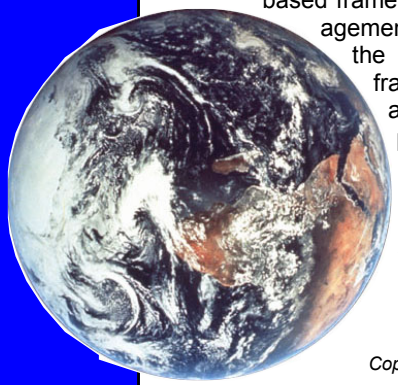
Value Based™ Asset Management

Why Value Based Asset Management?

With competitive forces becoming stronger, all operating and capital expenses are coming under intense scrutiny.
Value Based™ Asset Management can help to optimize the operational value of assets by demonstrating the monetary value of an asset throughout its lifecycle. The value of assets is optimized by comparing, in a real time, the value of maintenance, in-kind replacement, replacement with new technologies and system re-design. Decision makers will have the ability to assess issues and alternatives in terms readily understood by management and financial groups – mostly dollars.

What is Value Based Asset management?

Value Based™ Asset Management builds on several proven technologies and successfully integrates these technologies into a powerful asset utilization optimization practice. It grows the concepts implemented under Value Based Reliability and the accepted concepts of risk assessment and creates an integrated framework for managing an asset. System planning, maintenance planning, and operations planning are all addressed from the same value based framework. Value Based™ Asset Management allows for full integration into the asset/infrastructure management framework. The total asset is seen as one of the means of supplying power to customers with an adequate level of quality and reliability. Maintenance decisions, planning decisions, engineering design decisions, and operating decisions are made from a level playing field when there is a need to replace, upgrade or redesign infrastructure. As an extension, Value Based™ Asset Management allows for the monetary comparison of infrastructure decisions clearly illustrating benefits and value. It incorporates power system reliability and value based engineering concepts into the infrastructure planning and selection process.



Where can VB Asset Management be used?

Value Based™ Asset Management can be used in numerous applications whenever equipment is maintained, operated, and considered for upgrading or replacement. Value Based™ Asset Management is a natural extension of Value Based Reliability Centered Maintenance, Value Based Engineering and Value Based Risk Management.

These Value Based products have been successfully implemented by Power System Solutions Inc. (PSS) in:

- Thermal and hydro generating plants
- Transmission and distribution.
- The manufacturing and petrochemical industry

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Advantages of VB Asset management?

- Value Based™ Asset Management allows direct comparison of maintenance spending, upgrading and replacement costs with the $ (dollar) benefit to the company
- Value Based™ Asset Management allows integration with planning and operating functions
- Value Based™ Asset Management allows overall maintenance optimization
- Value Based™ Asset Management aids in budget preparation and justification in terms of dollar comparisons - an approach supported and understood by today's management
- Customer impact can be explicitly considered
- Value Based™ Asset Management can form a framework for an incentive based regulation

VB Asset Management is Ready for Deregulation

Value Based™ Asset Management is inherently ready for deregulation or re-regulation of the utility industry. Due to its focus on monetary cost benefit analysis, Value Based™ Asset Management can be used to set the incentive regulation targets and optimize the expenditure plan once the performance targets (and the penalties for failing them) have been established.

Staged Approach

PSS has developed a unique staged approach to the implementation of Value Based™ Asset Management. In working with numerous utility and industrial clients PSS has fine tuned the application of Value Based™ Asset Management to minimize resource and time requirements while maximizing benefits, staff learning, and universal acceptance of the Value Based™ Asset Management approach.

Stage 1: Training

The first step in implementing Value Based™ Asset Management is to ensure the engineering staff, maintenance craft personnel and management have a good understanding of the Value Based™ Asset Management technique. In particular, it is important they understand what Value Based™ Asset Management can and cannot deliver, how it ties in with other operating functions of the company and what commitment is required for its successful implementation. The training session may also serve as a kick - off meeting for the Value Based™ Asset Management project. PSS recommends allocation of time to present a summary of Value Based™ Asset Management to management and to request management endorsement of the project in front of all project participants.

The training course is structured into three days.

Stage 2: Gap Analysis

The primary purpose of the gap analysis is to assess requirements to initiate the Value Based™ Asset Management program. To that end, PSS reviews the existing organizational structure, assesses maintenance planning practices, design philosophy, replacement strategy, support tools, personnel attitude towards change and level of management support.

The results of the gap analysis are summarized in a report which serves as a high level guide for the validation project and full scale Value Based™ Asset Management implementation.

The topics addressed in the report include:

- Summary of client's asset management efforts
- What is Value Based™ Asset Management and how it will advance site optimization
- Synergies between Value Based™ Asset Management and other operational and planning activities
- Key management support required for the success of the Value Based Asset Management program
- Value Based™ Asset Management organization and road map for the Value Based™ Asset Management validation project
- Validation project site selection
- Resource requirement and schedule for the Value Based™ Asset Management validation project

The gap analysis takes typically one month

Stage 3: Validation

The Value Based™ Asset Management validation project consists of analyzing the systems selected in the stage 2. The objectives for the validation are:

- To prove the Value Based™ Asset Management potential
- Develop optimized asset management procedures for all equipment within the pilot site
- Verify the time and resource requirements
- Estimate the benefits to be gained by the full scale Value Based™ Asset Management implementation.
- Prepare a schedule and project plant for the full Value Based ™ Asset Management implementation.

The validation project typically takes three to five months.

Stage 4: Implementation

Full scale implementation of the Value Based™ Asset Management project consists of extending the Value Based™ Asset Management from the validation sites to the rest of the utility infrastructure. Many results from the validation study can be directly used in the full scale implementation, including all equipment templates.

The primary objective of the full scale implementation is to optimize the entire asset management program and, in parallel, to implement changes in the client's planning and operations and maintenance program. The full scale implementation includes:

- Implementation of condition-based maintenance with the required condition testing and monitoring
- Integration of the Value Based™ Asset Management databases with the other maintenance and accounting information systems
- Analysis of all systems
- Summary of the results in terms of actual savings and savings resulting from fewer equipment failures and system outages

The time required for the full scale implementation depends on the amount of resources allocated to the project. Typical full-scale implementation time frame is between one to two years.

Stage 5: VB Asset Management as a Living Program

The primary objective of the post implementation stage of Value Based™ Asset Management is to monitor tequipment and system performance to ensure that the results expected during the analysis stage are met. The analysis must also be modified for any significant changes in system configuration, the introduction of new equipment or technologies, and changes in size and criticality of load.

The effort required for the Value Based™ Asset Management as a living program is small when compared with the full scale implementation. The living program is best addressed by the asset management group.

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Questions and Answers

Q: ***What is the difference between the Value Based™ Asset Management and existing asset management practices?***

A: The primary difference between the techniques most companies utilize today and Value Based™ Asset Management is in the justification used for maintenance, replacement and other operational decisions. In Value Based™ Asset Management, a consistent, documented, defensible and theoretically sound framework is used to reach each decision. Since the justification is made on the basis of a cost-benefit analysis expressed in dollars, it is easy to communicate to management, financial people and other stakeholders

Q: ***Is Value Based™ Asset Management a computer program?***

A: Value Based™ Asset Management is not a computer program, but rather a framework for identifying effective asset decisions and determining cost effective triggers for these decisions. Value Based™ Asset Management is made much easier and is greatly accelerated by the use of user friendly database programs.

Contact Us

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