



Flow Management System maximizes business revenue and profitability

Most organizations need to continuously improve in order to stay competitive. Many decide to start a Lean or Six Sigma journey to maximize productivity and increase sales. Sometimes their efforts don't bring expected results. In fact, 74% of companies claim to be adopting Lean Thinking Methodology but only 24% claim any kind of positive results.

Despite significant progress and development of the Big 3 Improvement Methodologies (Lean, 6 Sigma, Theory of Constraints (TOC)) many manufacturers still suffer from ineffective operations, resulting in long lead times, late deliveries, high inventories and significant operational costs.

One of the most effective ways to improve manufacturing business revenue and profitability is to implement a Flow Management System (FMS) approach.

FMS has four key components:

- 1 Define inventory position and levels and create a pull-based replenishment signal
- 2 Identify production streams, schedule only key resources and reinforce schedule attainment as the primary measure
- 3 Drive plant-wide continuous improvement process based on the main reasons the schedule is not achieved
- 4 Base key market and product profitability decisions on the Throughput Economics approach

FMS Benefits include:

- ✓ Sales / Throughput increase of 20%-30%
- ✓ Inventory reduction of up to 50%
- ✓ Lead time reduction of approximately 50%
- ✓ On time delivery improvement up to 99%
- ✓ EBITDA increase of additional 10% of Sales

1 Define inventory positions and levels and create a pull-based replenishment signal

FMS focuses first on defining all inventory requirements, utilizing a TOC based Demand Driven Replenishment (DDR) sizing algorithm, to set up targets for key Finished Goods, Raw Material and Sub-Assembly items. These inventory buffers break supply chain dependence between unreliable supplier deliveries, variable customer demand and the plant, providing significant stability for the manufacturing operation. Once inventory buffers are in place, a pull-based replenishment signal, in combination with other customer demand, creates the basis for generating the plant load.

2 Identify production streams, schedule only key resources and reinforce schedule attainment as the primary measure

Drum-Buffer-Rope (DBR), a TOC production planning and execution methodology, is used to schedule each production flow stream within the plant and ensures timely production execution. Then, while measuring schedule attainment of each critical resource in a production stream, the reasons and plant locations that most often hinder the flow are tracked and recorded.

3 Drive continuous improvement process based on the main reasons the schedule is not achieved

FMS creates a Continuous Improvement process that uses Pareto Diagrams, comprised of the reasons hindering the flow, to prioritize plant-wide improvement opportunities. Once the Flow Issue Reporting (FIR) process is in place and improvement opportunities are known, Lean Thinking and Six Sigma tools are used to remove obstacles and create operational improvements. When the Lean and 6 Sigma tools are applied, based on the TOC driven priorities, plant performance drastically improves, throughput goes up, service levels increase, and productivity and revenue are maximized.

4 Base key market, customer, and product profitability decisions on the Throughput Economics approach

Cost-per-unit, the world's most popular analysis process, is a devastating and flawed paradigm of traditional business decision making. Regardless, many organizations still attempt to align their understanding of profitable markets / products with their manufacturing operation's performance using this approach. The cost-per-unit approach

supports a simple process for decision-making as it allows managers to use the concept of gross margin or contribution margin to evaluate business opportunities. Unfortunately, product margin is totally arbitrary and completely misleading.

FMS uses an alternative approach to understanding relative product and market profitability – a Throughput Economics (TE) based approach. The TE based Throughput Velocity (TV) indicator, has significant implications on plant performance, market focus, pricing evaluation and new product development strategies. Some of the strategic questions the new process answers include:

- Which market segments are the most profitable?
- Which products make the most profit?
- At what price should we accept an order?
- How to align your operating costs and plant capacity with market demand?
- On what products focus R&D efforts?



Using the four key components of FMS, organizations can significantly improve operational and financial performance.

Most companies that successfully implement FMS realize the following:

- Improved flow and reduced operating costs because of their new Constraints' Management scheduling tools
- Increased revenue from pricing decisions driven by 80/20 TE-based methodology
- Released working capital by improved inventory turns as a result of DDR
- Maximized throughput from a stable plant protected by the DBR operations management approach
- Increased shareholder value

About CMS Montera

CMS Montera are specialists in software and consulting that help clients solve problems in Operations and the Supply Chain. World-leading experts in Theory of Constraints and Lean Thinking.

RoadRunner ERP Expansion Pack

This suite of four plugins accelerates Flow Management System implementations and significantly improves business profitability.

