Regional Wood Products Consortium:
Mass Customization Workshop

Technology Enablement of Mass Customization

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Technology is an Enabler

- Information Technology is an enabler of Mass Customization and personalized furniture solutions
- Increasing product and pricing complexity becomes un-scalable without relevant technology
- Benefits of CNC are limited without supporting data
- Complexity of information required to fulfill a customer’s dream space requires integrated technology solutions
Technology from end to end

- **Dream**
  - Help the customer identify their needs/wants
  - Inspire and motivate
  - Make it easy and accessible

- **Design**
  - Validate customer’s needs/wants
  - Expand their vision to maximize sale
  - Create excitement to close the sale

- **Deliver**
  - Process/price the design accurately
  - Engineer and manufacture from the original definition
  - Deliver/install on-time and accurately
Dream + Design + Deliver = Data
Dream+Design+Deliver = Data

Same data, different perspectives
My Kitchen Planner

DESIGN YOUR DREAM KITCHEN
Create a kitchen project and collaborate with our design professionals

CREATE A HOME DEPOT ACCOUNT

LOGIN TO MY HOME DEPOT

Virtual Kitchen Showroom

Meet with a Designer

Countertops for Every Budget

ASK A DESIGNER
Questions? Our design experts can help

Watch our step-by-step introductory video
In a real-time, mass customization world, data becomes the lifeblood of the enterprise. Without it, no single part of the process can function. Technology is required to deliver the right data to the right person in the right format at the right time.

As options increase, complexity increases.

Speed of data creation and delivery affects speed of product delivery (lead time).
Inside Cold Stone Creamery

Super premium ice cream vendor Cold Stone Creamery was started in 1988 by Donald and Susan Sutherland and has 1,500 stores in the USA, Japan and Guam. The company says it offers more than 115 million possible flavor combinations.

Chilly elements
- Ice cream display freezer (called a dry store)
- Ice cream scoops
- Scoopable metal paddles
- 3½ inches
- 12-18 flavors of ice cream and sorbet, cooled to 6°F Fahrenheit
- 5-foot-long granite slab, rooted to 16°F Fahrenheit
- 40 varieties of toppings

Serving sizes
- Love it: Medium serving, 16 oz.
- Gotta Have it: Large, 14 oz.
- Like it: Small, 6 oz.

Creation process
1. Crew member uses ice cream scoop to pull ice cream into a ball. The ice cream is placed on the frozen granite stone.
2. A small scoop is made in the center of the ice cream; a brownie and ice cream are added, and the ingredients are chopped and mixed.
3. Serving is topped with caramel and fudge, then placed in a homemade waffle cone or bowl.

Data

Few ingredients...

...Many flavors
Dream/Design

- Develop concept on the web
- Order direct or...
- Send to local dealer
- Expand customers vision (up sell)
- Close
- Transmit order to manufacturer(s)
Design/Deliver

- Validate configuration, price
- Engineer (automation)
- Schedule
- Purchase
- Produce
- Verify

Manufacturer

Operator
Deliver

- Organize
- Schedule
- Validate

- Deliver
- Install
- Verify
Technology as Enabler

- Maintain integrity of data across the order supply chain from concept to cash
- Create a “single source of the truth”
- Automate product configuration
  - including custom purchased components
- Allow different details for different users
- Provide speed and accuracy
The Goal: Profitably provide personalized product solutions

- Distributors
- Manufacturers
- Suppliers
Strategic Technology

- **Klaussner Furniture Industries**
  - MTO frame manufacturing
  - Nesting and CNC Integration integral to the design of the process
  - Technology integral to the design of the process

- **Ultragraft Cabinetry**
  - Switched business model from stock inventory to make-to-order, mass custom
  - Significant expansion of product offering
  - Empowered LEAN production methods
  - Navigated recession through quick-response on new products
  - Offers size changes at NO CHARGE
Technology Options

- **Integrated Solution**
  - “Off the Shelf” + Tailored-to-fit

- **Best of Breed**
  - Integration of multiple components

- **Custom Solution**
  - “Home grown”
Technology Components

- **Web Presence**
  - Idea Starters
  - Configuring
  - Ordering

- **Factory Solution**
  - Order Management
  - Product Configuration
  - Material Demand
  - Purchasing/Supply Chain
  - CNC Integration
  - Manufacturing Execution
  - Shipping
Contact

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