Value Engineering Case Study

Bill of Material (BOM) Review

Executive Summary

A Value Engineering assessment identified the opportunity to update an IT Bill of Material (BOM) - and then explore the process & other opportunities for all other BOM's within the portfolio. The review of Created Value fo the IT BOM, and generated Process Improvements for the stewardship of all BOM's in the portfolio;

- **Reduce waste & spend by >$55k per project, or $1.1M p.a.**, while improving Budget accuracy moving forward
- Process Improved by formalising BOM Reviews every 18 months, or by exception in response to the Design change process moving forward
- The IT Standard Design was improved by using the Review as a catalyst to fast-track the inclusion of emerging technologies and equipment
- Updated BOM Data to align with current site practices, quantities, pricing and deletions

Solution Integrity checks confirmed there were ***No*** compromises to the function nor intent of the BOM - other than a modest investment of time to complete the Review!

Value Engineering Case Study

Bill of Material (BOM) Review

Background – A Bill of Materials (BOM) acts as a "picking list", to ensure the specification and quantity of specified items are captured – preventing omissions or variance in the items required to deliver an outcome. BOM's are Best Practice, and contribute to maximising repeatability and cost, especially within standardised or repeated processes.

Like all standardisation initiatives, BOM's are tools to improve variability, efficiency, and risk. Periodically reviewing BOM's ensures their content is assessed by Subject Matter Experts, to ensure ongoing accuracy against the ongoing evolution of site & user requirements, and the availability of new pricing & technologies. Process rigour should trigger a "spot check" of affected BOM's, as part of any change to a Standard. When these do not occur, BOM errors can impact both scope and cost - so appropriate Governance is justified to control those Risks.

Value Engineering Opportunity – An assessment found that other priorities had seen the IT BOM operating for some years without review. Further investigation found that some IT items and their quantities were "manually" adjusted to work around the known inaccuracies – costing extra time, risking errors & delays, and leading to inherent cost over-run on each project, Vs the Standard cost model.

A Value Engineering assessment identified an opportunity to update the IT BOM - and then explore the process & other opportunities for all other BOM's within the portfolio.

Outcomes & Benefits – The IT BOM was reviewed by the Design Manager, and specialists from the IT team. The review focussed upon; reassessing the IT User Requirement, assessing emerging IT technologies that should be included, and a Gap analysis between anecdotal site installation practice Vs. the BOM scope, quantities and unit costs.

The BOM Review generated;

- **Update BOM Data** to formally capture current site Practices that had been adopted since the last BOM review eg quantities were updated to match current practice, redundant items were deleted, and recent site inclusions were added

- **Functional Improvement** opportunities included fast-track the inclusion of emerging IT technologies / equipment, and challenging the requirement for low criticality items - resulting in further improvements to BOM accuracy, and delivered functionality
- **Process Improvement** with the Governance process endorsing the adoption of a formal BOM Review program, to see each BOM Scheduled for review every 18 months, and checked for impact as part of changes to any Standard
    - Once underway within the 18 month review frequency, the ongoing intervals for each BOM would be reduced or extended based upon Risk - by assessing the level of variance detected in each instance
- **Value Creation** through cost reduction & reduced waste, which saw the Standard IT Capital spend ***reduce by >$55k per project – or $1.1M p.a.***

Value Engineering Pillars involved – *This result was achieved through application of* 4 of the 5 Value Engineering Pillars;

- Design Optimisation through reassessing against the User Requirement and including (otherwise emerging) new technologies into the revised BOM
- Substitution to ensure that the most (functionally and cost) effective technologies were included
- Quantity Rationalisation was a primary goal to eliminate waste
- Solution Integrity confirmed there were *No* compromises to the function or intent of the target outcome - other than a modest investment of time to complete the Review!

Uptimise Consulting Pty Ltd
m +61 (0)410 458 059
e mike@uptimiseconsulting.com.au
w uptimiseconsulting.com.au
p PO Box 347, Castle Hill 1765, Australia