

A lean innovation

Thomas Cutler talks about the concept of Value Stream Mapping (VSM)—a tool and technique that helps manufacturers and organisations discover the highly effective technology solutions and provides distinct competitive advantage through its implementation

Value stream mapping (VSM) is perhaps the most worthwhile lean innovation because according to Lynne Hambleton it allows manufacturers to ask, “Where is value being added in the process and conversely, where does waste exist in the process?” Ms Hambleton, author of *Treasure Chest of Six Sigma Growth Methods, Tools, and Best Practices*, suggests that VSM provides specific analytics including:

- Identify the value-add and non-value-add activities in a process and discover improvement and/or redesign opportunities
- Analyse where waste occurs in a process and develop a strategy to improve the process flow by eliminating the waste
- Make the processes work for a company, instead of working for the process.

As a manufacturing journalist who has written about lean efficiencies for more than a decade, it became clear that if there was awareness and utilisation of value stream mapping other technologies throughout the enterprise would axiomatically be impacted. The levels of resistance throughout the manufacturing sector to some technologies drove a methodological survey that revealed less than two per cent of those surveyed had indeed utilised value stream mapping of greater surprise was the finding that of the 698

respondents, more than two thirds (68 per cent) express no awareness of this technique or tool.

Nearly a third (30 per cent) said they had a basic understanding of value stream mapping and had used ‘something similar’ in their lean process.

Ms Humbleton defines a value stream as a set of activities required to deliver a product to the customer from raw material input. The total value stream may encompass multiple companies and organisations. It is a big-picture perspective required to avoid selective implementation resulting in isolated islands of lean within an overall non-lean process.

The value stream mapping output typically entails all or some of the following calculations:

- Total number of steps
- Total process cycle time
- Percent and number of value-add steps
- Percent value-add time
- Percent non-value-add time.

Value added work is defined as the activity that physically changes the product or adds important information; nonvalue-add is pure waste.

Value stream mapping leads to technological breakthroughs

Obviously the elimination of waste and identifying the ideal flow changes the efficiency of an organisation. However, far beyond eliminating rework by creating

standardised work reducing inventory, or balancing workloads, a genuine competitive advantage is created through the implementation of a value stream mapping because the organisation seeks technological breakthroughs.

According to Larry Caretsky, President of Commence CRM (customer relationship management), who has spent much of the last two years focusing on the industrial sector, “There seems to be a strong resistance on the part of many manufacturers to extend a lean process to understanding the customer-base.

Basic tracking and data analysis of the customers’ buying patterns, satisfaction, and sales methodologies is such a natural extension of the value stream mapping process, yet often does not get beyond the plant floor to the sales and marketing arm of the enterprise.” Only 36 percent of manufacturers surveyed reported using a formal CRM technology solution corroborating Caretsky’s assertions. Those organisations that are utilising a strong lean initiative, especially those utilising value stream mapping or not, encounter the concept of Kanban, a pull-based demand driven supply chain methodology.

According to Stephen Parker, CEO of Datacraft Solutions, “We recently tracked an automotive

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manufacturing industry client who recognised a 50 per cent decrease in inventory levels over six months (\$16 million to \$8 million); order of magnitude increase in inventory turns from 10 to 105; 60–70 per cent of on-hand inventory is 4–5 working days of demand; significant operational benefits; 5000 scans a day with zero expedites over six months; and doubled revenue while realising these benefits.”

Mr Parker believes that this is all part of the distinct competitive advantage that can be derived from the value stream mapping, noting that, “Digital Kanban solutions within the demand-driven supply chain impacts the profit margins in several ways, from decreasing expense side tangible costs associated with legacy forecast management solutions, while increasing the profit margins through efficiency gains and increasing the customer satisfaction results in additional sales from new as well as existing customers. Mr Parker further added, “Automated or Digital Kanban can dramatically reduce inventory, increase turns, and eliminate stock outs while enhancing supplier relations and customer satisfaction.”

Ms Hambleton provides some valuable hints and times about how and when value stream mapping can lead technological

breakthroughs and competitive advantages. Value stream mapping is a good starting point to work at the ‘door-to-door’ level within an organisation and that this keeps the project at a manageable level of complexity while maintaining a ‘big picture’ perspective; also noting that waste is really a symptom rather than a root cause of the problem. Waste points to

problems within the system at both the process and value stream levels. Ms Hambleton is emphatic that, “Working faster is not the answer; working smarter and adding value is.

Work is to be done right the first time, every time hence, activities such as inspection and rework are non-value adds.” While value stream mapping is just a tool and can be instrumental in visualising a process; and while it can lead to the discovery and implementation of highly efficacious technology solutions that provide distinct competitive advantages, if most manufacturers are unaware of this technique, it will provide little benefit. The ability to visually diagram the current state of the enterprise can only result in efficiency and a more competitive organisation. 

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