

Extend Helps Contractor Save Money

Imagine That, Inc.

The agency expects a net savings of \$2.5 million per year and a 36% reduction in the time it takes to fulfill requests

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With the current climate of budget cutting and governmental downsizing, federal agencies are looking for ways to reduce expenses and increase productivity. Some proven methods to accomplish this are: eliminate work processes which don't add value; add integrated client-server-based information systems; and determine the economic impact of government regulations and modify them if they exceed commercial best practices.

Redesigning the Supply Chain

DynMcDermott Petroleum Operations Company (DM), managing and operating contractor for the Department of Energy Strategic Petroleum Reserve (SPR), initiated reengineering of the SPR supply chain to reduce expenses, decrease need-fulfillment time, and improve the storage and dissemination of information.

To arrive at the best redesign proposal, DM's reengineering team developed a Best Practice Baseline Process that incorporated reengineered process principles, technology innovations, team inventions, and material, supplier, financial, and acquisition management best practices.

To build a simulation model of this process, the team chose Extend+BPR™ from Imagine That, Inc. The model served as the baseline from which to develop the best alternative for the SPR. Multiple simulation runs were conducted to test alternatives and gauge the effects of varied constraints on the key measures of *average time from request to item or service available* and *average cost to process a request*.

Narrowing the Universe

Alternatives tested included the extent to which warehousing should be centralized, the effect of delivery to the maintenance work site, the effect of various technological innovations (such as hand-held remote database access), and the effect of various government regulations.

According to Brian Seagrave, DM's Director of Strategic Initiatives, "*The simulation model was instrumental in narrowing the universe of possible solutions down to the best for the requirements, estimating return on investment from the new process design and information systems, and clearly demonstrating the impact on cost and speed from governmental rules exceeding commercial best practices. This helped to make*

the case for deviations and changes in local regulations."

Picking the Best Alternative

Construction of the model posed questions for the team that had not yet been con-



sidered. It forced discussion and consensus about major and minor issues that had gone either unresolved or unnoticed. With the Notebook feature of Extend, the team could quickly answer questions concerning assumptions and vary these on demand.

As a result of the modeling exercise, the team determined that the best design alternative for the SPR would include the following features:

- Improved, "cradle-to-grave" material and service materials planning for operational equipment.
- Fewer and larger procurement actions and innovative vendor relationships
- Electronic commerce
- Eliminated database constraints through integrated network software
- Expert systems to put decision expertise at the fingertips of the material or service requisitioner, combined with decentralized and delegated authority.

The team also determined that they should provide planning time and budget to review and validate the simulation models and ensure that process design cost/benefit computations made using model data include the costs of activities not included in the models.

This design is expected to save \$2.5 million per year (net of all reengineering, information systems, and implementation expenses), cut need-satisfaction time by 36%, reduce inventory by 5% of annual revenue, and increase accounts payable productivity to 3,600 vouchers per person per month.