Mix Manufacturing VSM is part of the eVSM Mix edition and provides the tools needed to value stream map and improve MIXED MODEL production environments for discrete parts and assemblies.

Applications built on the MIX engine remove the 'averaging' of products, demand, cycle times, and routing that make many mixed model maps difficult to create and of limited value. The benefits of the MIX engine can be summarized as:

**Speed**
- Less work to create the VSM and update it
- Avoid creating separate VSM’s for products

**Comprehension**
- Make it easy to SEE how products are made
- SEE the individual product demands and cycle times

**Insight**
- Visualize the key metrics
- Choose the best improvements

The technical concepts addressed are shown below:

- Cycle Time
- Multiple Stations
- Qty Per Cycle
- Takt Time
- Utilization
- Transfer Lot Size

Cycle Time / Takt Time Chart

- Scrap
- Changeover
- Setup
- Rework
- Performance

Effective Capacity Chart

- Shared Resource
- Resource Utilization
- Resource Bottlenecks
- Resource Allocation

Resource Balance Chart

- VA & NVA Times
- Process Lead Time

Lead Time Chart

- Varying Cycle Times
- Varying Demand & Mix
- Varying Routings
- Interval Design (EPEI)

Product Utilization Chart

Product Routings Display

- Inventory Holding Cost
- Activity Based Cost
- Material Cost
- Resource Cost

Cash River Plot
eVSM Mix Manufacturing VSM Application Example Map

OEE Measures
- Activities comprehend OEE, downtime, scrap, etc.

Multi-Lane Maps
- Filter charts and summaries by path numbers to handle multi-lane maps.

Product values
- Input fields that allow separate values by product have 'tabs' for data entry.

Demand by Product
- Change overall demand and product mix to assess capacity.

ACME Medical
Forceps, Cutters, and Scissors Line
Current State - VSM

The map can also be used easily for single product value streams.

Dedicated Value Streams

Use variables and calculations that have been standardized over the last decade.

Standardized Variables & Calculations

Automatically plot Utilization charts that show asset usage by product.

Product Based Charts

Color code arrows and activities to show product routings by set.

Routings by Product Sets

Define Sets of products that have common routings but whose process parameters can vary.

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