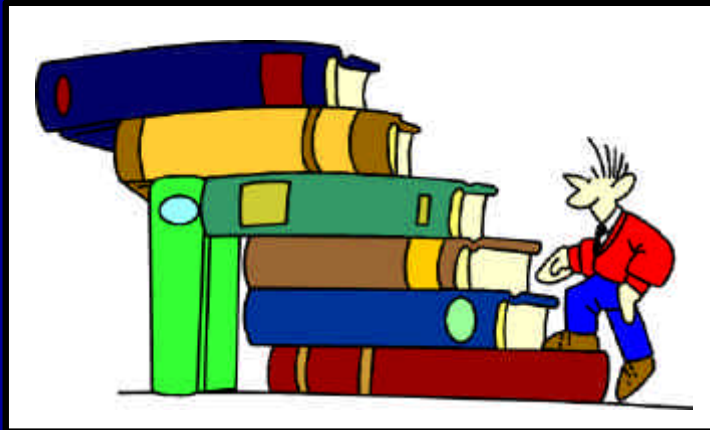


A. G. RAYMOND & COMPANY
Incorporated

Management and Technical
Solutions for the Wood Products Industry



Lessons Learned

Wood Products Manufacturers Association

2002 Annual Meeting

Rockport, ME

17 October 2002

Introduction

“Those who cannot remember the past are condemned to repeat it.”

- *George Santyana*

“The person who does not worry about the future will shortly have worries about the present.”

- *Old Chinese proverb*

Furniture Headlines

Every day business headlines report seismic changes in the U.S. household furniture industry...

- ***The ascension of China to no. 1 source for imports.***
- ***Insolvency of major furniture retailers.***
- ***Entry of producers into furniture retailing.***
- ***Entry of retailers into furniture production.***
- ***Loss of thousands of furniture industry jobs.***
- ***Shuttering of millions of ft² of wood furniture plants.***

The Future for U.S. Furniture Producers?

For many wood furniture plants, time has run out...



Introduction

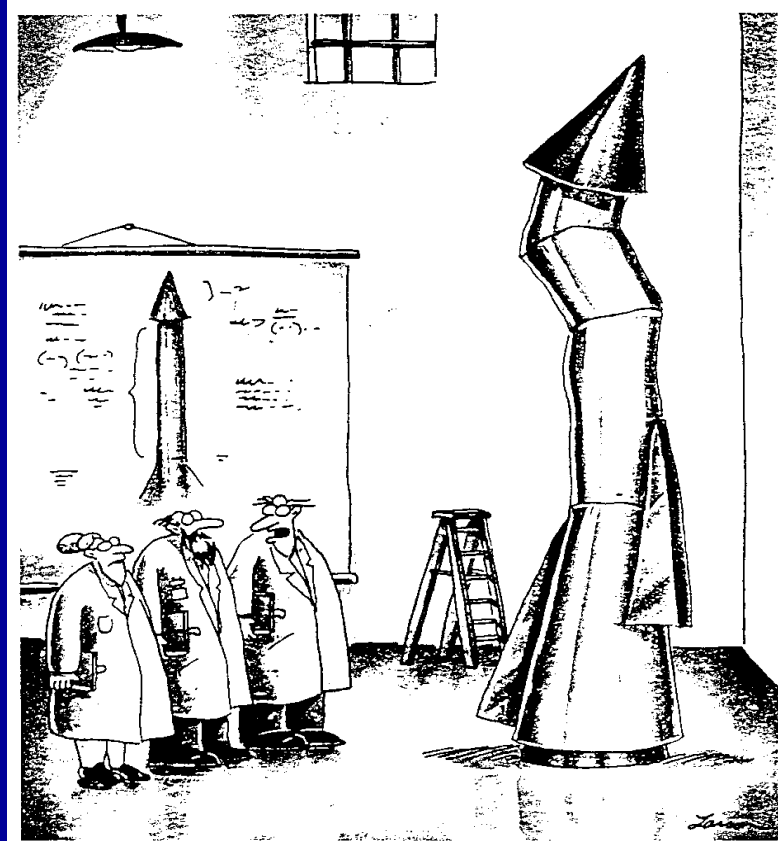
Are there lessons to be learned from the decline of wood furniture production in the U.S.?

Let's look at...

- ***Why competitors around the world are capturing the U.S. wood furniture market.***
- ***What the cabinet industry is doing to stave off foreign competition.***
- ***A lesson from a successful company in another industry.***

Furniture Making Is Not Rocket Science

It's more complicated than that...



"It's time we face reality, my friends. ... We're not exactly rocket scientists."

Wood Furniture Industry Weaknesses

What important, interconnected elements have contributed to the development of foreign competition?...

- ***Product Proliferation***
- ***Low Unit Volumes***
- ***High Labor Content***
- ***Low Selling Prices***
- ***Low Profitability***
- ***Low Capital Investment***
- ***Chaotic Retail Distribution***

Product Proliferation

What are the adverse consequences of an uncontrolled product policy?...

- ***Every product is different.***
- ***Product life cycles are typically short.***
- ***Component production sequences are diverse.***

The Typical Wood Furniture Plant

A casegoods plant with...

- > Annual Production** **\$36 million**
- > Product Line** **375 SKUs**

faces a huge product engineering challenge...

- > Average Parts per SKU** **25**
- > Parts Standardization** **4%**
- > Discrete Parts** **9,000**
- > Product Life** **3 years**
- > New Products per Year** **125**
- > New Discrete Parts per Year** **3,000**

The Typical Wood Furniture Plant

And a complex manufacturing process...

- > *Average Price per Unit* \$300
- > *Annual Unit Production* 120,000

when the average cutting size is 120 and
the number of machining steps per part is 7...

	<u>Per Year</u>	<u>Per Day</u>
--	-----------------	----------------

Low Unit Volumes

These negatives are compounded by another fact...

- ***Individual products rarely achieve high volume***

In a typical wood furniture product line...

80% of sales → 30-35% of SKUs
Bottom 35-40% of SKUs → 5% of sales

A sound product policy targets...

80% of sales → 20% of SKUs

High Labor Content

Product attributes such as...

- ***Carvings***
- ***Fancy Veneering***
- ***Complex, Multi-Step Finishes***

increase the amount of manual labor in furniture.

Total labor cost including direct and indirect workers and fringe benefits averages about 25% in wood furniture plants.

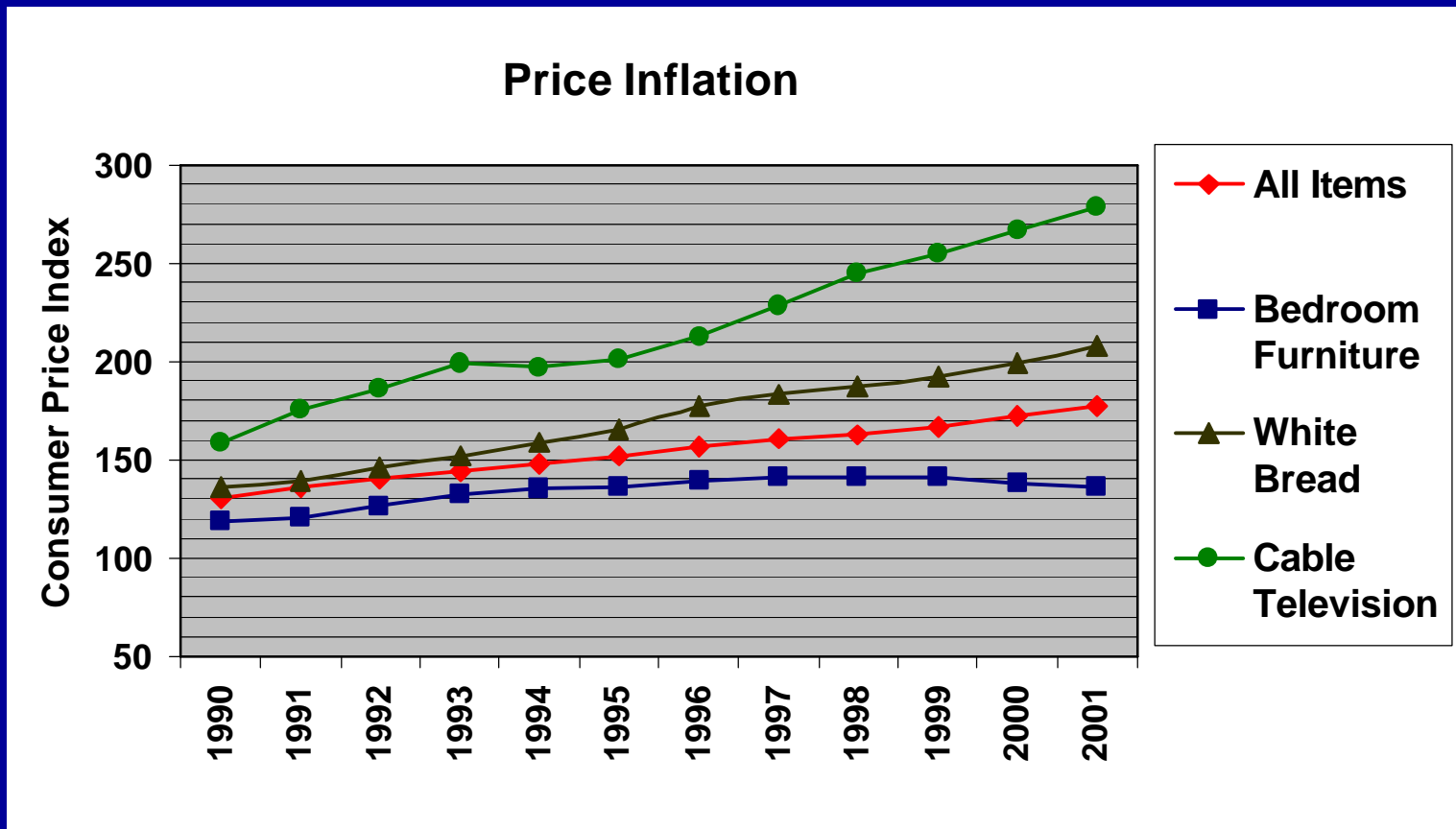
Low Selling Prices

Products like these are fast becoming commodities...



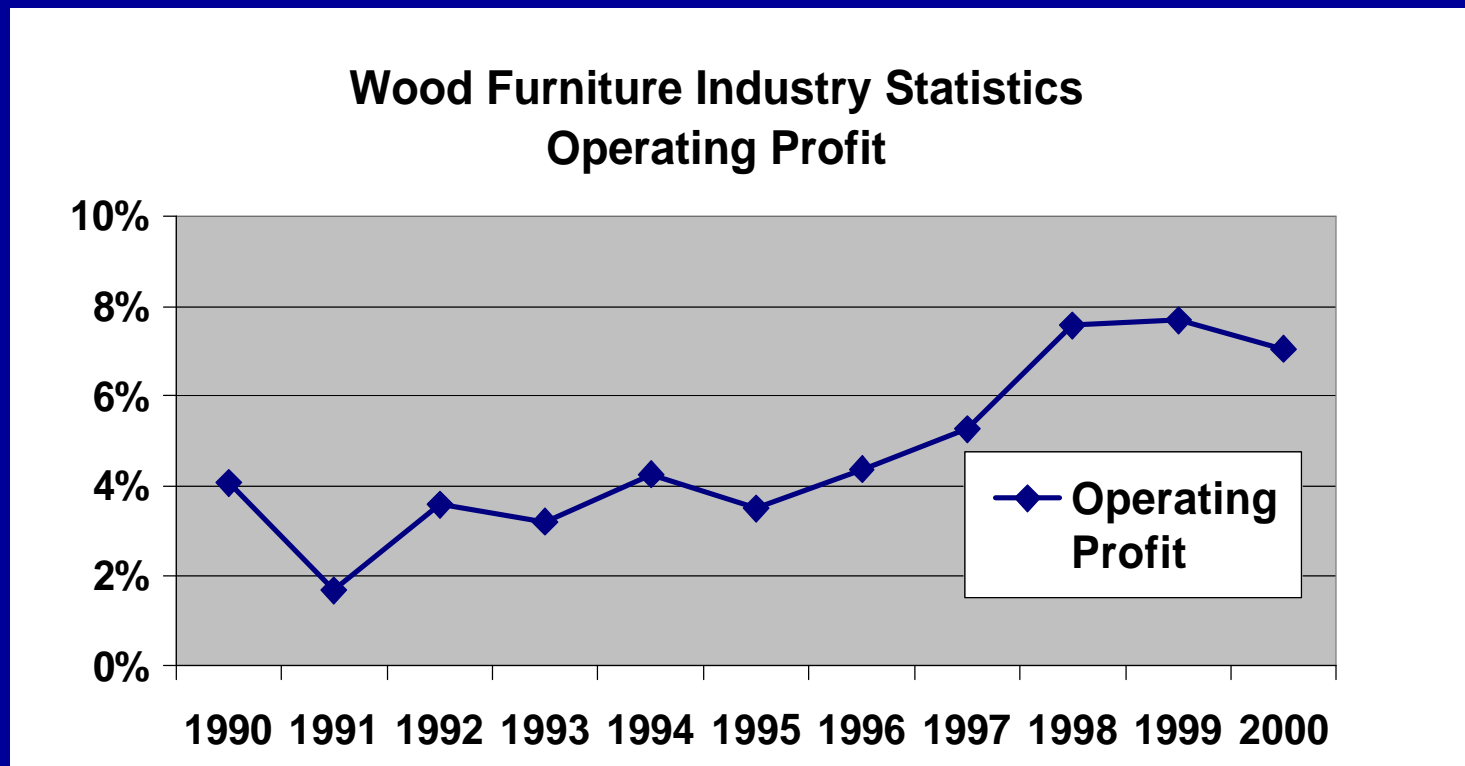
Low Selling Prices

Furniture makers receive fewer dollars 'per ton' of product than 20 years ago...



Low Profitability

Low selling prices and high labor content translated into relatively low profits...

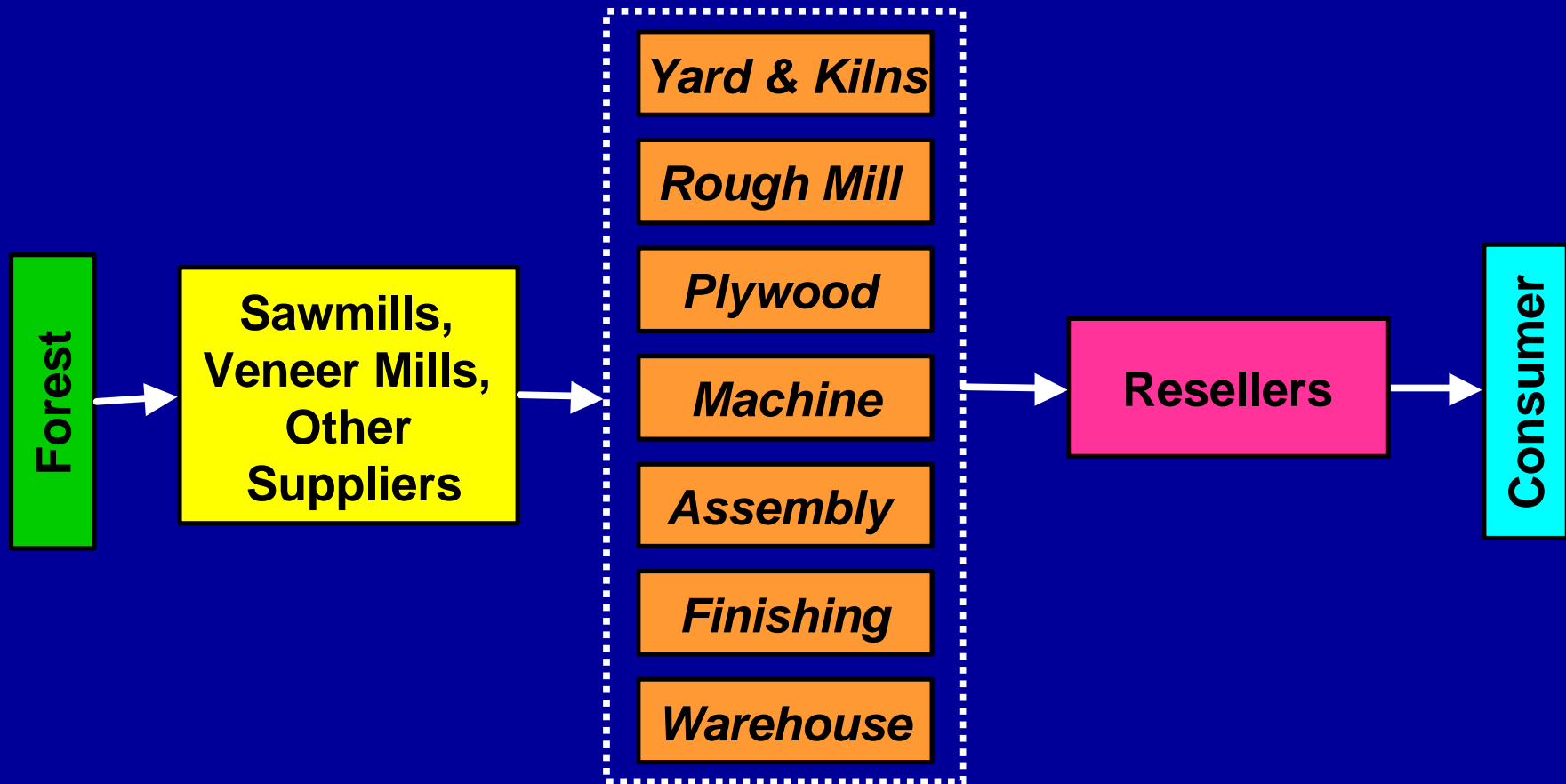


Source: BDO Seidman LLC

Large Need for Capital Investment

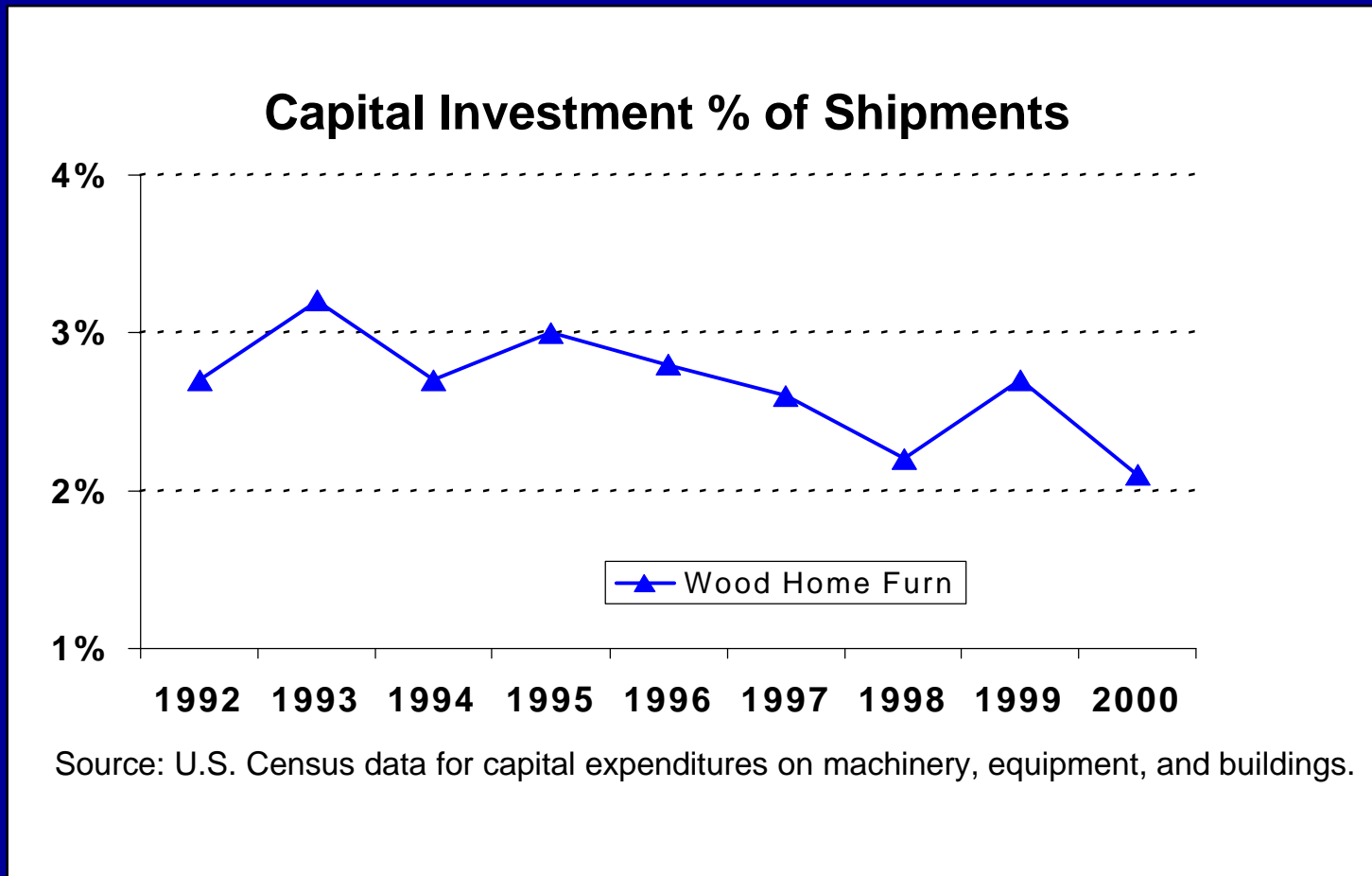
Furniture makers must invest in many processes...

Furniture Company



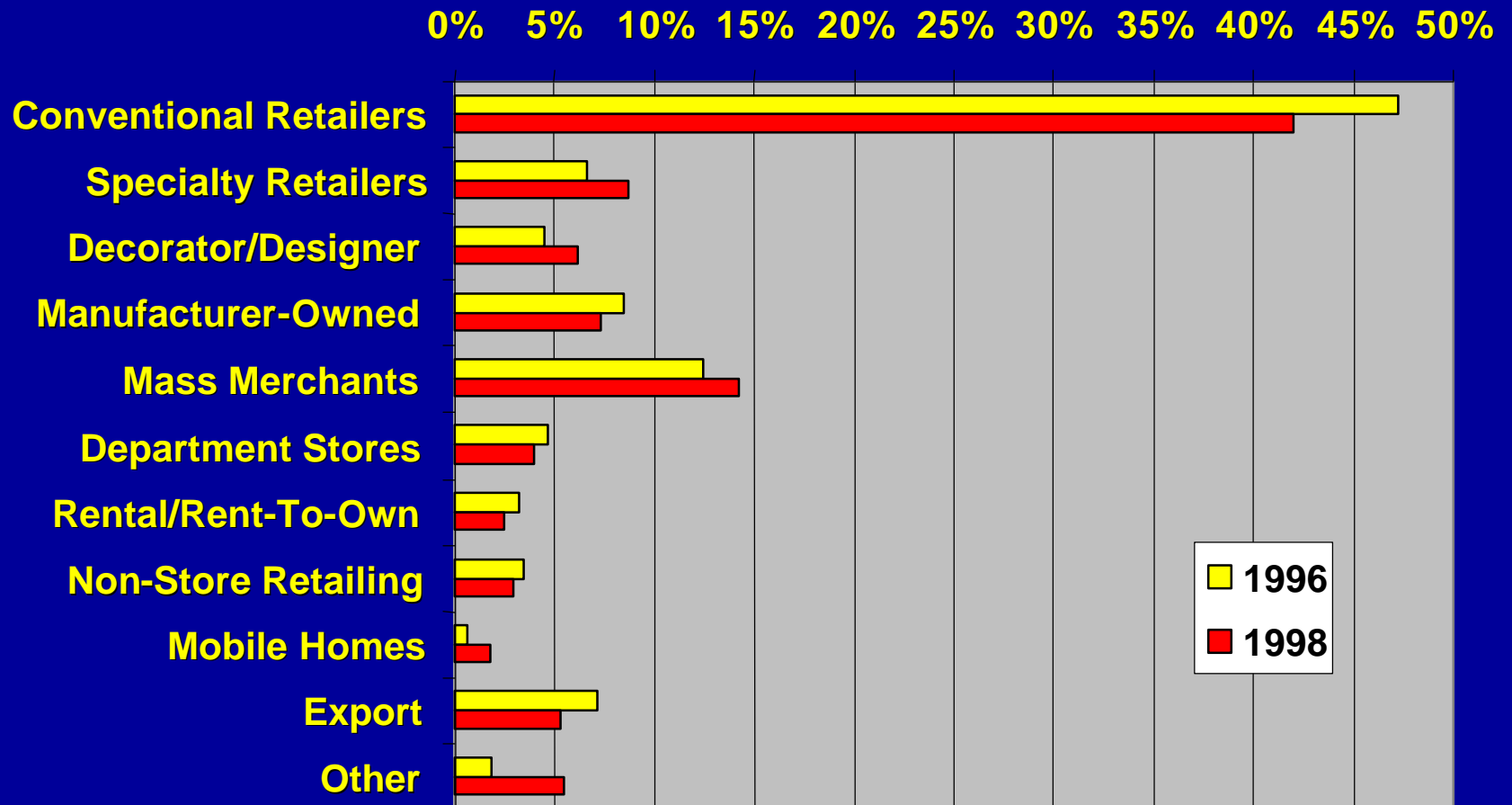
Low Capital Investment

Low profitability has resulted in low capital investment...



Chaotic Retail Distribution

More distribution channels are emerging...



Source: Mann Armistead & Epperson 1998 data

Chaotic Retail Distribution

In 2000 the industry began suffering the bankruptcies of many well-known furniture retailers...

Recent Furniture Retail Bankruptcies

Retailer	Filing Date	Peak Volume (\$ millions)	Peak Year	<i>Furniture Today</i> Rank	No. of Stores
Roberd's	1/00	\$342	1997	19	24
This End Up	2/00	152	1997	20	152
Heilig-Meyers	8/00	1,729	1999	1	1,253
Wards	12/00	506	1999	18	252
Krause's	7/01	155	2000	40	101
Homelife	7/01	680	2000	8	133
Bedroom Superstore	7/01	60	2000	88	19
Total		\$3,624			1,934

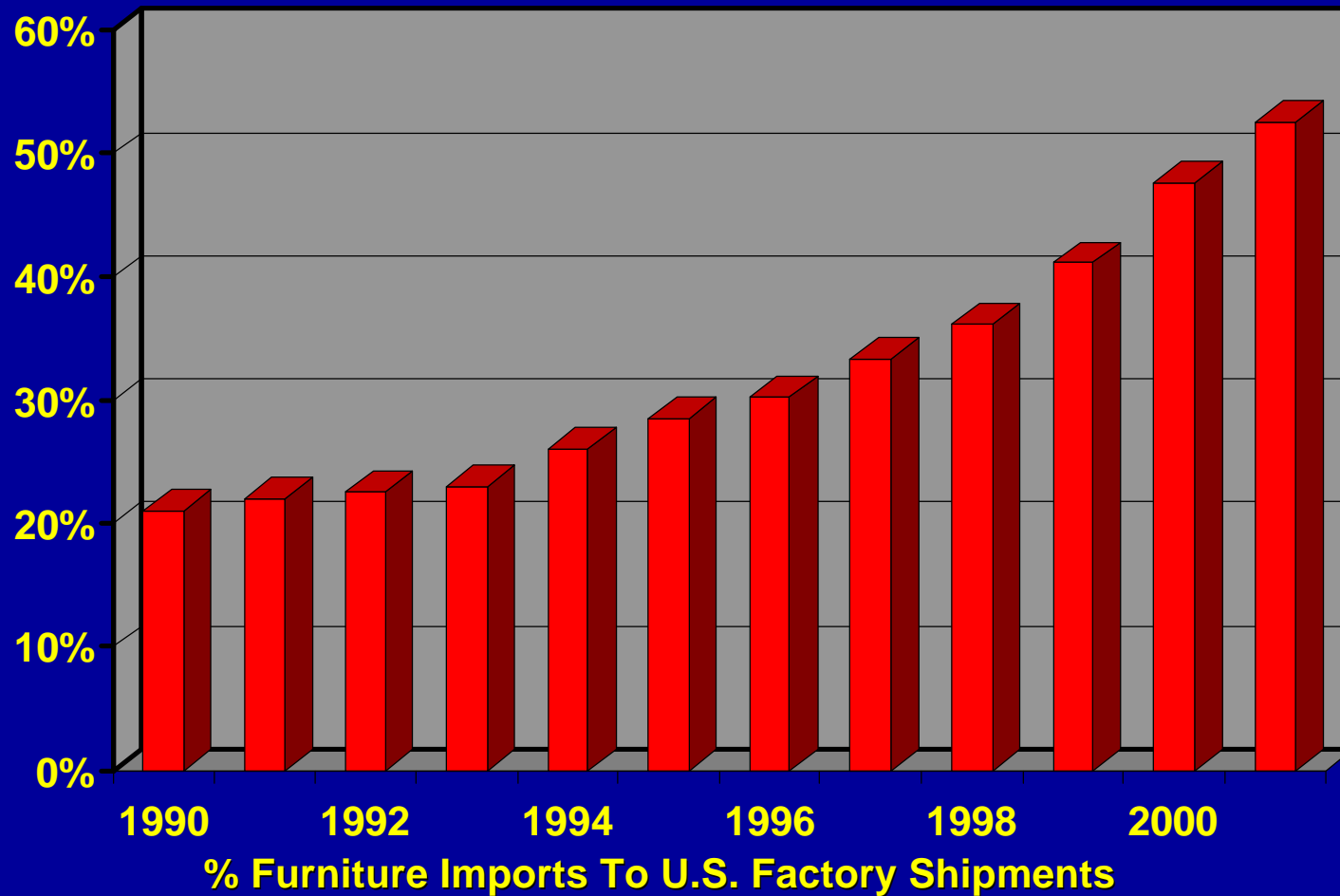
The No Profit Zone

The features of *The No Profit Zone* are...

- *All players have the same business model.*
- *Technology is not proprietary.*
- *Products are differentiated only by price.*
- *Prices are declining.*
- *Major customers are no profit zones.*
- *Survival requires a high ratio of 'good' years.*
- *Competition has become global.*

Furniture Imports

Offshore producers continue to capture market share...



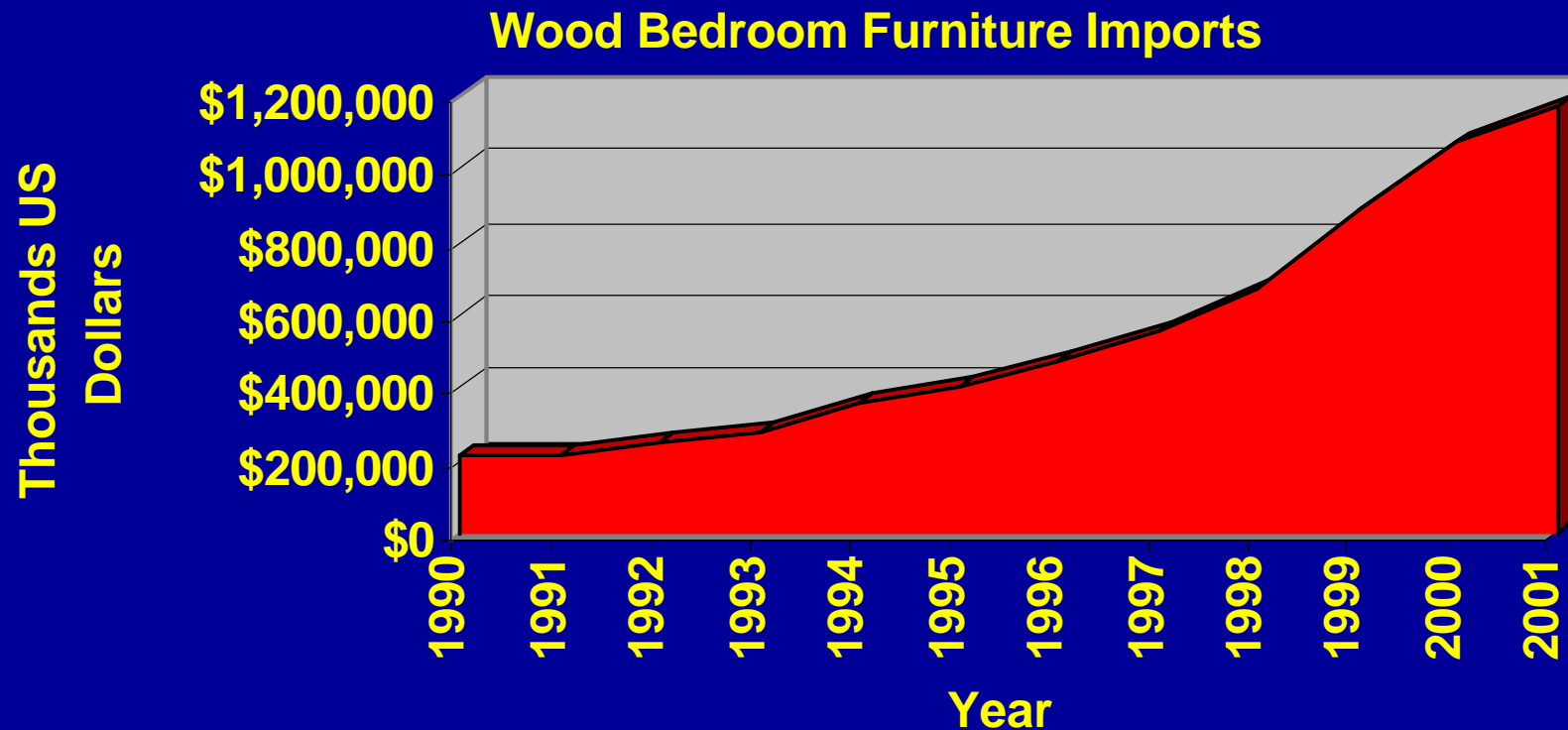
Sources of Imports

U.S. Furniture Imports by Source Country in millions of US\$

	<u>2000</u>	<u>2001</u>	<u>%Growth</u>
China	\$3,686.8	\$4,177.1	13%
Canada	2,390.2	2,246.6	-6
Italy	1,256.8	1,202.1	-4
Mexico	880.2	796.2	-10
Taiwan	813.4	608.2	-25
Indonesia	485.1	488.0	1
Malaysia	460.8	414.4	-10
Philippines	271.3	228.8	-16
Thailand	265.0	273.0	3
Brazil	<u>100.2</u>	<u>144.0</u>	<u>44</u>
Top 10	\$10,609.8	\$10,578.4	-0.3%
WORLD TOTAL	12,188.4	12,071.3	-1%

Import Product Categories

Bedroom imports have grown by 256% since 1991 in spite of shipping inefficiency...



Source: *Furniture Today*

A. G. Raymond & Company

22

The Foreign Advantage

Obscenely low wages are being converted into great product values with the features desired by the U.S. consumer...



Hand Carvings



Complex Finishes

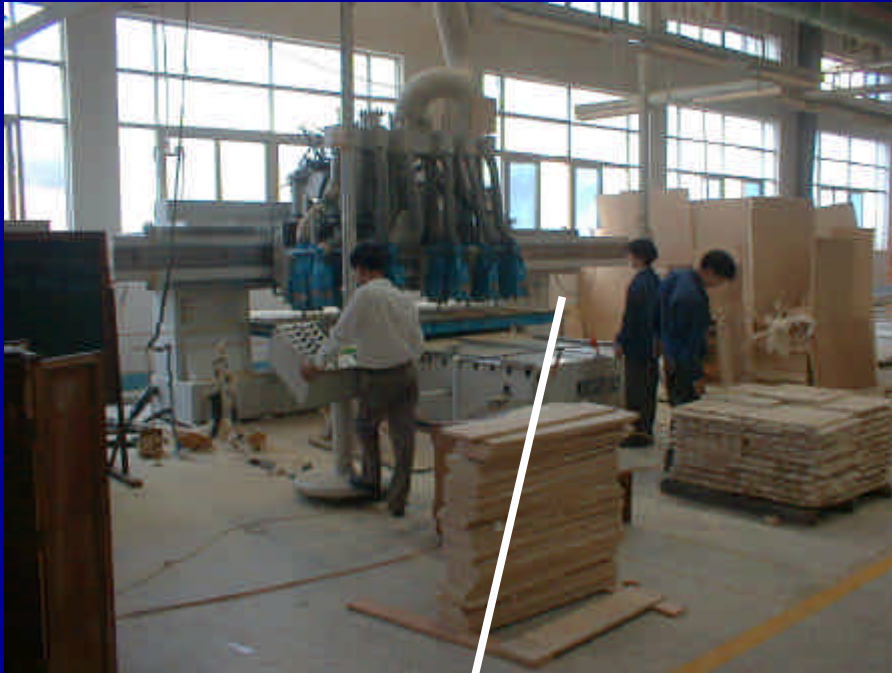
The Foreign Advantage

... in plants that are organized for efficient production...



Chinese Plant Attributes

The best Chinese plants combine low cost labor with world class machinery...



**CNC
Router**

**Optimizing
X-Cut Saw**



Chinese Plant Attributes

and efficient materials handling equipment...



***Conveyorized
Assembly***



***Towline
Finishing***

Chinese Plant Attributes

Producers there use popular U.S. woods...



**U.S. Hardwoods
in
Chinese Plant**

**Cherry
Veneers/
Poplar Solids**



Chinese Plant Attributes

Many Chinese producers have lots of room for improvement...



**Manual
Veneer Splicing**

**Poor Handling
Methods**



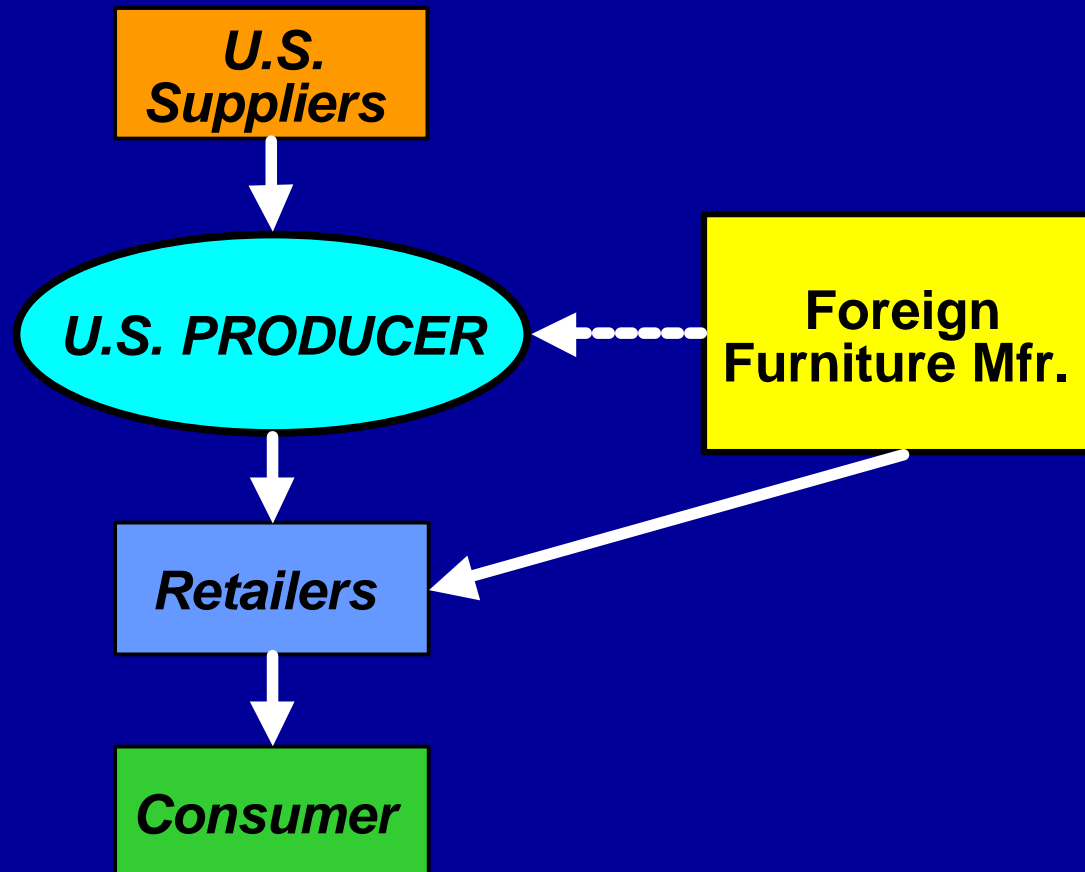
Chinese Plant Attributes

Many plants are capable of supplying volume and quality...



The Future for U.S. Furniture Makers

The real threat to U.S. producers who import is disintermediation ie, elimination of the middle man...



The Kitchen Cabinet Industry

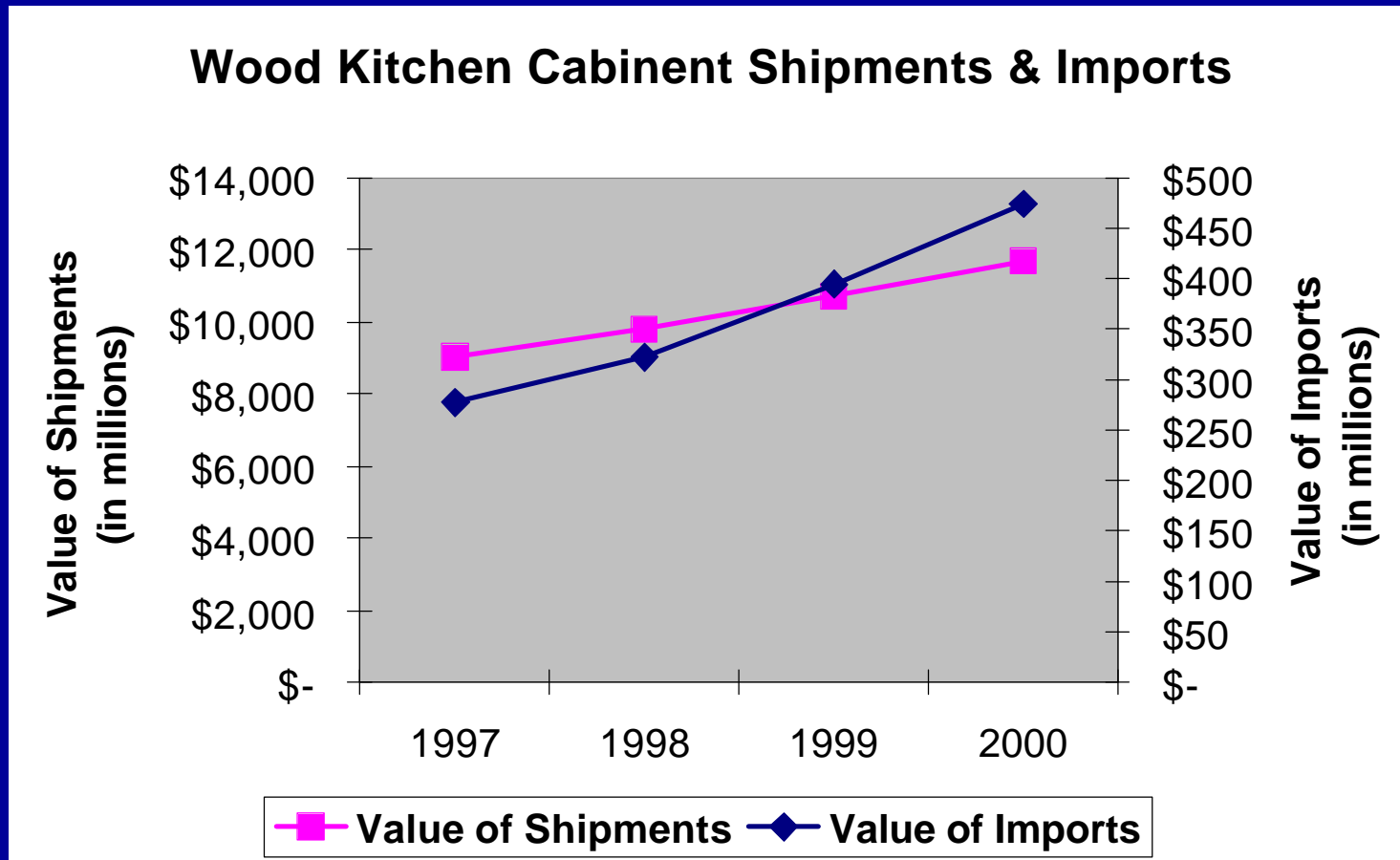
The production of wood furniture and kitchen cabinets has similarities...

- *Process machinery & tooling*
- *Plant infrastructure*
- *Materials*

However the application of these technologies and materials differs significantly.

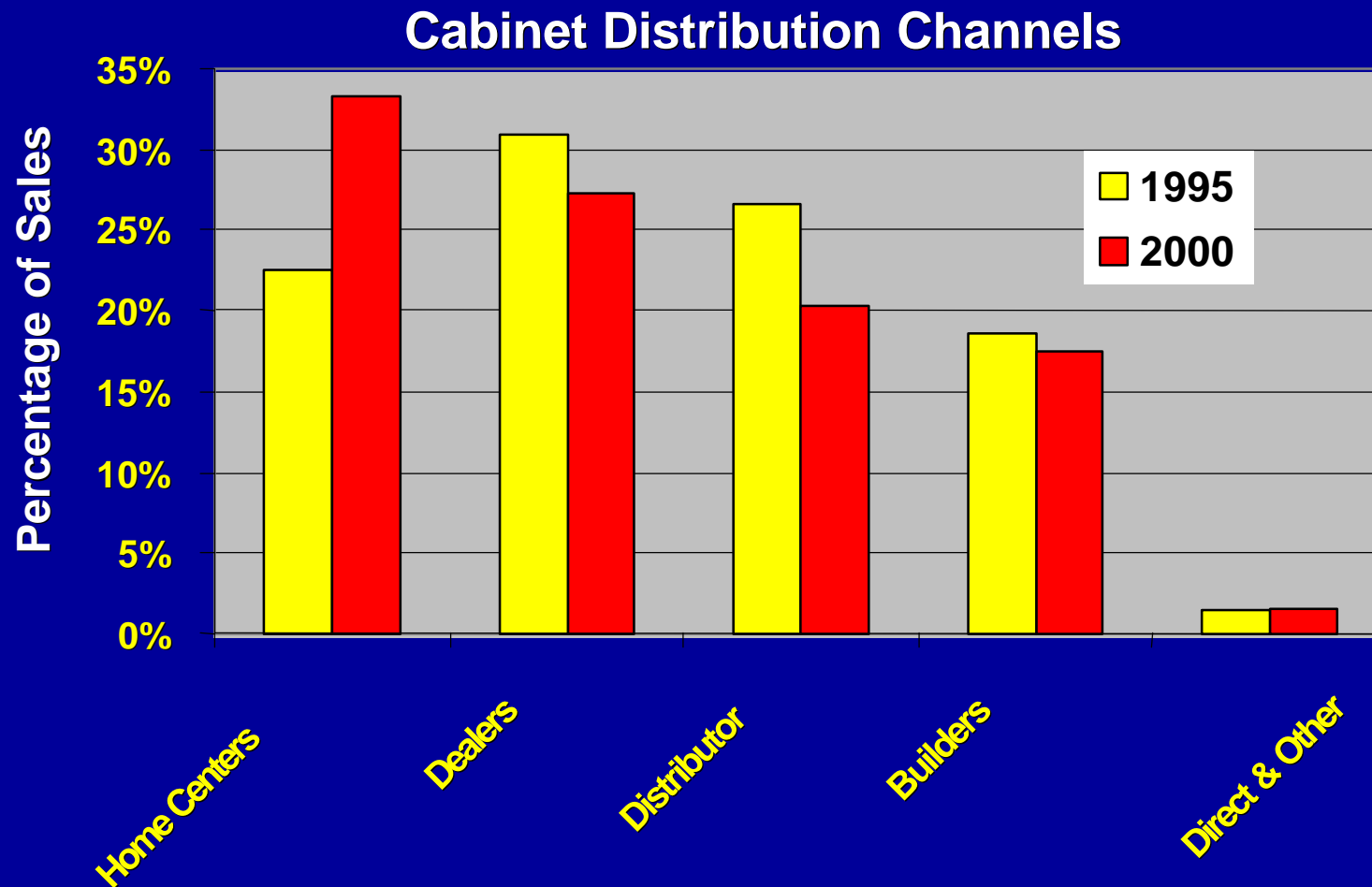
Cabinet Imports

U.S. cabinet makers are not immune from foreign competition...



The Changing Cabinet Marketplace

The primary distribution channel for cabinets is now the 'big box' home centers....



Cabinet Makers Respond To The Market

Home center cabinet sales changed the expectations of the cabinet consumer.

Cabinet makers first responded by changing their product offerings...

- ***Longer Product Lines***
- ***High Product Standardization & Modularity***

Cabinet Makers Respond To The Market

This sound product line management forms the basis for...

- ***Process Simplicity***
- ***Make To Order Production Process***
- ***Fast Order Fulfillment***

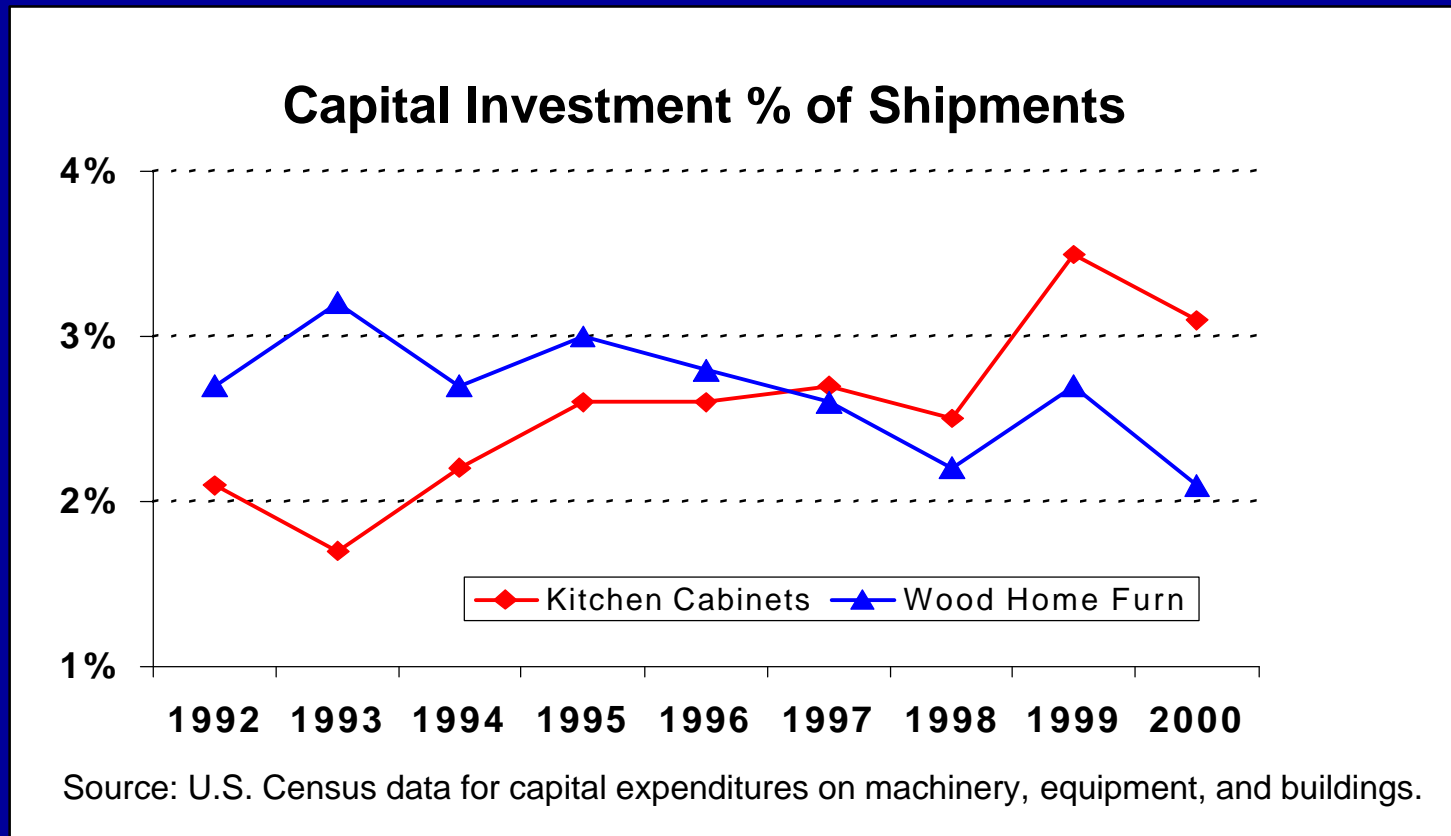
Cabinet Makers Respond To The Market

Often these features are further leveraged by...

- ***Reliance on Supply Chain Partners***
- ***Focused Investment in Process & Information***

Comparing the Industries

With simpler processes and more focus cabinet makers can leverage their capital investment further than wood furniture producers...



Comparing the Industries

Process simplicity and investment focus have produced results for the cabinet industry...

Productivity Comparison

	Cabinet Industry	5-Year Growth	Furniture Industry
Output per Ft2	\$171/ft2	20%	\$100/ft2
Output per Worker	\$182,000	41%	\$105,000

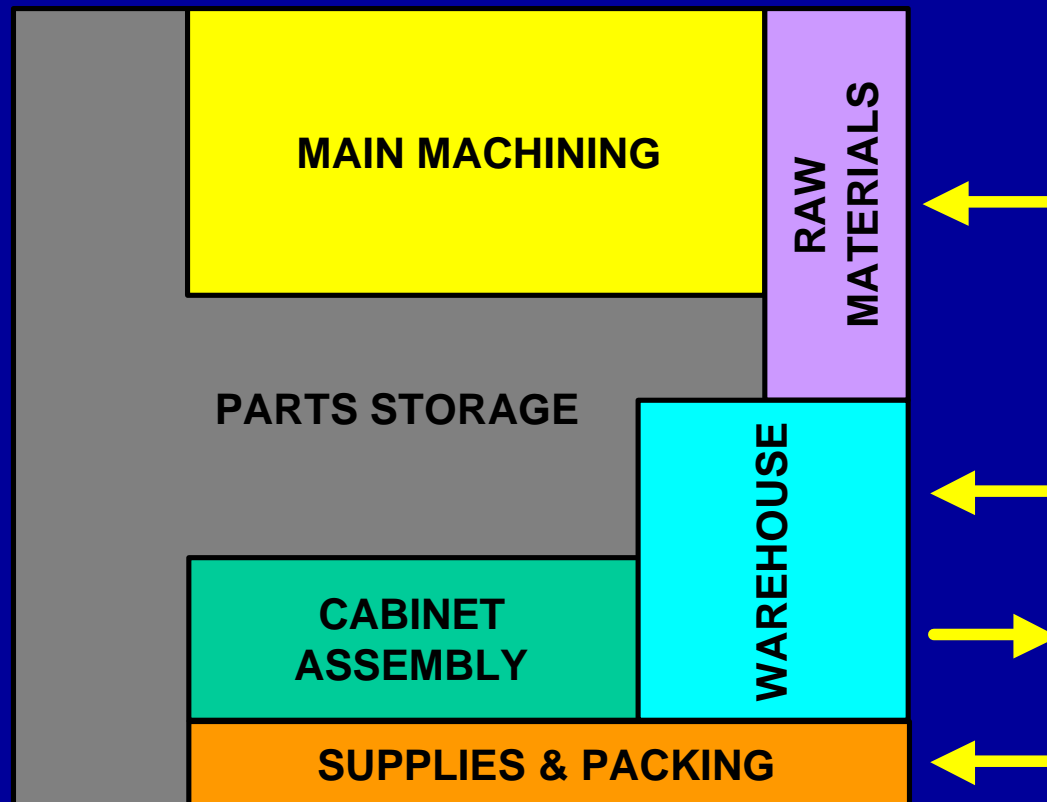
Present Competitive Advantages

The attributes resulting from this business model may prove to be sustainable advantage over lower cost foreign competitors...

- ***Customizable Products***
- ***Fast Delivery***
- ***'Kitchen At A Time' Service***

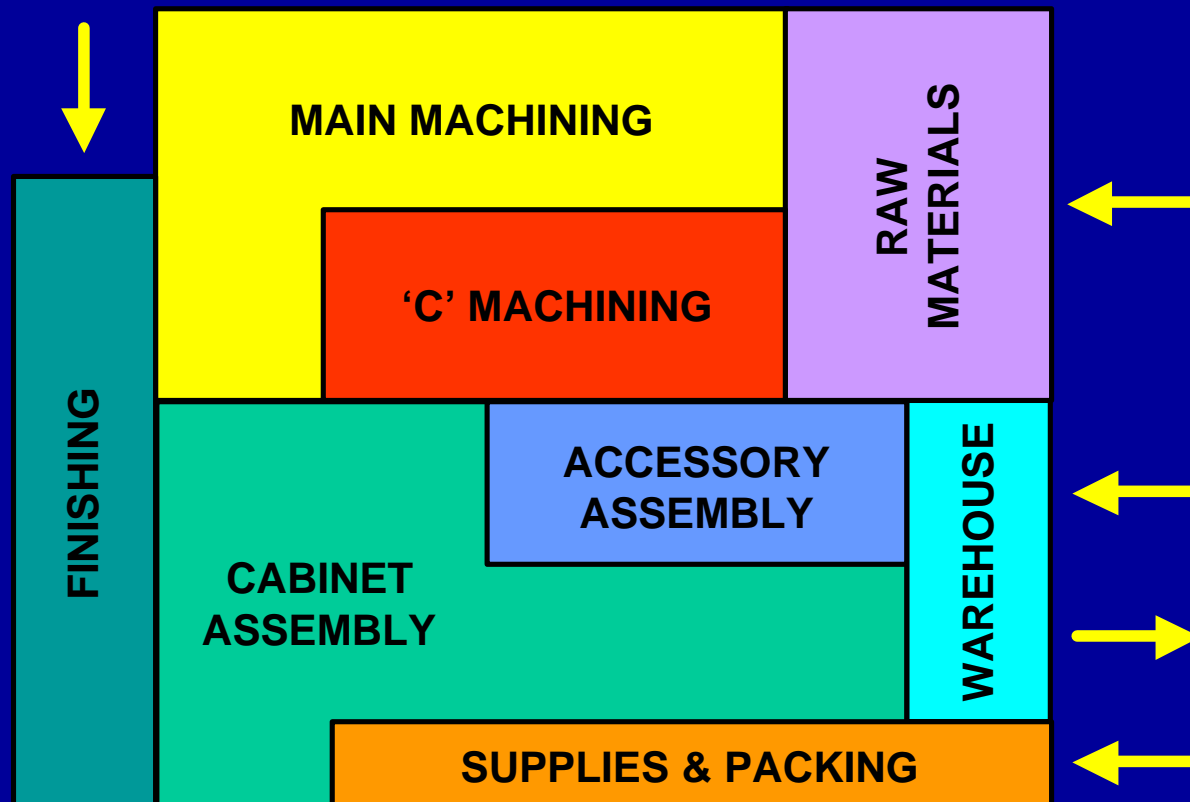
Case Study – Cabinet Plant Conversion

The initial cabinet plant featured a short product line manufactured on high speed/high volume machinery creating lots of parts inventory...



Case Study – Cabinet Plant Conversion

With minimal space addition, the final configuration will offer semi-customized cabinets with little inventory in ten to fifteen days...



Furniture Customization

You can produce customized furniture from a limited parts list...

Pure

Choice of **6** buffet feet

Choice of **3600** color combinations

Choice of **18** table legs

DINEC

info@dinec.com • 1.888.00.DINEC
dinec.com

This advertisement shows a dining table and chairs. It highlights customization options: 6 buffet feet, 3600 color combinations, and 18 table legs. The DINEC logo and contact information are also present.

Sonoma

Choice of **18** choices of decorative hardware

Choice of **over 70** fabrics and leathers

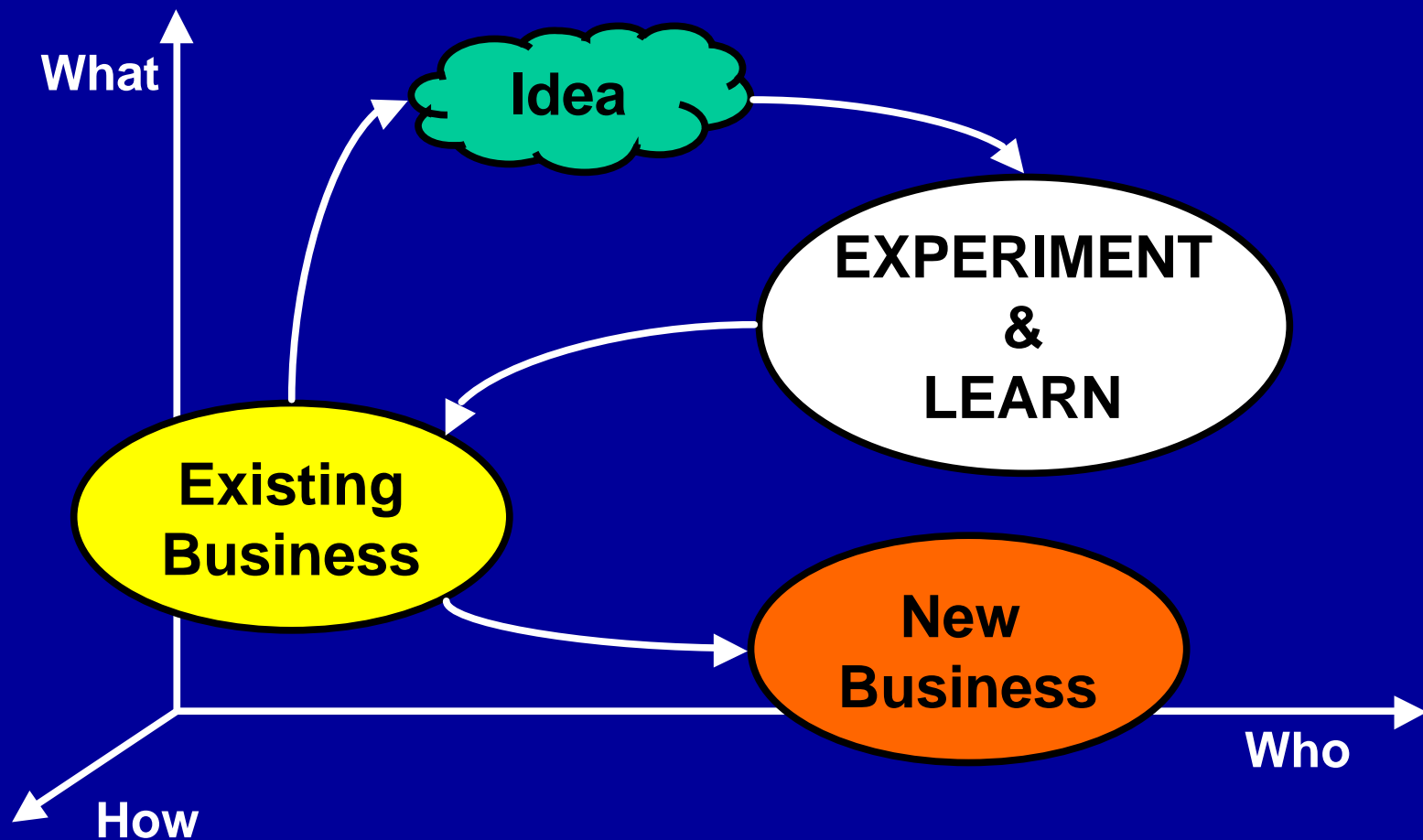
Choice of **12** chair legs

Our stylish Personalization Center is the ultimate tool needed to satisfy your decorator's desire in designing his or her own personalized dining room suite.

This advertisement shows a dining table and chairs. It highlights customization options: 18 choices of decorative hardware, over 70 fabrics and leathers, and 12 chair legs. A note about the Personalization Center is also included.

Imagineering

Inventing a new way of doing business requires imagination and experimentation...



Imagineering at Starbucks

Starbucks took a low profit, commodity product and built a new, highly profitable business by...



Creating a new experience.

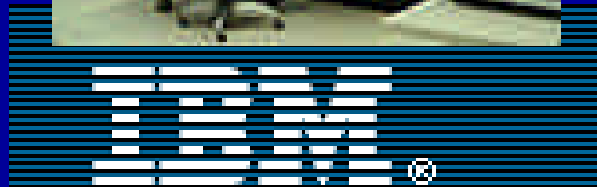
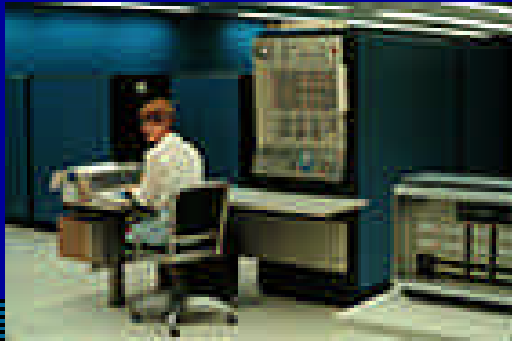
Lessons from Starbucks

The Starbucks story teaches three important lessons...

- *Don't solve today's problems with yesterday's answers.*
- *Don't count on sales and marketing to provide insight into the needs and frustrations of your customers.*
- *Start experimenting!!*

Other Industries, Other Lessons

In 1964 IBM introduced System 360, a new computer system that made their existing products obsolete. Total investment for that product was *2-1/2 times* their annual revenue. IBM proved that...



Sometimes you have to bet the ranch...

Lessons from IBM

The IBM story teaches three more important lessons...

- ***Do your homework.***
- ***Decide quickly to hold 'em or fold 'em.***
- ***Hire the right people.***

The Bottleneck To Excellence

An often unmentioned problem is the shortage of technical/engineering manpower...

Types of Manufacturers	Number of Engineers Employed in 1998	Sales Dollars per Engineer
Household Furniture	633	\$43,267,730
Millwork & Plywood	1,119	\$30,673,077
Household Appliances	3,442	\$6,215,702
Communications Equipment	39,423	\$2,101,628

Other Industries, Other Lessons

Seeking growth opportunities UPS expanded into supply chain activities that its customers do not want. Their results proved the merits of a new strategy...



Extending your offering...

Lesson from UPS

The UPS story teaches another important lesson...

- ***Take on tasks that your customers do not consider part of their core competency.***

Staying Out of The No Profit Zone

- ***Imagineering***
- ***Experimenting***
- ***Planning***
- ***Executing***