

A. G. RAYMOND & COMPANY
Incorporated

Management and Technical
Solutions for the Wood Products Industry



***Ten
Common Sense Rules
for
Manufacturers***

Wood Products Manufacturers Association

2002 Annual Meeting

Rockport, ME

17 October 2002

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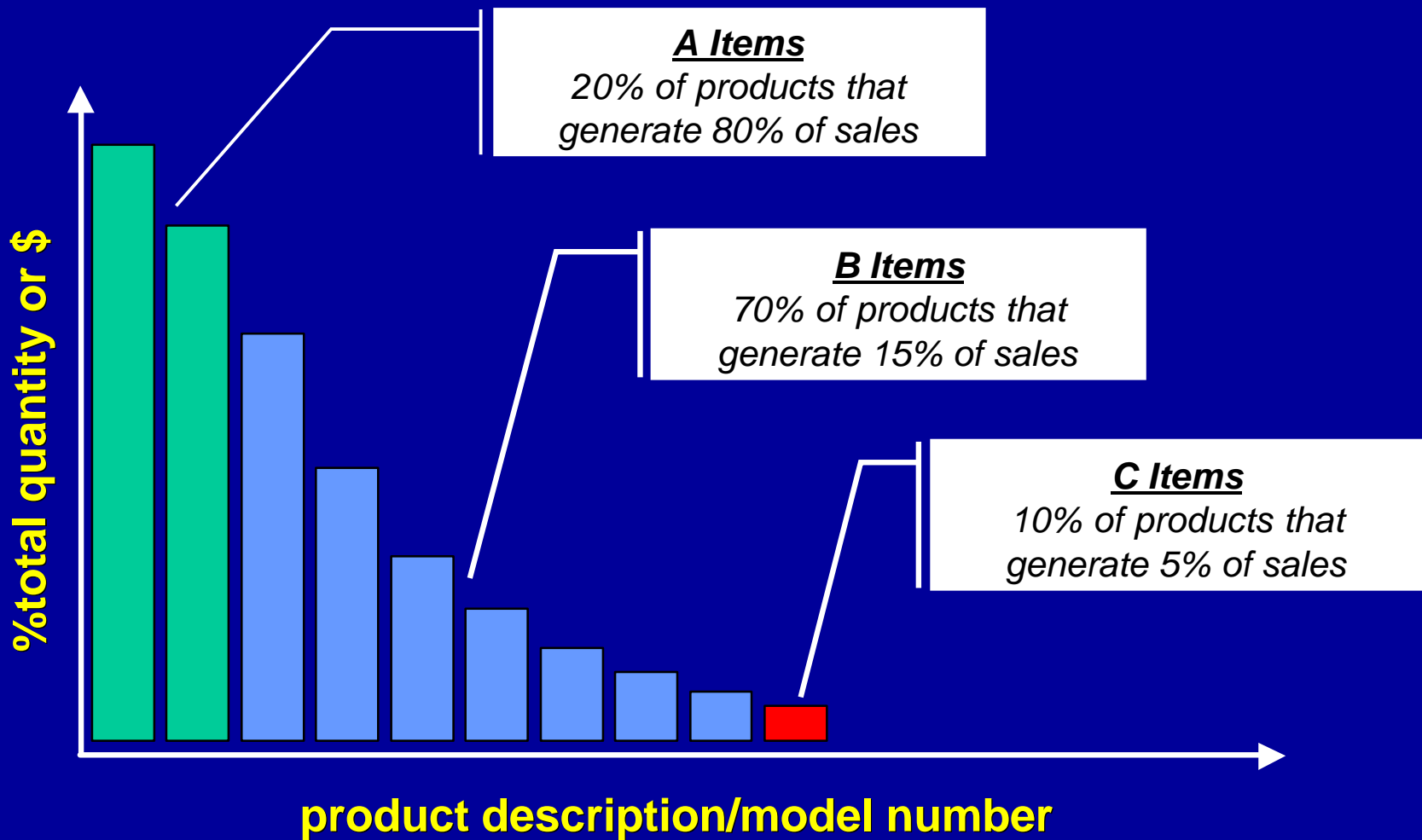
Levers of Success

1. *Focus your plant(s) on your core products.*



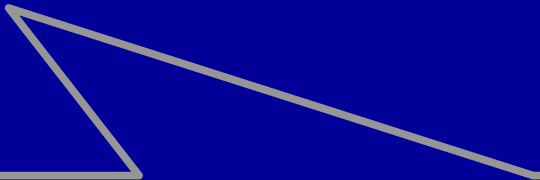
→ Understand the volume relationships in your product line.

Volume Relationships



Levers of Success

1. Focus your plant(s) on your core products.

- 
- Understand the volume relationships in your product line.**
 - Select the type(s) of product focus you can use:**
 - > Product line**
 - > Part family**
 - > Volume**
 - Divide your plants into product focused work groups and/or “plants within a plant”.**

Levers of Success

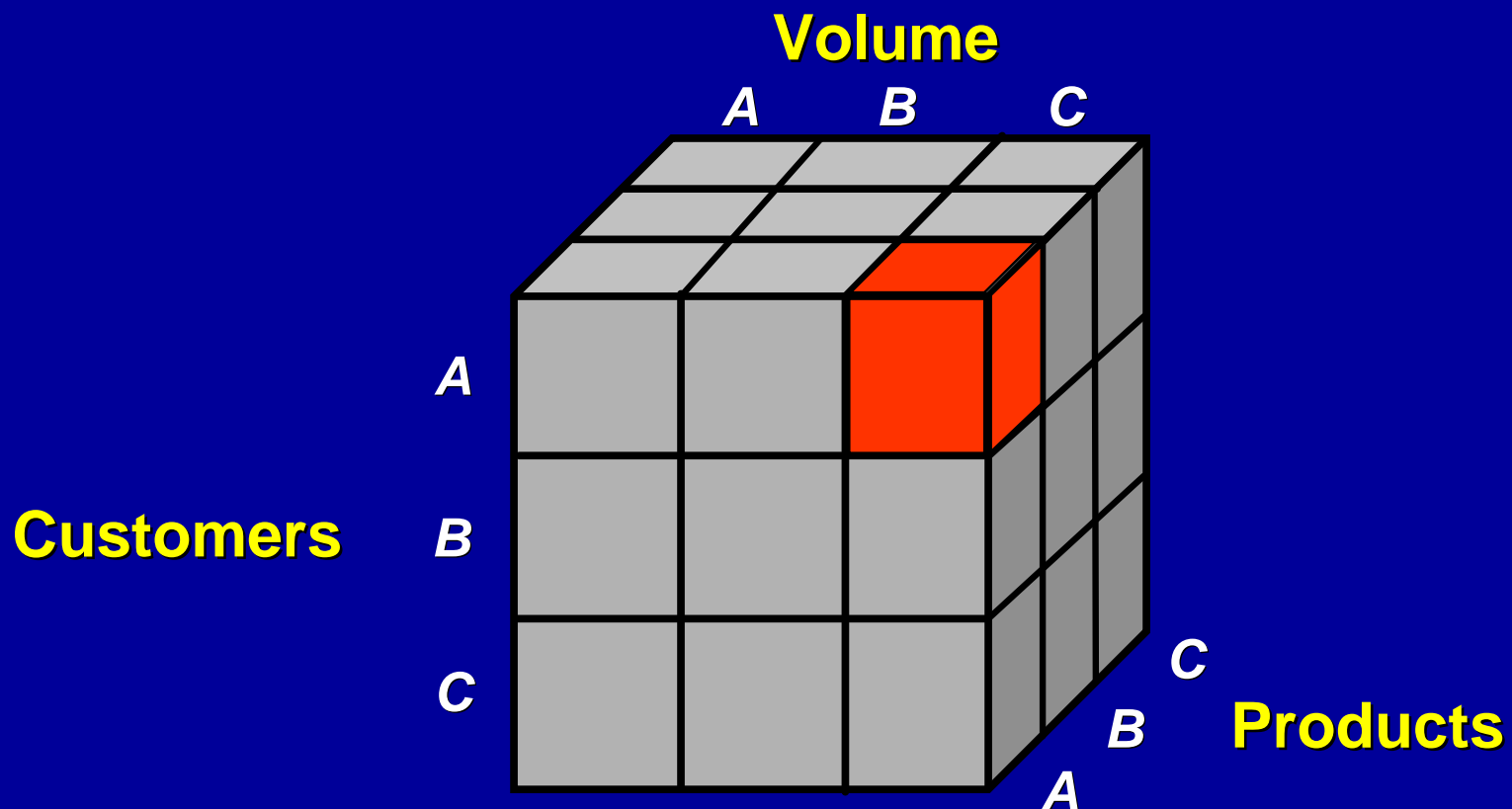
1b. *Focus on your core customers.*



→ Remember that 20% of your customers generate 80% of your sales.

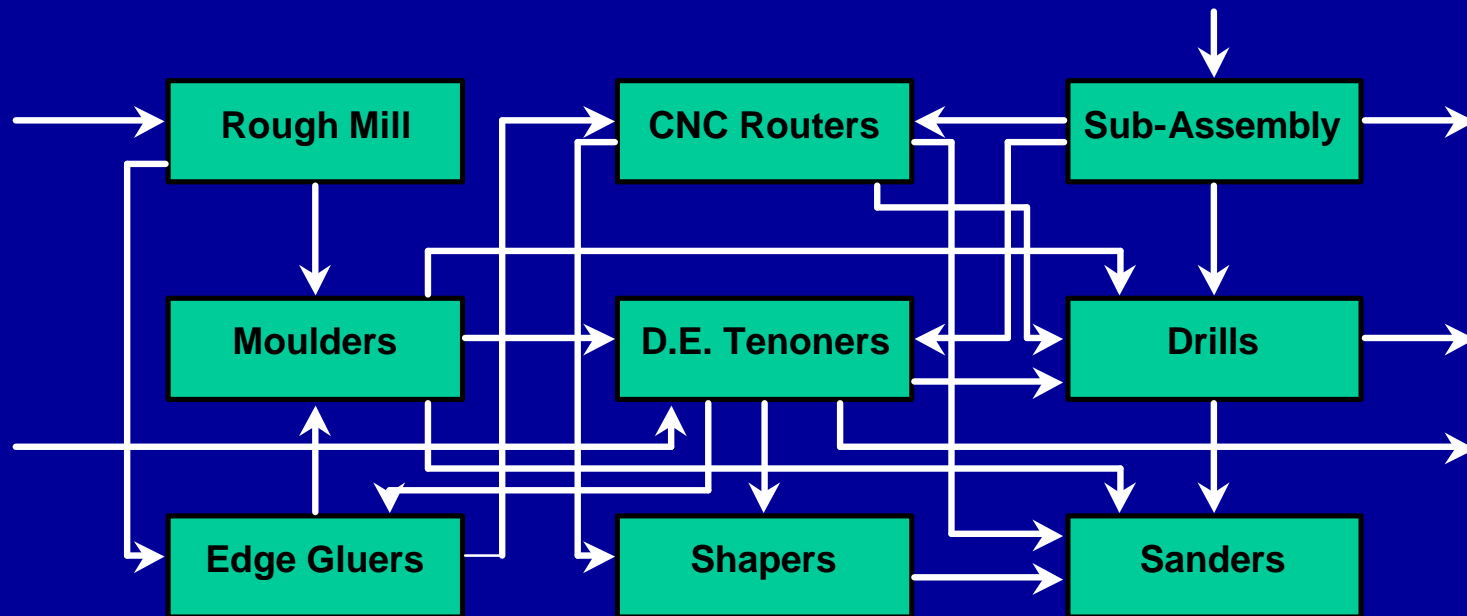
Speed from Focus

Plants can achieve faster cycles by focusing on *product, volume, and customer...*



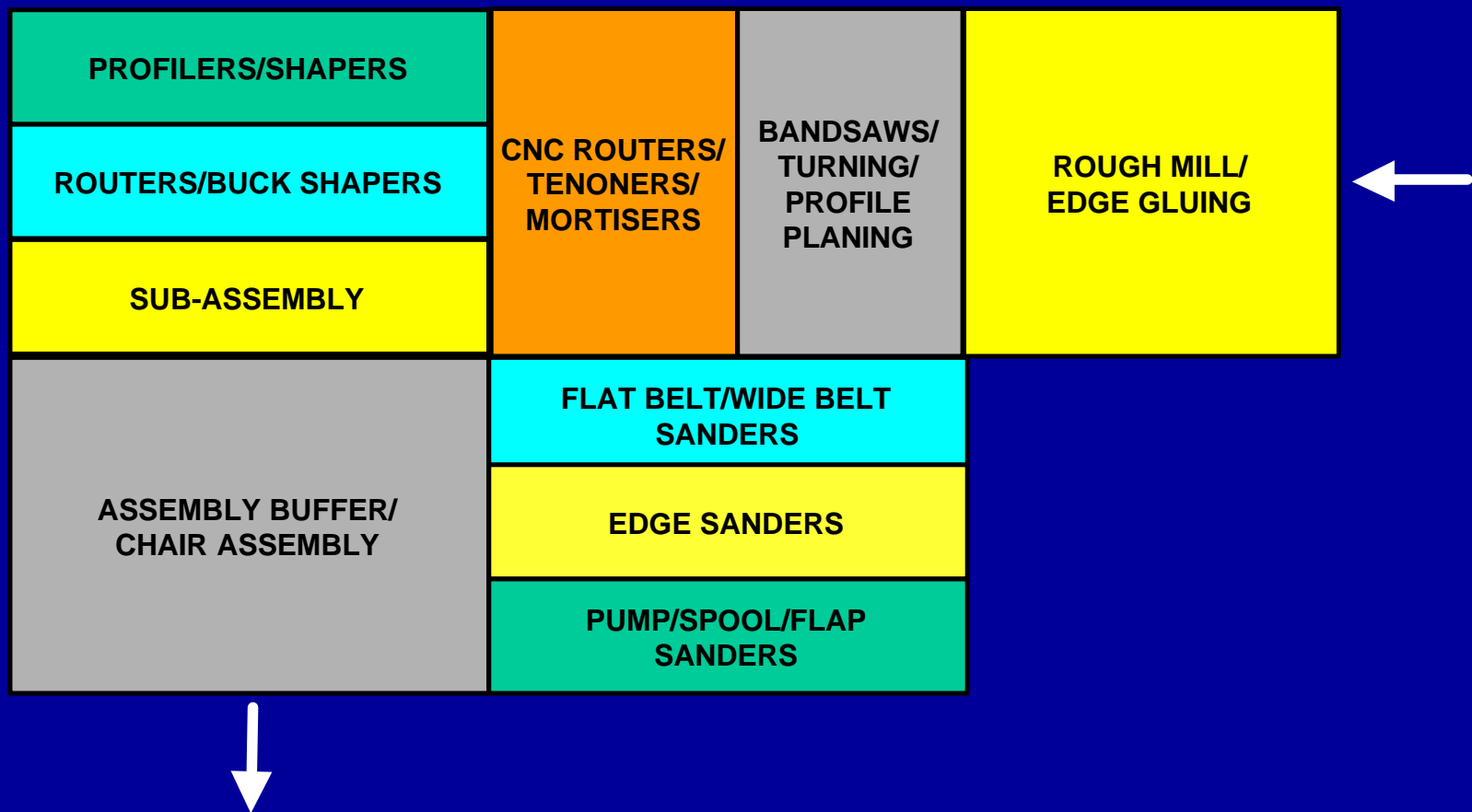
Existing Layouts

Most plants are poorly arranged...



An Example of Product Focus

Many plants have organized parts machining operations by process...



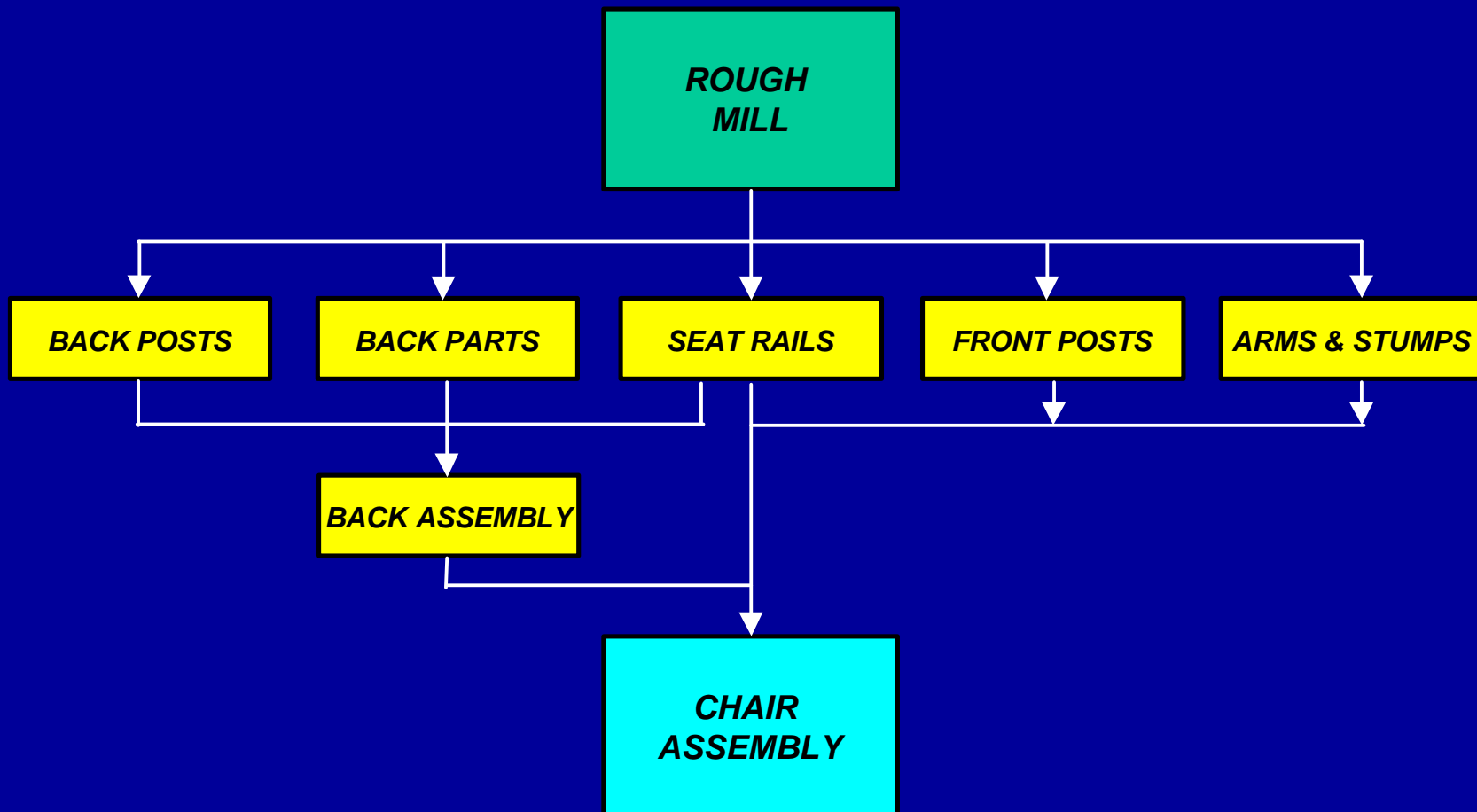
Organizing By Product

Products often exhibit part family standardization...



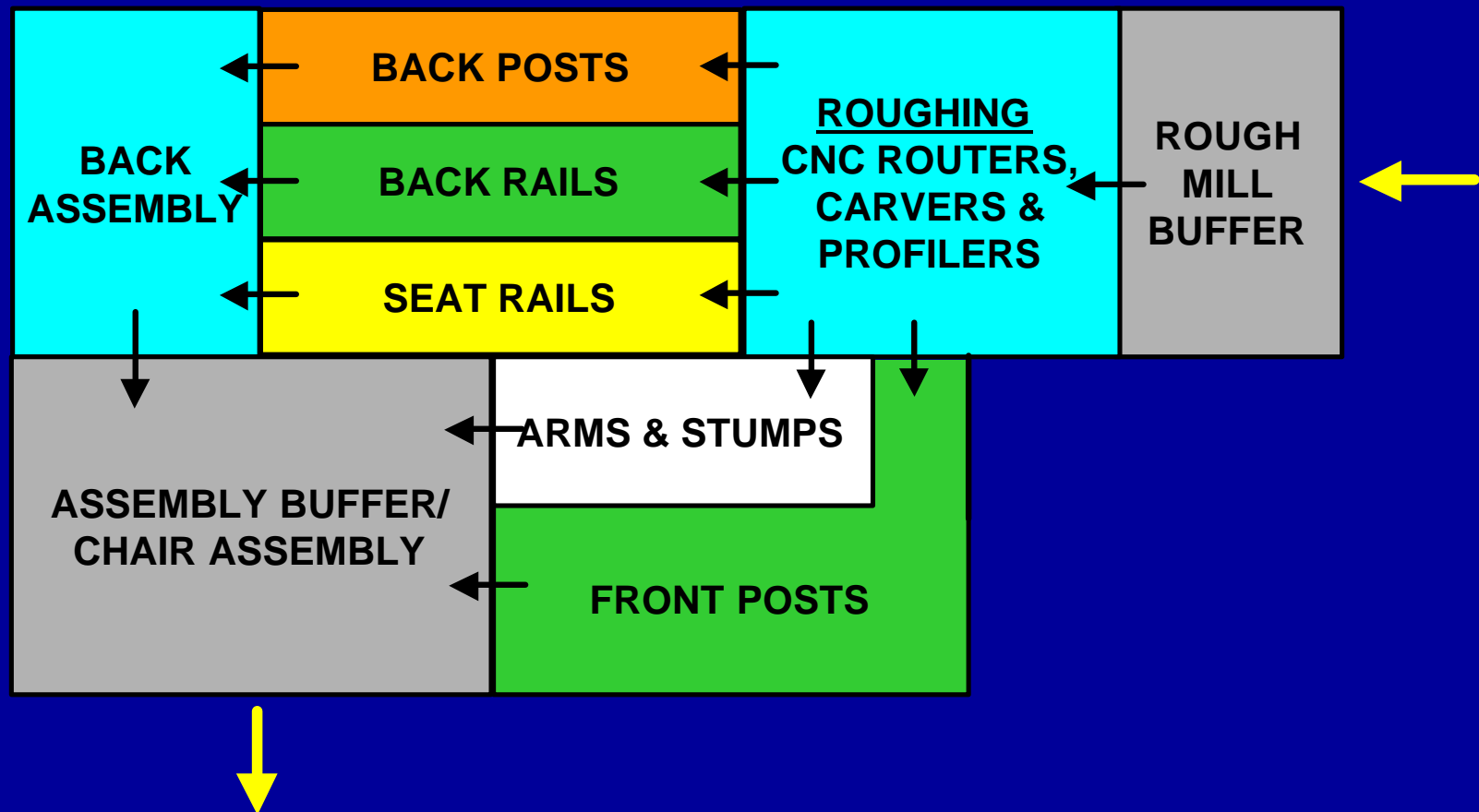
Product-Focused Layouts

Efficiency can be gained by organizing this plant by product or by component type...



Product-Focused Layout

Reorganize by part family to reduce handling, increase teamwork, and reduce complexity...




Levers of Success

2. Know your real costs.

- Are you the “lowest cost” supplier in the value chain of your parts, end products, and related services?**
- What are your material yields?**
- What are your attrition rates?**
- What should your labor costs be?**

Levers of Success

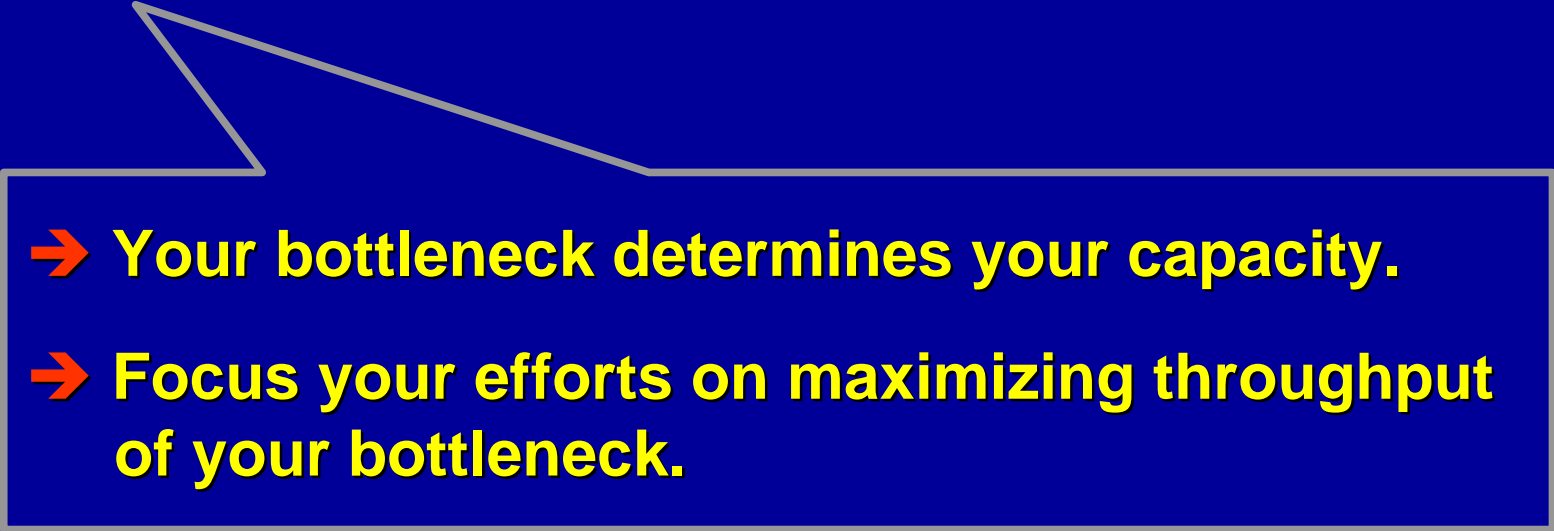
3. Capitalize on your manufacturing strengths.



→ Focus your efforts and capital on doing those tasks that you do well and buy the rest.

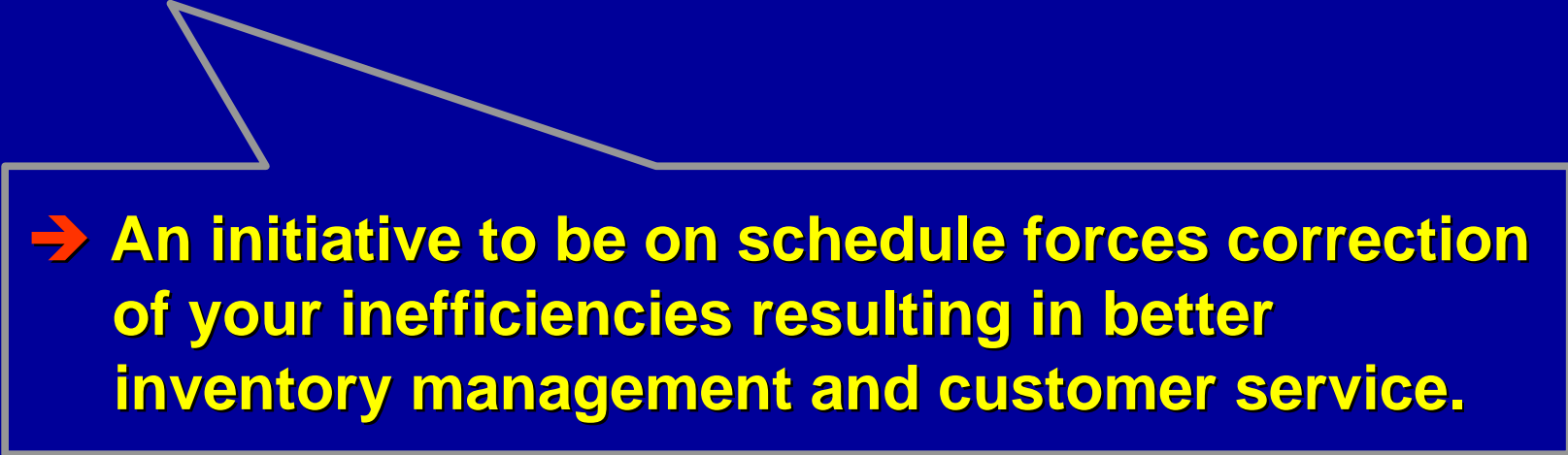
Levers of Success

4. *Manage your bottleneck.*

- 
- Your bottleneck determines your capacity.**
 - Focus your efforts on maximizing throughput of your bottleneck.**

Levers of Success

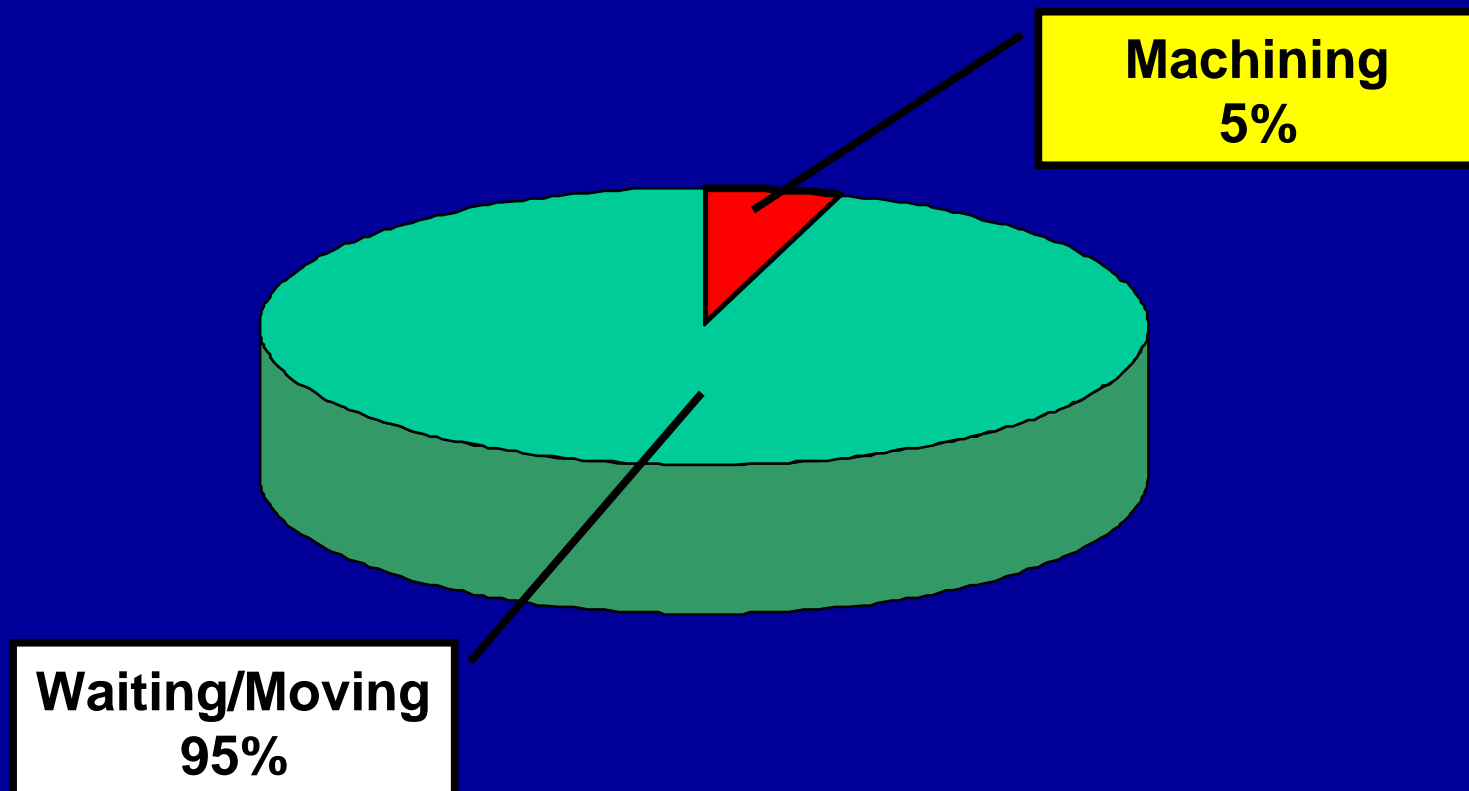
5. *Get your plant on schedule.*



→ An initiative to be on schedule forces correction of your inefficiencies resulting in better inventory management and customer service.

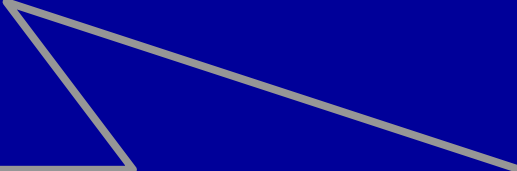
Being On Schedule

Being on schedule reduces the amount of time when no value is being added to your product...



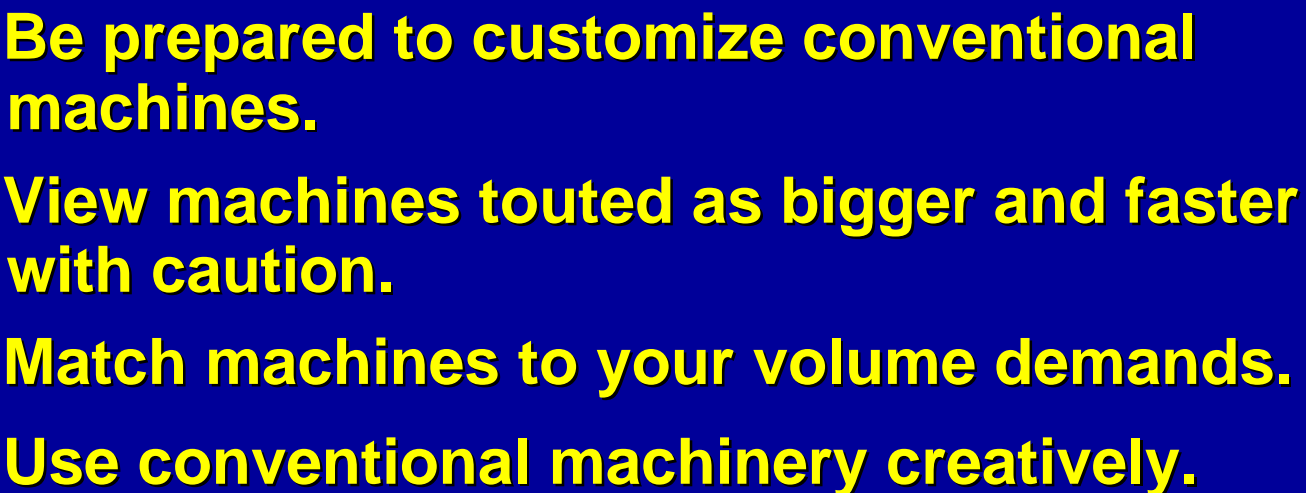
Levers of Success

6. Engineer your products and plant floor carefully.

- 
- Standardization reduces cost.**
 - When parts fit, assembly labor is minimized.**
 - On the plant floor there should be a place for everything and everything in its place.**

Levers of Success

7. Choose machinery to match your demands.

- 
- Be prepared to customize conventional machines.**
 - View machines touted as bigger and faster with caution.**
 - Match machines to your volume demands.**
 - Use conventional machinery creatively.**

Creative Use of Conventional Machinery



Creative Use of Conventional Machinery



Levers of Success

7. Choose machinery to match your demands.

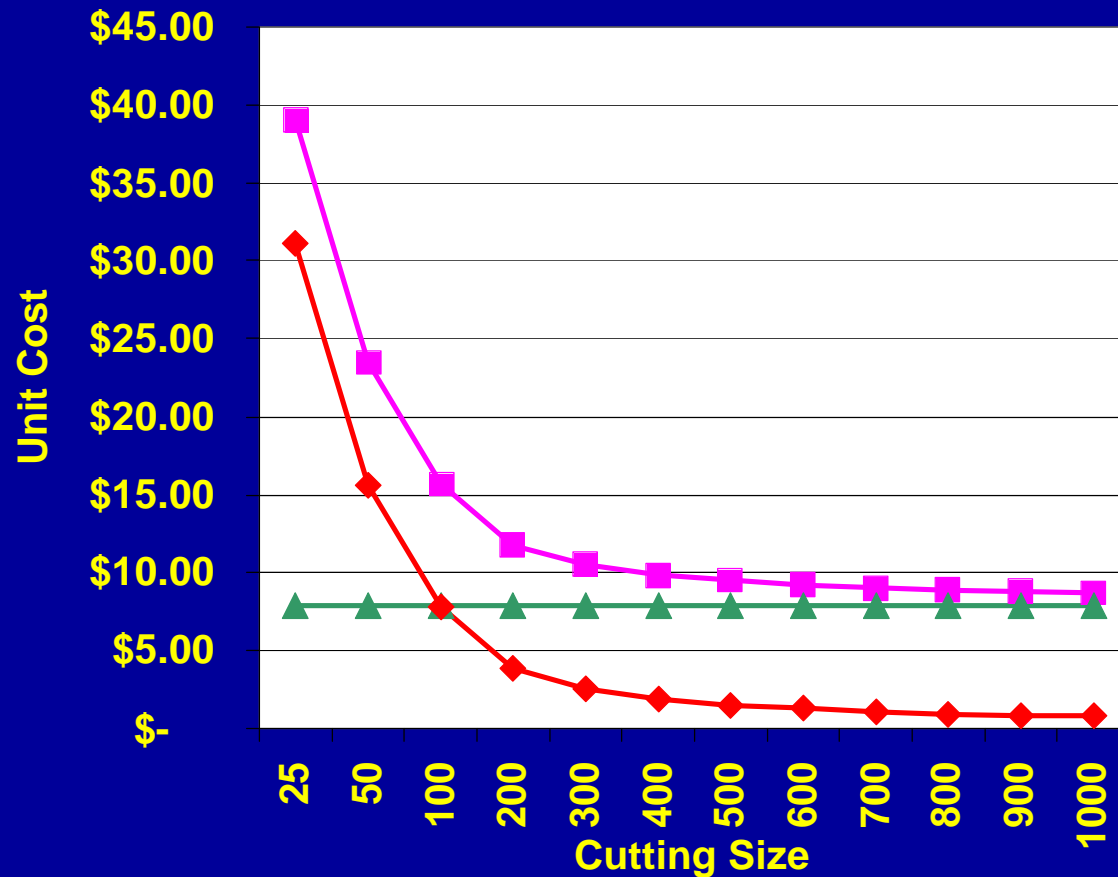
- Be prepared to customize conventional machines.**
- View machines touted as bigger and faster with caution.**
- Match machines to your volume demands.**
- Use conventional machinery creatively.**
- Understand your set-up economics.**

Set-Up Economics

Unit Labor Cost By Cutting Size

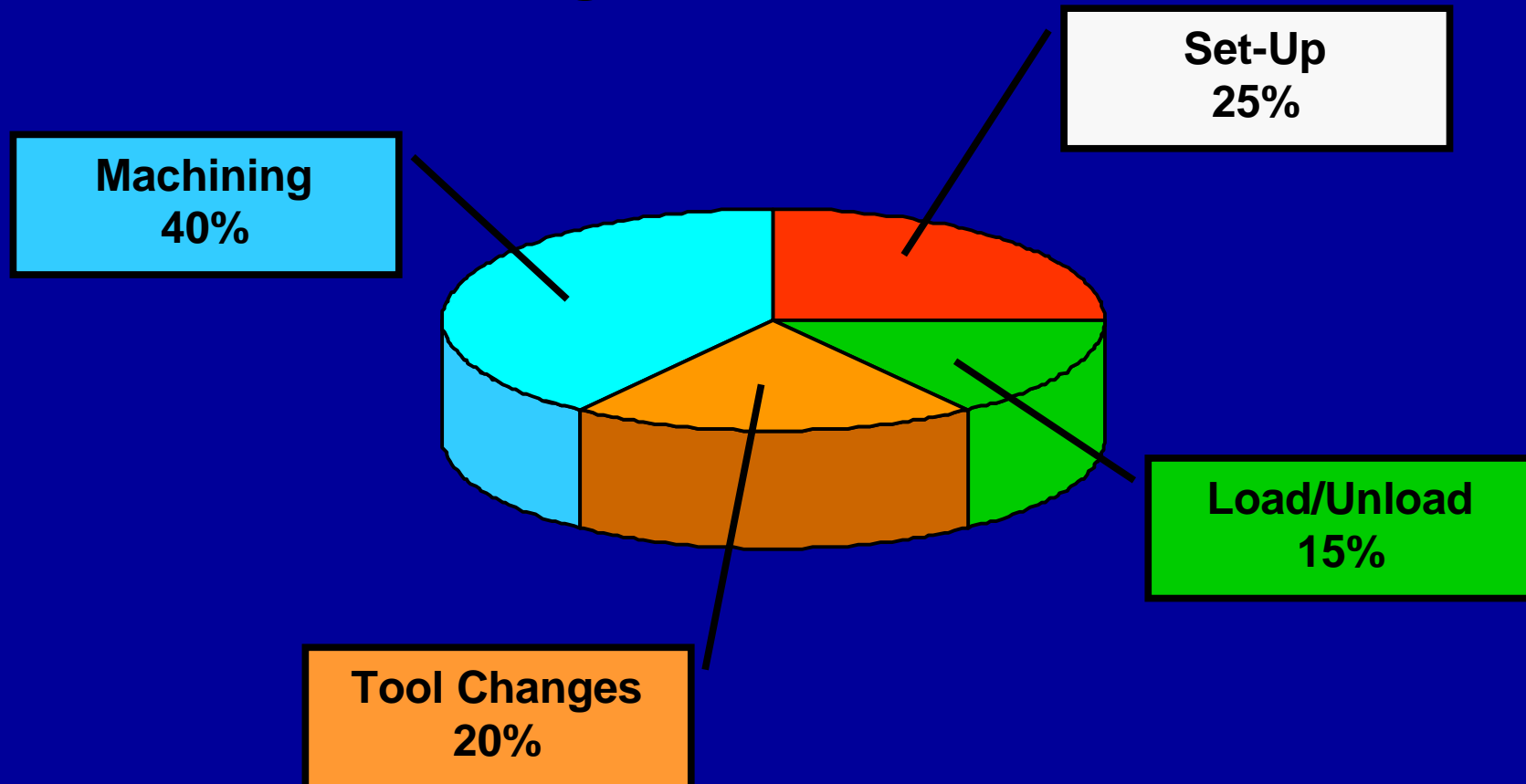
Riverside Furniture Corporation

- Average Unit Cost
- ▲— Average Run Cost per Unit
- ◆— Average Set-Up Cost per Unit

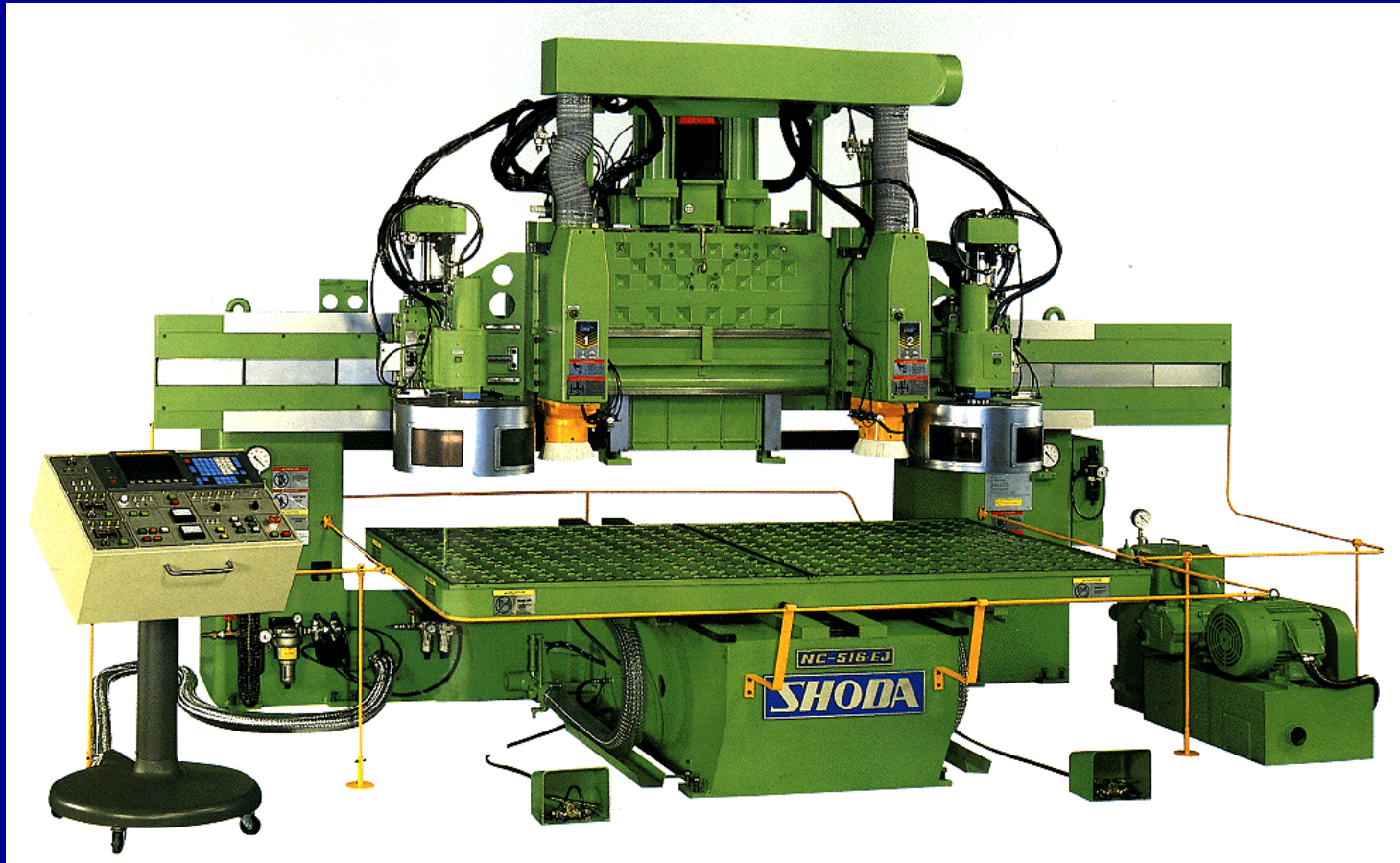


Set-Up Economics

Time spent in set-up and tool changes consumes valuable machining time...

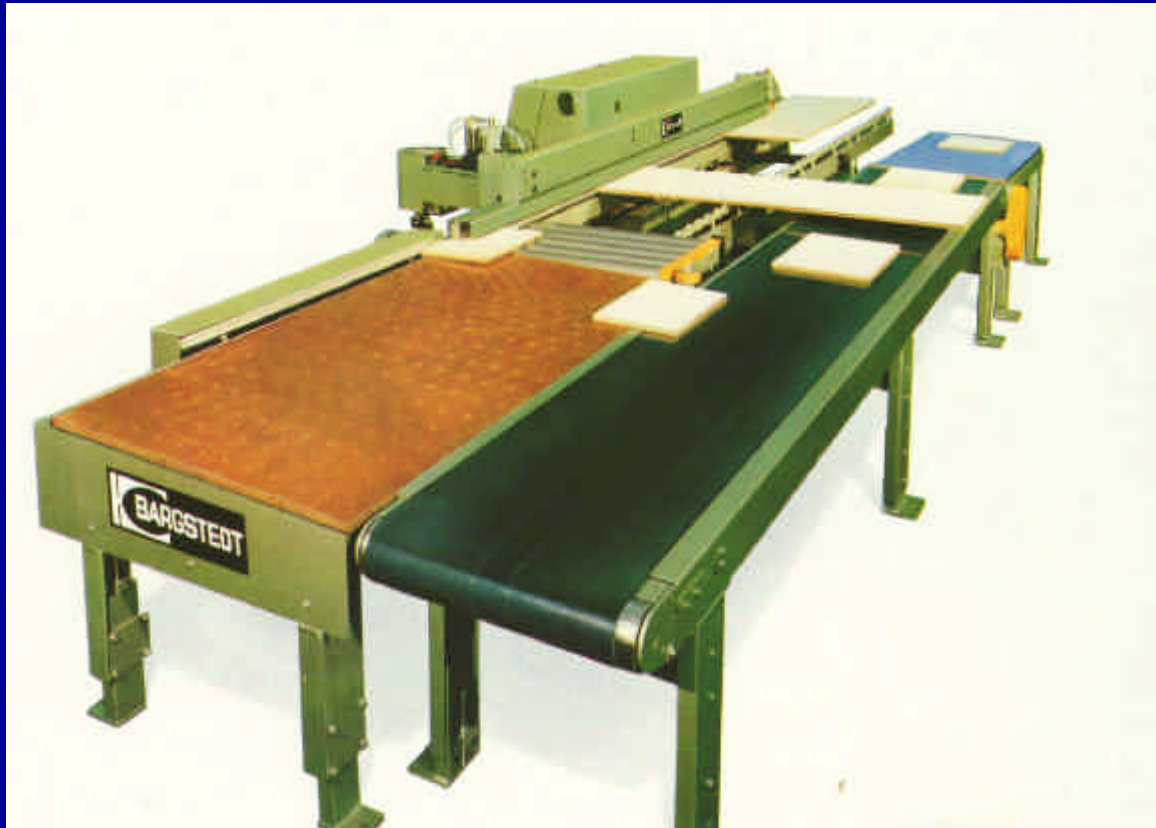


Multi-Function/Quick Set-Up Machinery



Easy To Set-Up Machines

Single-sided machines are best for small orders...



Levers of Success

8. *Size and locate inventory wisely.*

For most producers inventory is a necessity.

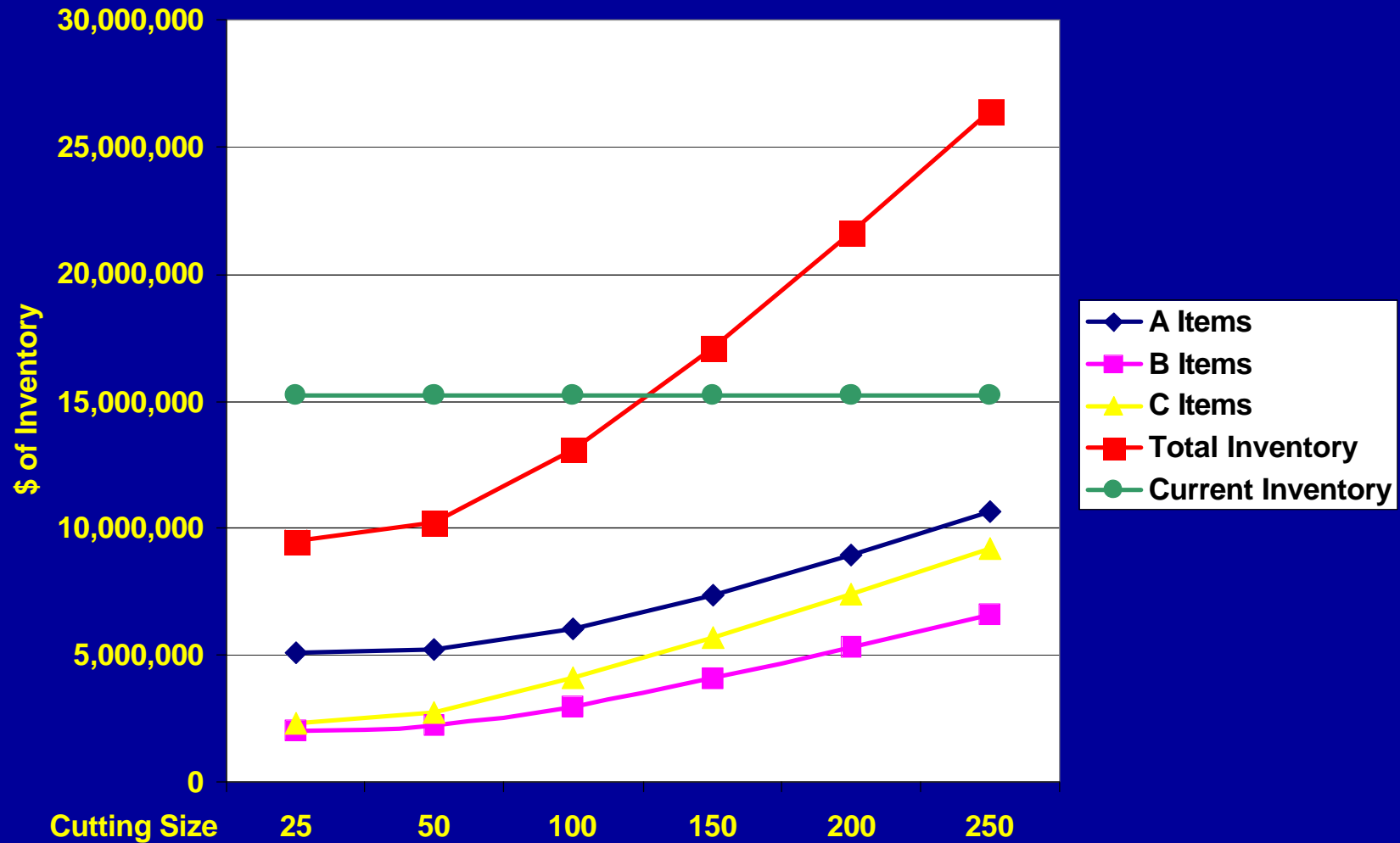
Your job is to...

- locating inventories through your process**
- sizing the inventories**

intelligently to optimize customer service.

Inventory Relationship To Cutting Size

Finished Goods Inventory By Cutting Size
Riverside Furniture Corporation



Levers of Success

9. Educate, inform, and motivate your workers.

Success depends on people who...

- Care if you succeed.
- Know how to help you succeed.
- Have reasons to learn new skills.

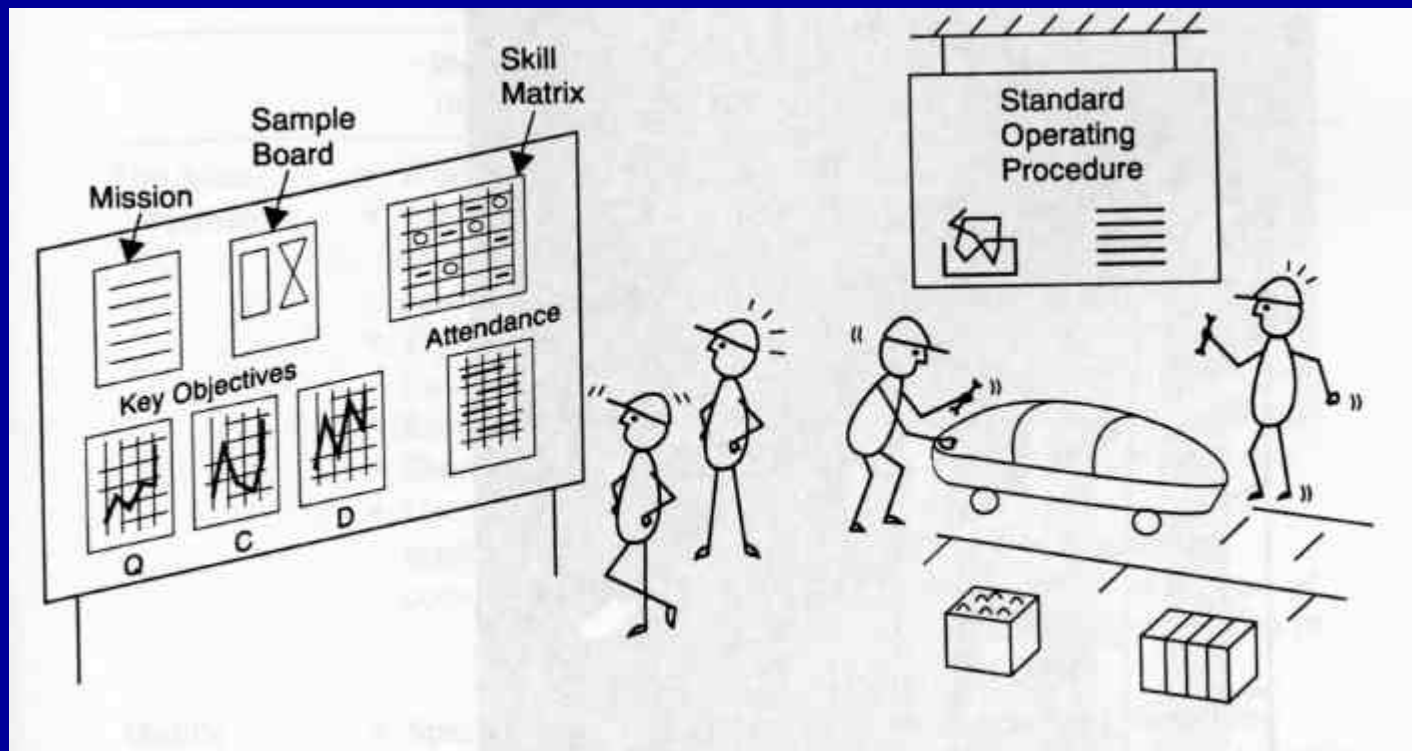
Enlightened People Management

Don't be like Dilbert's boss...



Visual Instruction & Motivation

Operating standards and performance expectations are clearly communicated to the plant floor...

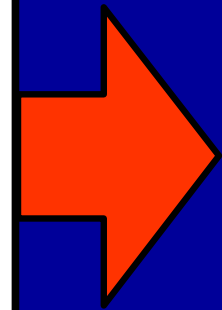


Source: *The New Shop Floor Management*, Suzuki

Enlightened People Management

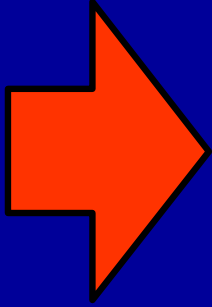
Industry Week's Best Plants educate and motivate their work force...

- Annual Days of Training per Employee = 6
- Annual % Labor Costs for Training = 2.5%
- Empowered Work Teams = 88% of Work Force
- Pay For Skills = 66% of Plants
- Emphasis on Cross Training = 100% of Plants



Enlightened People Management

with tangible results...



- **Warranty Costs = 0.38% of Sales**
- **Labor Turnover = 3.9%**
- **Annual Sales per Employee = \$258,000**

Levers of Success

10. Plan your work and work your plan

"We cannot direct the wind ...



but we can adjust the sails."

- K. Suzuki