

# case study



*Client:* Chemical Division (US)  
*Practice:* Business Technology Solutions  
*Business Process:* Asset Management/Facilities Management  
*Consulting Service:* Business Process Reengineering / Systems Implementation  
*Industry:* Process Industries  
*Business Function:* Chemicals

## q *Business Issue:*

With annual revenues in excess of \$3 billion, this chemical division had grown in the US through both plant capacity additions and a series of acquisitions. In addition, certain facilities were operated as joint ventures where revenues and costs were shared in various proportions depending upon the nature of the joint venture. The accumulated total asset base exceeded \$9 billion representing operating plant and equipment as well as capital spares and MRO. Operations were conducted from seven primary processing locations and other warehouse and office/sales facilities. In the acquisition process, acquired companies were typically allowed to continue to operate with existing management information systems, with the exception of sales and inventory management and a single system for financial consolidation. Because of the nature of growth and the joint venture agreements, it was known that there was considerable duplicity in the operating spares and MRO assets, however the multiple IT systems did not permit an easy means to rationalize the asset base or to manage asset inventories across the enterprise. Furthermore, the exact condition of various assets was unknown. Work management systems were labor intensive for planning and verifying work efforts, where work efforts were completed by both internal staff and on a contract basis.

## q *The Solution:*

To alleviate the issues being faced on a day-to-day basis, the company decided to implement AMS across all locations. As an initial step, all assets were downloaded into AMS from the various financial system fixed asset modules, while other assets were loaded from various systems of record. This provided a single view in AMS of all assets, by location, with a direct tie to the appropriate financial system. It also provided a consolidated view for MRO inventories and an ability to ascertain surplus items. The physical condition of non-installed assets was then established through an inspection process resulting in a decision to maintain, sell, or scrap various assets depending on number, condition, and forecasted need.

With an updated asset base, additional work management modules were deployed to permit tracking of open work orders and the proper chargeback for efforts and resources expended. Being web based, operating personnel could enter and receive

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information from their work locations and duplication of work efforts was eliminated. Work orders could also be reviewed and closed out (or punch-list items entered) in the field on a real-time basis such that an accurate assessment of work activities existed. By opening up the system to outside contractors, all parties could maintain the current status of work activities.

The system easily integrated into the financial system so that appropriate financial accountability and interfaces were maintained without re-entering information a second time. Pertinent documentation (specifications, warranties, manuals, etc.) was also identified and indexed into AMS as was maintenance histories and schedules. Life-cycle information was readily updated to permit more accurate forecasting of future maintenance activities and long-term capital planning needs.

The total cost of implementation including licensing costs, configuration, interfaces to other systems, hand-held devices, and training was less than \$250,000. On-going software maintenance and support costs are approximately \$25K per year. Total time of implementation was approximately 3 months, much of this time expended on the asset evaluation.

## q *Team Structure:*

Implementation activities consisted of a business process/project manager and a technical staff of 3 individuals, for a total of 4 outside resources. The client team consisted of a full-time project manager and various part time support for a total of 2 FTEs.

## q *Client Benefits:*

Benefits were found in two categories – 1) a one time benefit obtained through the identification and elimination of surplus, non-standard, or non-operative assets; and 2) continuing operational benefits through enhanced asset and facility management work processes. In both categories, there were direct and indirect benefits derived.

On a one-time basis, approximately \$128 million dollars (book value) of assets were identified that were deemed “unfit” for the business either because items exceeded the desired number to be held in inventory or as spares; standards had been adopted that did not include particular items; or the physical condition of the asset made it unfit for service. These items were then sold as surplus for approximately \$7 million and written-off. In addition to the revenue generated, benefits were accrued from decreased personal property taxes on the equipment, lower insurance premiums, and the cost-of-money related to the items (all based on book value). Other one-time savings were gained in freeing up one warehouse that could then be used for other purposes as well redeployment of 2 FTEs whose functions had centered on the maintenance and services related to the surplus items.

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Enhanced work processes resulted in benefits in 6 major areas and consisted of both direct and indirect benefits. The Benefits accrued to the following areas:

- § Better visibility and control resulting in increased asset utilization, reduction in excess MRO spend, and better management of life cycle-life extension activities
- § More efficient maintenance procedures
- § Reduced labor
- § Better management of work efforts including contractor work efforts
- § More effective cost control and chargeability of costs, e.g., warrantee and shared facility cost delegations

One of the most appreciated indirect benefits derived was in the morale of the staff, where efforts were significantly reduced in searching for either items or documentation and frustration reduced from the uncertainty in whether they had the appropriate documentation and/or all of it. This also led to improved turn around times in completing unplanned or emergency maintenance.