the business aided by external resources who provided methodology, coaching and market knowledge. The combined team worked together to assemble and analyze the facts, evaluate options and make a recommendation. The goal was to arrive at a solution decision that would:

- Align with established strategic priorities.
- Provide effective support for the business.
- Receive broad ownership within the business.

## Decision Process:

**Strategic Vision:** Interviews with executives and managers provided detailed insight into the underlying business issues. An executive workshop brought the entire senior management team together to affirm:

- Top priority business issues to be addressed through system change.
- Relationships between business issues and strategic priorities.
- High-level process map that would guide detailed analysis.



**Current State Assessment:** In a series of facilitated, workshops, a group of managers worked together to document:

- Relative contribution of each business process to overall business execution.
- Performance of each process in fulfilling its goals.
- Issues and opportunities to improve transaction processing and information management.

The group identified over 200 specific opportunities for improvement, which were condensed and summarized as ten initiatives that could be addressed through information system changes. These were scored and ranked in terms of cross-functional impact and links to strategic priorities identified in the executive sessions.

Priority	Description
1	Knowledge-Based Product Configurator
2	Product Life Cycle Management System
3	Customer Information Management
4	Implement Service System
5	Improved Project Management
6	Document Management System
7	Improve Market & Product Planning
8	Streamline Order Management Process
9	Improved Planning and Forecasting
10	Streamline Purchasing and Inventory Management

**Future State:** By this time the group had some to a common view of business priorities and were able to express them in terms that could be used to specify software capabilities. In a second series of workshops, the group worked together to define:

- A revised process model for future operations.

- Software functionality that would be required in order to support the new model.
- A matrix that linked key areas of system functionality to the strategic priorities set by the executive.

**System Capability vs. Strategic Priorities**

Strategic Priority / System Capability	Deliver Innovative Solutions	Expand Customer Relationships	Globalize the Business	Accelerate Demand	Improve Execution
Project Management	●				●
Product Management	●		●		●
Configurator	●		●		●
Customer Information Management		●	●		●
Reporting	●	●	●	●	●
Technology Platform			●		●

**Going to Market:** The scope of functional requirements was broad. As well, the emphasis on Configurator and Product Life Cycle Management capabilities constrained the field of potential vendors to 10 software companies who appeared to have a potential match. A formal RFP was distributed and evaluated in three stages:

- **Responses to functional requirements were scored**, ranked and combined with comments by team members from individual reviews of vendor documentation.
- **Two top-ranking vendors** were invited to present a scripted demonstration of their system capabilities. Scripts demonstrating various aspects of a day in the life of the company were prepared from the future state process model and functional requirements documents.
- **A quantitative decision model** was completed, giving overall vendors scores based on functional fit, total cost of ownership, demonstration results and other factors.

Throughout the selection process the team came together as a group often to review different aspects of the information and arrive at a consensus. The final choice was **Oracle 11i eBusiness Suite**. Even though total cost of ownership was estimated as substantially higher than the second rank vendor, demonstrated functionality in the critical of Configurator and Product Life Cycle Management offered tangible value that offset the higher cost.

**Business Case**

From the beginning, senior management had emphasized that improving business execution would be a critical measure of success. As part of the overall business case to support the capital investment the project team had to demonstrate tangible, measurable benefits and to establish a baseline for post-

implementation assessment. Despite the complexity of introducing a tier-one ERP solution, the net benefit would be to reduce the number of applications required to support core business processes by 60%.

Simplification of day-to-day transactions, improved information accessibility and an increased ability to integrate business processes and data across the company were linked to specific business issues. Collectively, these benefits were estimated as quantifiable savings, predominantly in indirect labour costs, leading to an estimated payback of 3 years for the new system investment.

Process	Benefit
Order-to-Cash	Reduce operator cycle time for Order Management activity by 75% through Oracle configurator, integrated with order management.
	Reduce Design Engineering costs for customer orders by 28% through Oracle configurator, integrated with order management.
	Reduce cost of design errors for customer orders by 60% through integration of Oracle configurator with product data management.
Customer Information Management	Reduce operator cycle time for Call Ticket Handling by 27% through consolidation of customer information and integration with service functionality.
Product Data Management	Reduce incremental product change activity by 50% and reduce transaction cost for engineering data management by 60% through integrated product data management with work flow control.
Procure to Pay	Reduce transaction costs for the procure-to-pay cycle by 33% through improved vendor communication capability.
	Reduce cost of vendor errors by 10% through improved component forecasting integrated with product data management and electronic vendor communication.

**DMA Systems Inc.**

**Bill Neaves**, principal consultant of DMA Systems, served as solution architect throughout all phases of the project. His role was to guide the team to a well-defined system solution that aligned with corporate strategy. The resulting requirements model brought together the needs of executives and managers in a way that provided:

- Common Vision for setting priorities and implementation planning.
- Integrated Business Process model to optimize coordination between departments and offices.
- Minimized Duplication of data, applications and infrastructure.
- Reduced Total Cost of Ownership

Specific contributions included interviews and facilitation of executive sessions, preparation of key summaries for review by the project team, risk assessment of solution alternatives and preparation of the business case to support the necessary capital investment.

**DMA Systems Inc.** provides a full range of system architecture and software selection services. For more information please contact us:

[www.dmasystems.ca](http://www.dmasystems.ca)  
 email: <mailto:bneaves@dmasystems.ca>  
 Phone: 519-685-6324