



Extended Value Stream Mapping

A Manufacturer and Supplier Supply Chain Competitive Advantage

Presentation by
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Agenda



- Overview and Challenge
- What is value stream mapping?
- Real-world examples of successful extended value stream mapping implementation
- Summary and Conclusions
- Questions and Answers

Healthcare supply chain overview



cost effective patient care



laws and regulations

pricing and transparency

sustainability

disaster preparedness

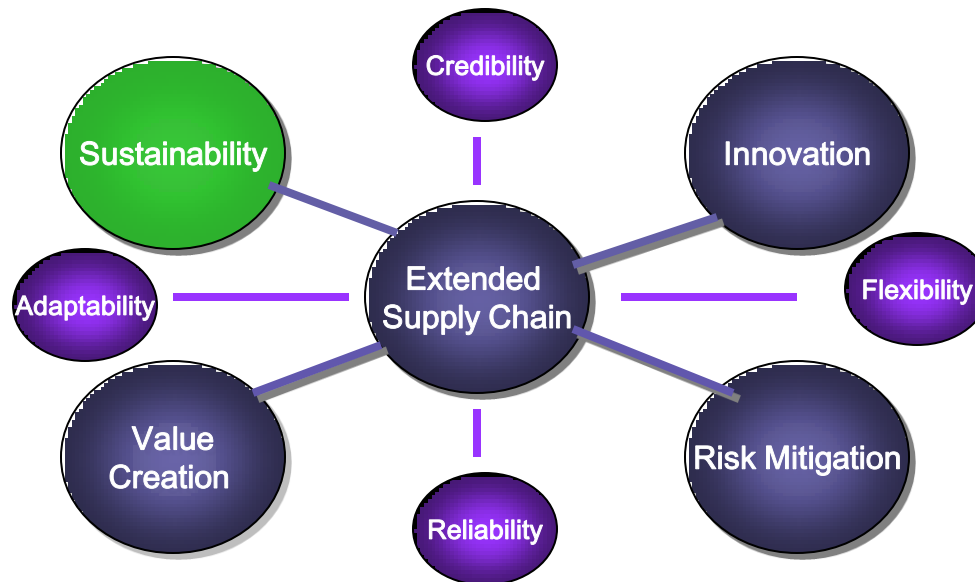
economic storm

compliance

standards

Definition of a supply chain...

A supply chain consists of all the activities required to **convert**: material, information, people, assets, capital, cash, laws, regulation, time, equipment, and logistics to bring a product and/or service to the end customer



Why use extended value stream mapping?



- Utilizes visual technique where **manufacturers and suppliers** draw the information and product flow to identify waste
- Provides a common language between **manufacturers and suppliers**
- Forms the basis of a joint implementation plan that is owned by both **manufacturers and suppliers**
- Structures the alignment in **manufacturers and suppliers** improvement activities and sustainability
- Helps the **supplier** to understand value from the perspective of the **customer**
- Gains results that both the **manufacturers and suppliers** can share
- Identifies business continuity gaps

Approach and timeline for extended value stream mapping



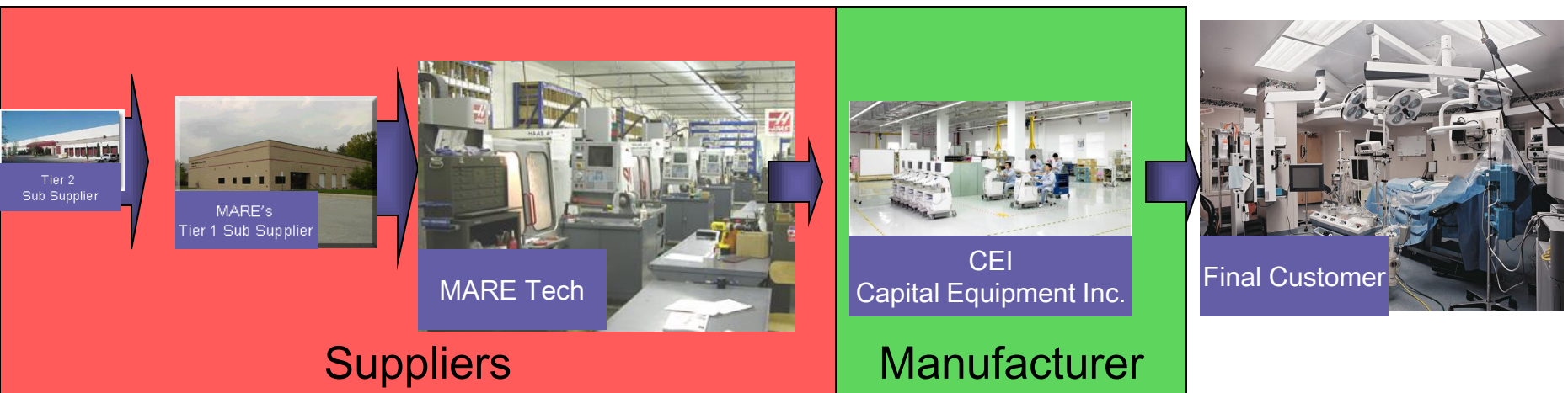
Step 1: Organize the Manufacturer and Supplier Joint Team	5 days
Step 2: Draw the Current State Extended Value Stream Map	2 days
Step 3: Identify the Opportunities and Develop Implementation Plan	2 days – 5 days
Step 4: Execute Implementation Plan for Future State Design	40 days
Step 5: Repeat Steps	On going

Case Study – CEI and MARE Technologies

(Medical Equipment - Chillers)



Current State	Results Metric	Future State	% Improvements
56	Lead Time (Calendar)	35	60%
12	Inventory Reduction (Number of Units)	7	71%
\$6,400	Unit Cost Break Down	\$6,255	2%
\$76,800	Inventory Dollars	\$43,785	75%
112	Sustainability -Waste Shrink Wrap Feet	84	33%



*2% CEI Cost Reduction Share: Unit Cost Reduction - \$145 per unit / Units Sold Per Year 275 (Estimate Annual Unit Savings: \$39K)

Step 1: Organize the Customer and Supplier Joint Team



- **Gain Executive level commitment from Supplier**
- **Identify targeted product family for Value Stream Mapping**
- **Determine organization priorities, strategic direction and desired results**
- **Form customer-supplier team with Sponsors, Change Agents, and Team Members**
- **Initiate basic training on Extended Value Stream Mapping, Lean Concepts, and Project Management**

Mare Technology Customer and Supplier Team -



Manufacturer

- Sponsor Director of Supply Chain Management
- **Project & Change Agent** Supply Chain Manager
- Change Agent Quality Manager
- Member Component Engineering
- Member Quality Manager
- **Member** Compliance Manager

Supplier

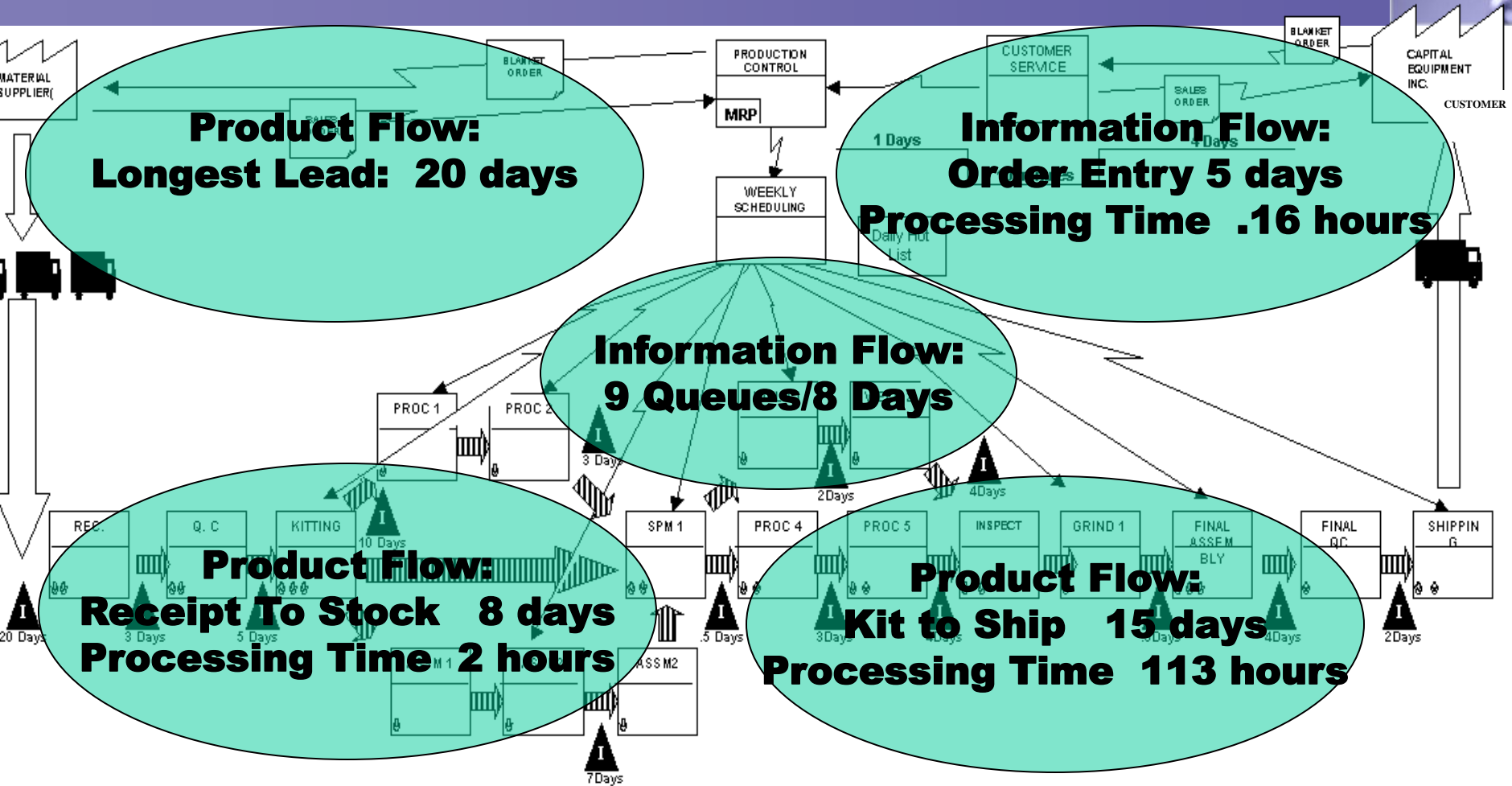
- Sponsor VP of Operations/Engineering
- Change Agent Manufacturing Manager
- Member Account Manager
- Member Quality Manager
- Member Production Planning Manager
- **Member** Controller
- **Member** Compliance Manager

Step 2: Draw the current state extended value stream map



- **Begin with a quick walk through of the value stream**
- **Conduct a detail walk through following the pathways of the INFORMATION and PRODUCT flow**
- **Ask questions to those performing the work**
- **Collect and analyze value stream data**
- **RECORD YOUR OBSERVATIONS**

FIGURE 1: Mare Technologies Current State Extended Value Stream Map



Step 3: Identify the opportunities and develop an implementation plan



“The secret of getting ahead is getting started. The secret to getting started is breaking your complex, overwhelming tasks into small, manageable tasks, and then starting on the first one.”

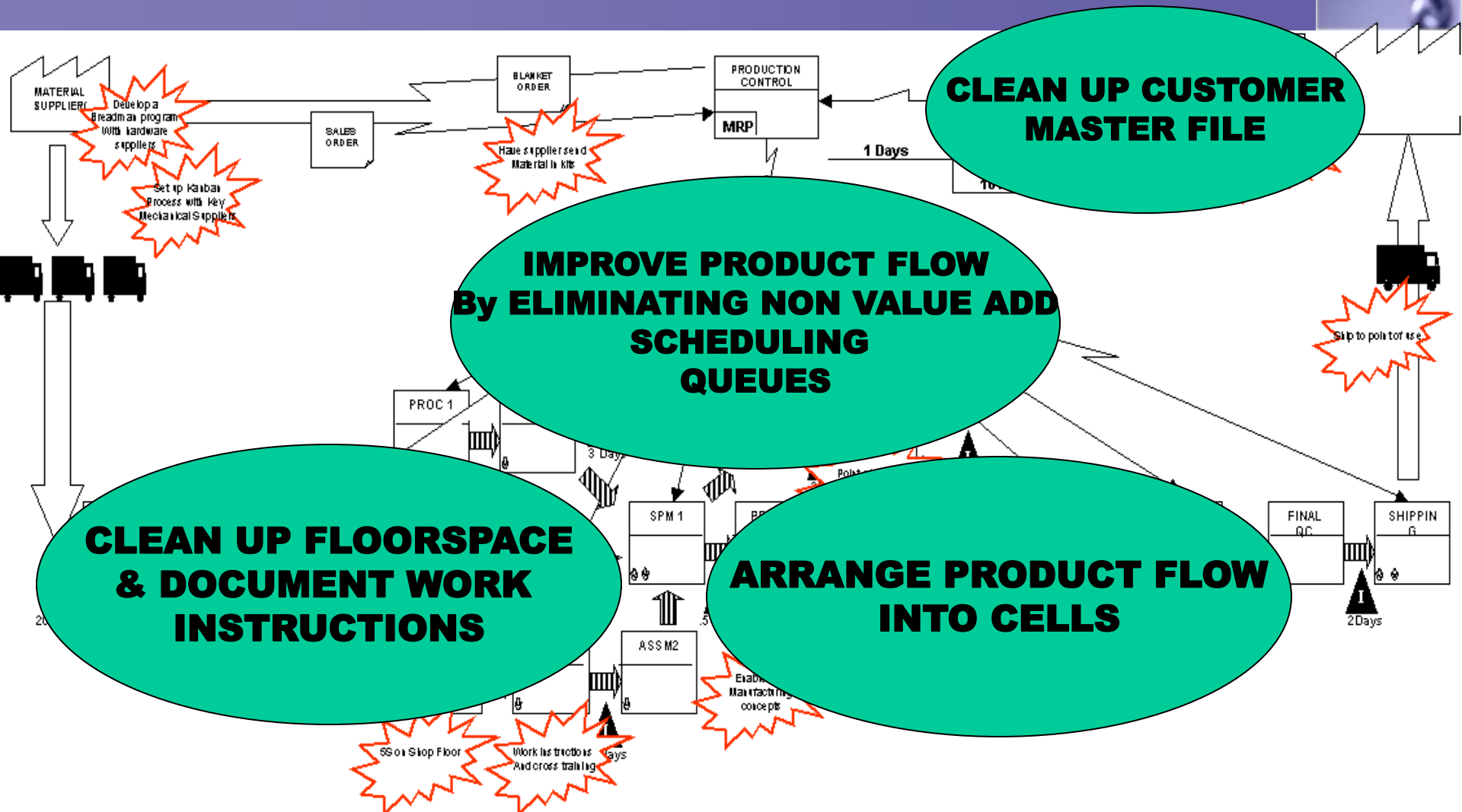
Mark Twain

Step 3: Identify the opportunities and develop an implementation plan



- Identify focused areas that will benefit from the application of lean concepts
- Focus on eliminating the obvious waste in the extended value stream
- Prioritize opportunities (benefits and solutions)
- Work with reality (process, issues, and actions)
- Break implementation into steps
 - Who, What, When, How
 - Define measurable goals, deadlines and named reviewer(s)
- Take chances, test and try some idea or solution and then try again if it doesn't work

FIGURE 2: Mare Technologies Current State Extended Value Stream Map



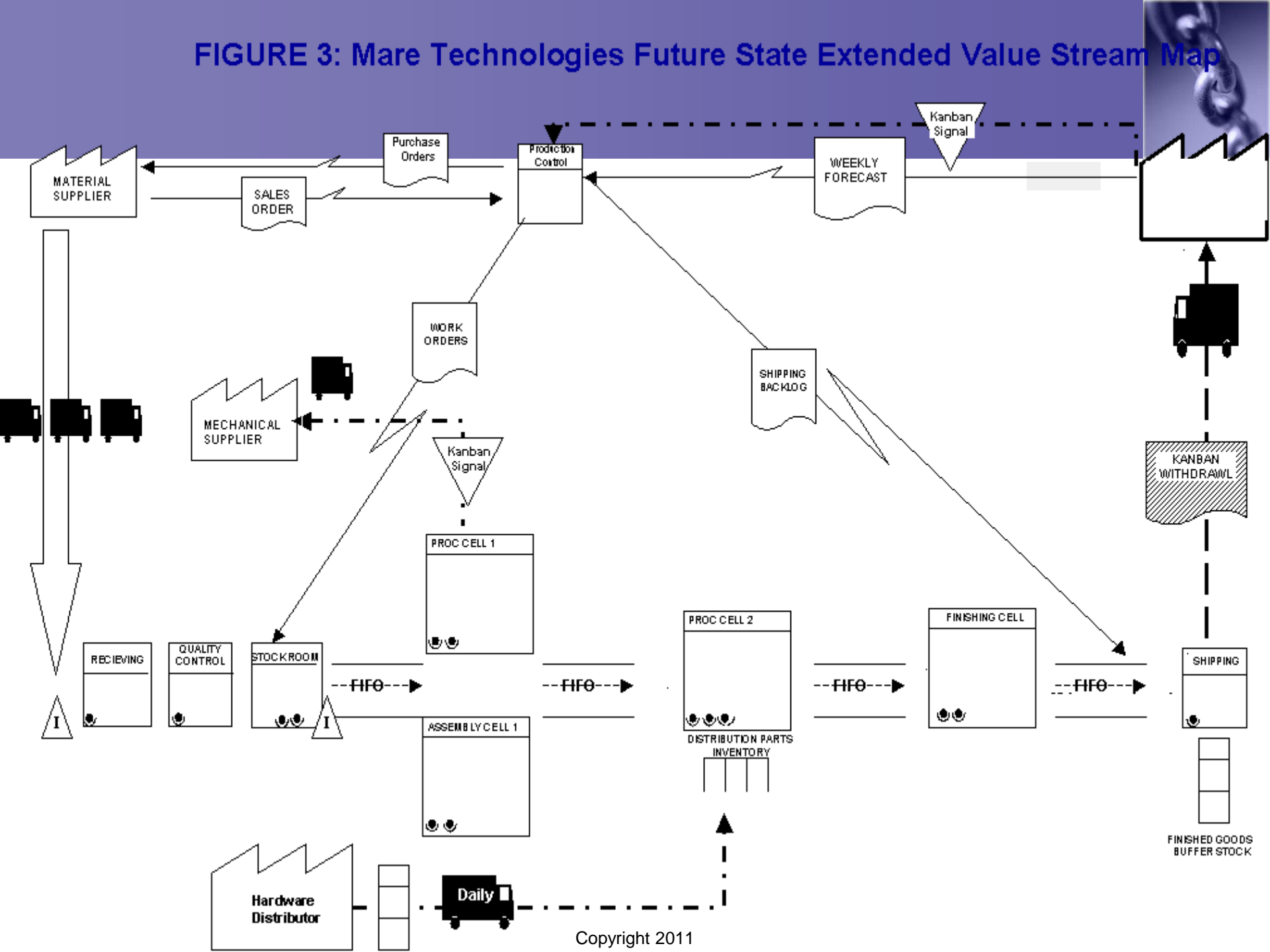
Step 4: Execute Implementation Plan



- Train and involve in the improvement work to all impacted personnel
- TEAM 1: Deployed an Office 5S program to customer master file
- TEAM 2: Implemented FIFO Lanes, Cellular Mfg and Mfg 5S programs and eliminated non value added scheduling queues
- TEAM 3: Documentation of work instructions and manufacturing processes
- TEAM 4: Deployed shop floor cross training



FIGURE 3: Mare Technologies Future State Extended Value Stream Map



Step 5: Repeat



- **Customer and supplier have utilized the success of first initiative to build upon a core capability**
- **Customer and supplier have prioritized a series of initiatives leading to long-term performance improvements**

Summary & Conclusions



- **Price of admission is cheap and the benefits are significant**
- **Positive supplier feedback**
- **Customer-Supplier change agents are vital in developing an overall roadmap to build a core competency**
- **The velocity and accuracy of information transactions can impact the flow of product**

Questions and Answers

