



Logistics For the Public Sector

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Objectives

- ❖ To illustrate some of the constraints facing the shipper/carrier communities
- ❖ To help focus on possible areas of public policy response
- ❖ To promote public-private dialog



Structure

- ❖ Archived powerpoint presentations
- ❖ Video clips of real shippers and carriers
- ❖ Each powerpoint is 15 to 35 minutes in length
- ❖ Each video is about 15 minutes
- ❖ Listen to them at your own pace
- ❖ Course can also be done face-to-face with the benefit of exchange and discussion

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Agenda

- ❖ Part One--The basics for the novice or a refresher for the more experienced
- ❖ Part Two--The concepts in more depth for all who work in the area

Agenda

- ❖ **Part One**
 - Introduction and total cost competition
 - Managing inventories
 - Managing transportation
 - The European experience and conclusions
- ❖ **Part Two**
 - Logistics strategies
 - Network design
 - Outsourcing and third party logistics
 - Information technology
- ❖ **Highlights for participants**



Acknowledgements

- ❖ Funded by the Mississippi Valley Freight Coalition and the National Center for Freight and Infrastructure Research and Education
- ❖ Prepared by Bruce Wang, UW--Madison and Ernie Wittwer, consultant

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Mississippi Valley Freight Coalition Member States

- ❖ Illinois
- ❖ Indiana
- ❖ Iowa
- ❖ Michigan
- ❖ Minnesota
- ❖ Kansas
- ❖ Missouri
- ❖ Kentucky
- ❖ Ohio
- ❖ Wisconsin

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MVFC Supporting Institutions

- ❖ National Center for Freight and Infrastructure Research and Education
- ❖ University of WI--Madison
- ❖ University of Illinois--Chicago
- ❖ University of Toledo

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Your Part One Facilitator

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Module One

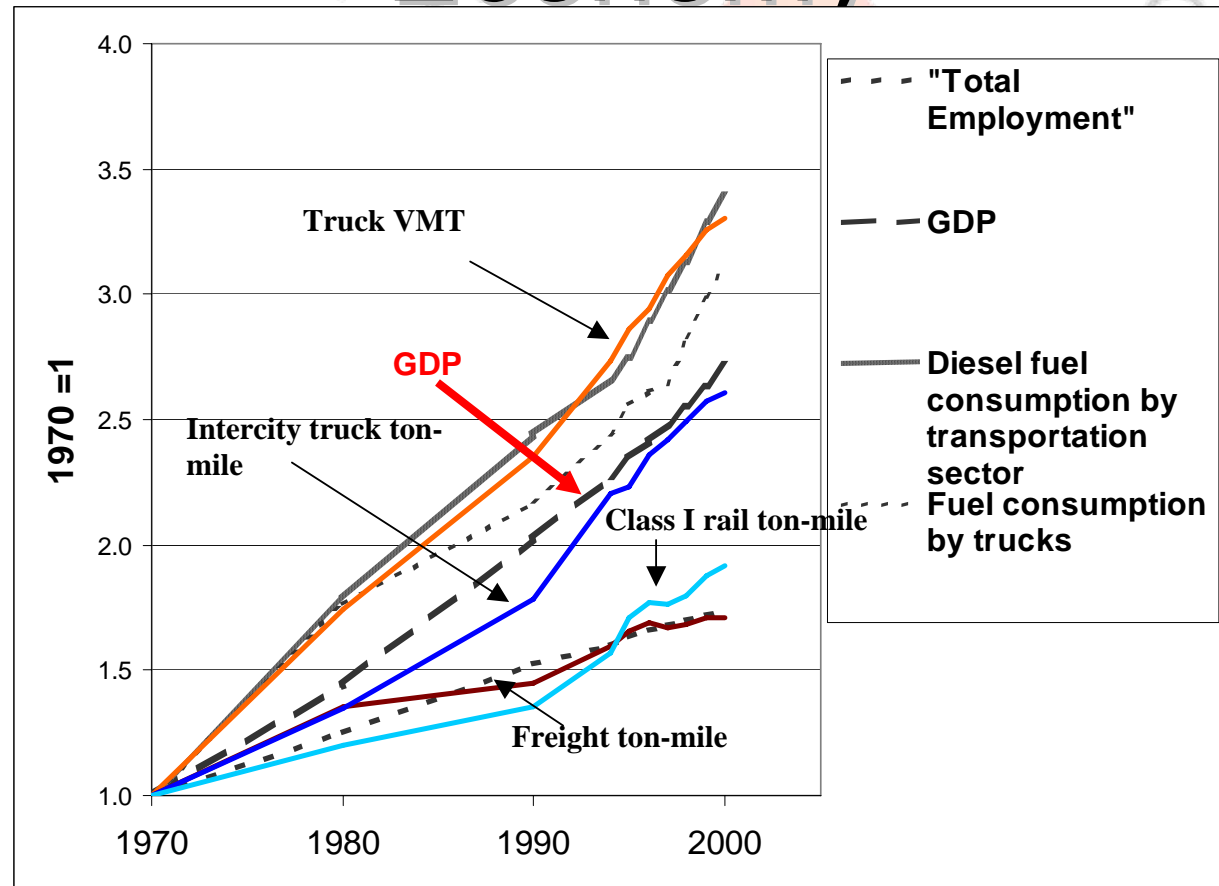
Introduction and Total Cost Competition

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Freight and the Economy



1998 Congestion

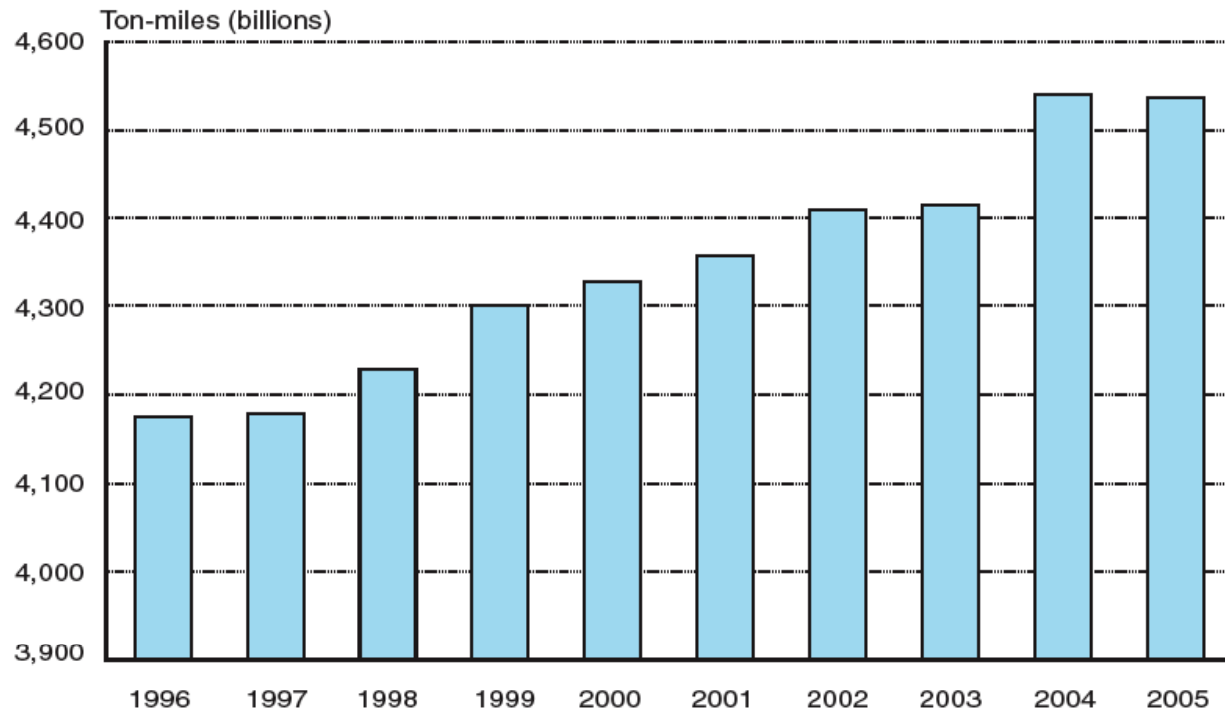


US Department of Transportation
 Federal Highway Administration
 Office of Freight Management and Operations
 Freight Analysis Framework

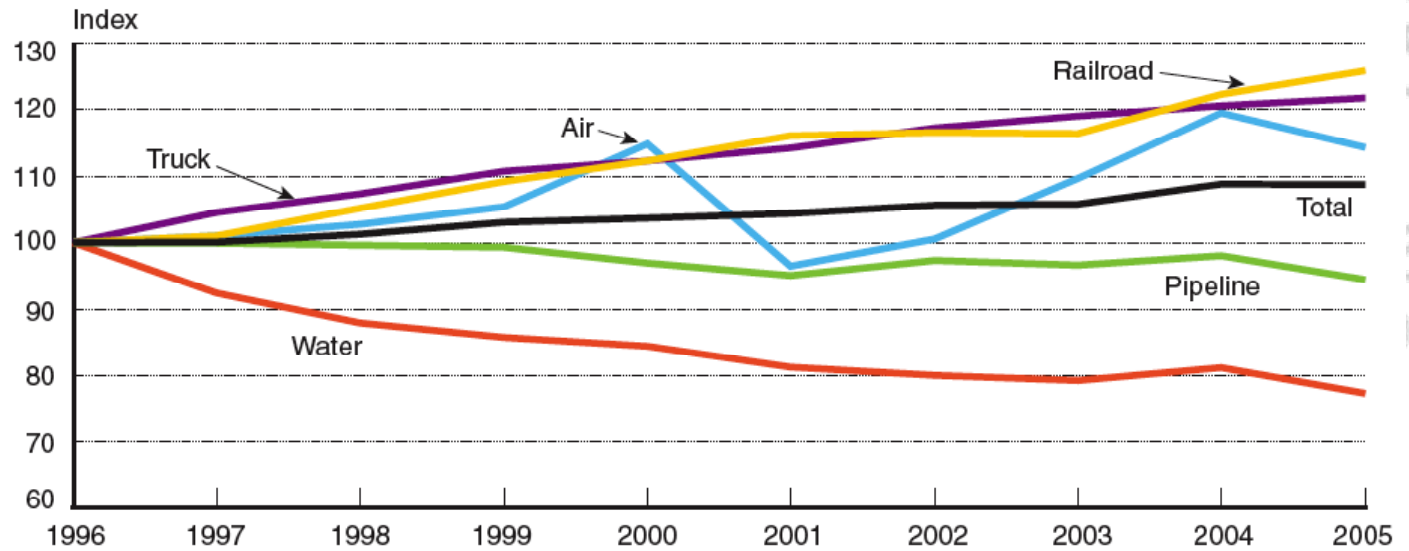
National Highway System Estimated Peak Period Congestion
 (1998)

NHS Highways
 — Below Capacity
 — Approaching Capacity
 — Exceeding Capacity


Growth in Ton-Miles



Modal Share Trends



2020 Congestion

US Department of Transportation
 Federal Highway Administration
 Office of Freight Management and Operations
 Freight Analysis Framework

National Highway System Estimated Peak Period Congestion
 (2020)

NHS Highways
 — Below Capacity
 — Approaching Capacity
 — Exceeding Capacity

Supply Chain Management

- ❖ Encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all logistics management activities
- ❖ It also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third party service providers, and customers

Logistics Management

- ❖ Is that part of supply chain management that plans, implements, and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements
- ❖ Logistics is part of the supply chain management concerning materials movement and storage

Quiz

- Q. According to FAF, what portion of the average state truck tonnage simply passes through the state?
- A. 43%
- Q. In 2002 what percent of the 19.3 trillion tons of freight shipped in the US was domestic?
- A. 91%

Quiz

Q. Which country is the US's largest trading partner?

A. Canada

Q. In 2002 how many people were employed by American railroads?

A. 177,000

Q. In 2002 what was the total revenues of class I railroads?

A. \$35.3 billion

Quiz

Q. In 1997 what portion of the US GDP was involved in international trade?

A. 25%

Q. What is generally used as the haul length needed to make rail economic?

A. 600 miles

Q. Between 1980 and 2000, which grew fastest: overall VMT, truck VMT, lane miles of highway?

A. Truck VMT (89%); overall VMT (80%); lane miles (3.8%)

Quiz

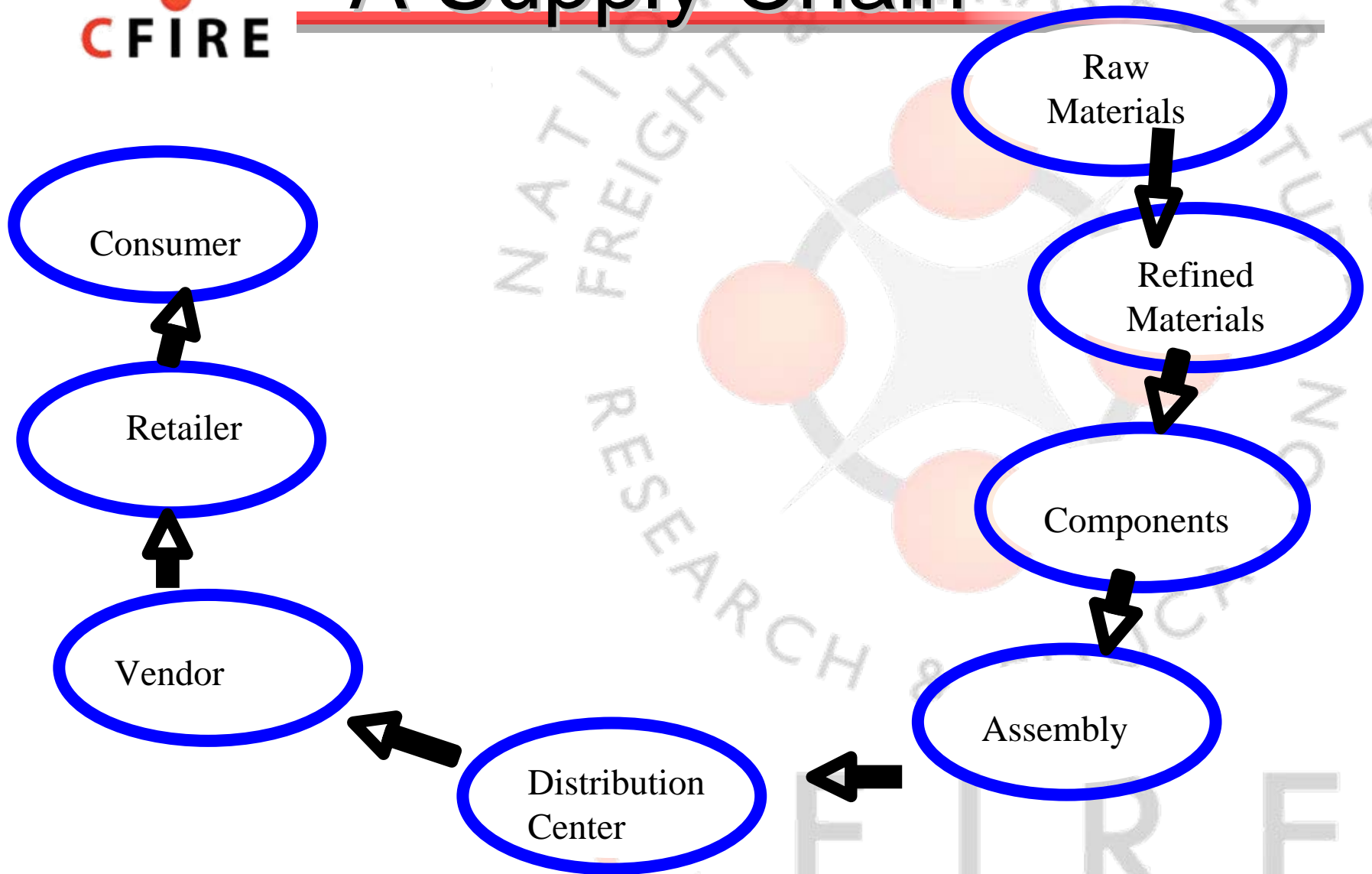
Q. How many trucks would it take to carry the load of one river barge?

A. 58, or 15 rail cars

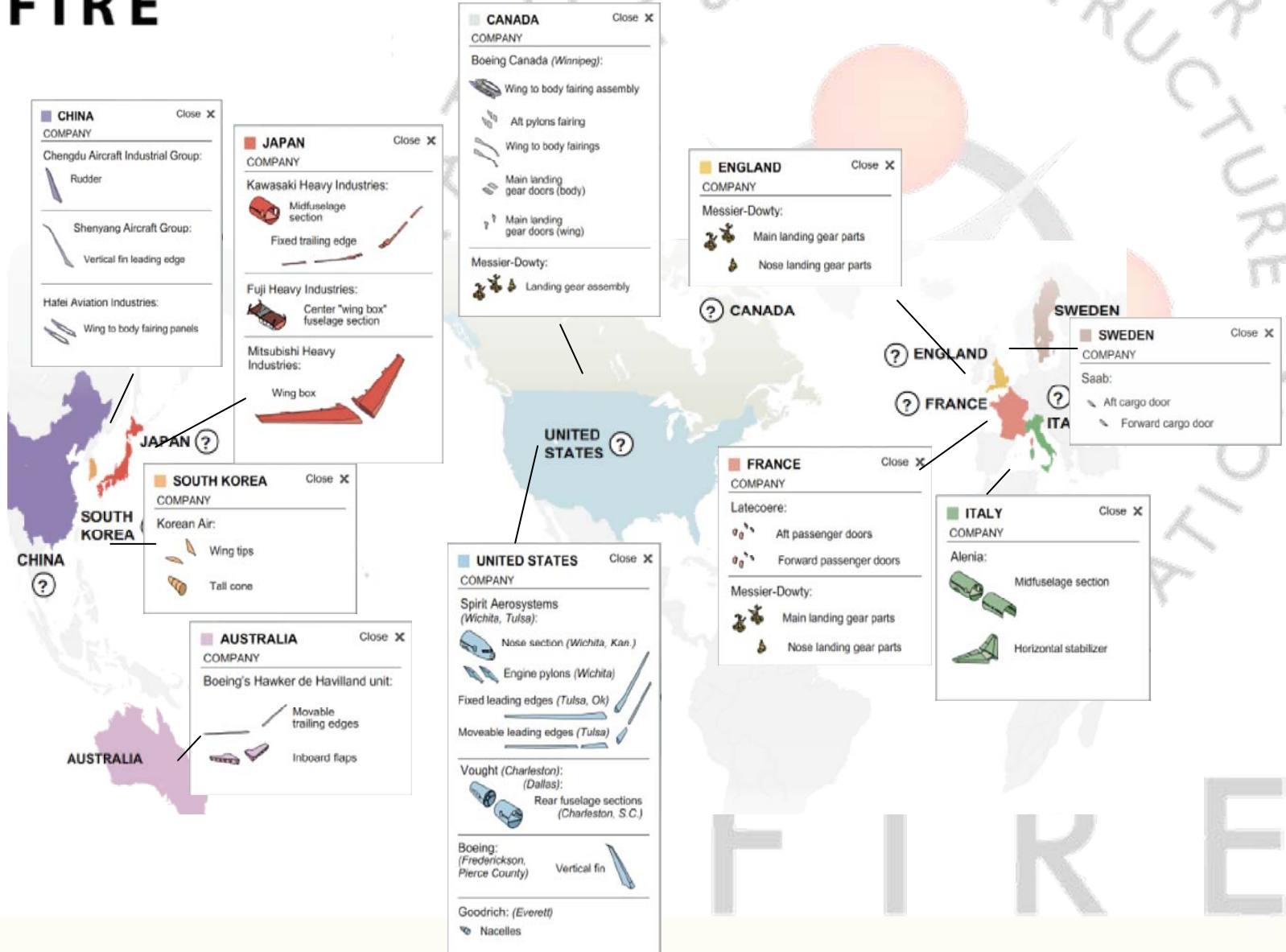
Q. What is the value of an average ton of freight moved by air relative to that of truck?

A. About 90 to one

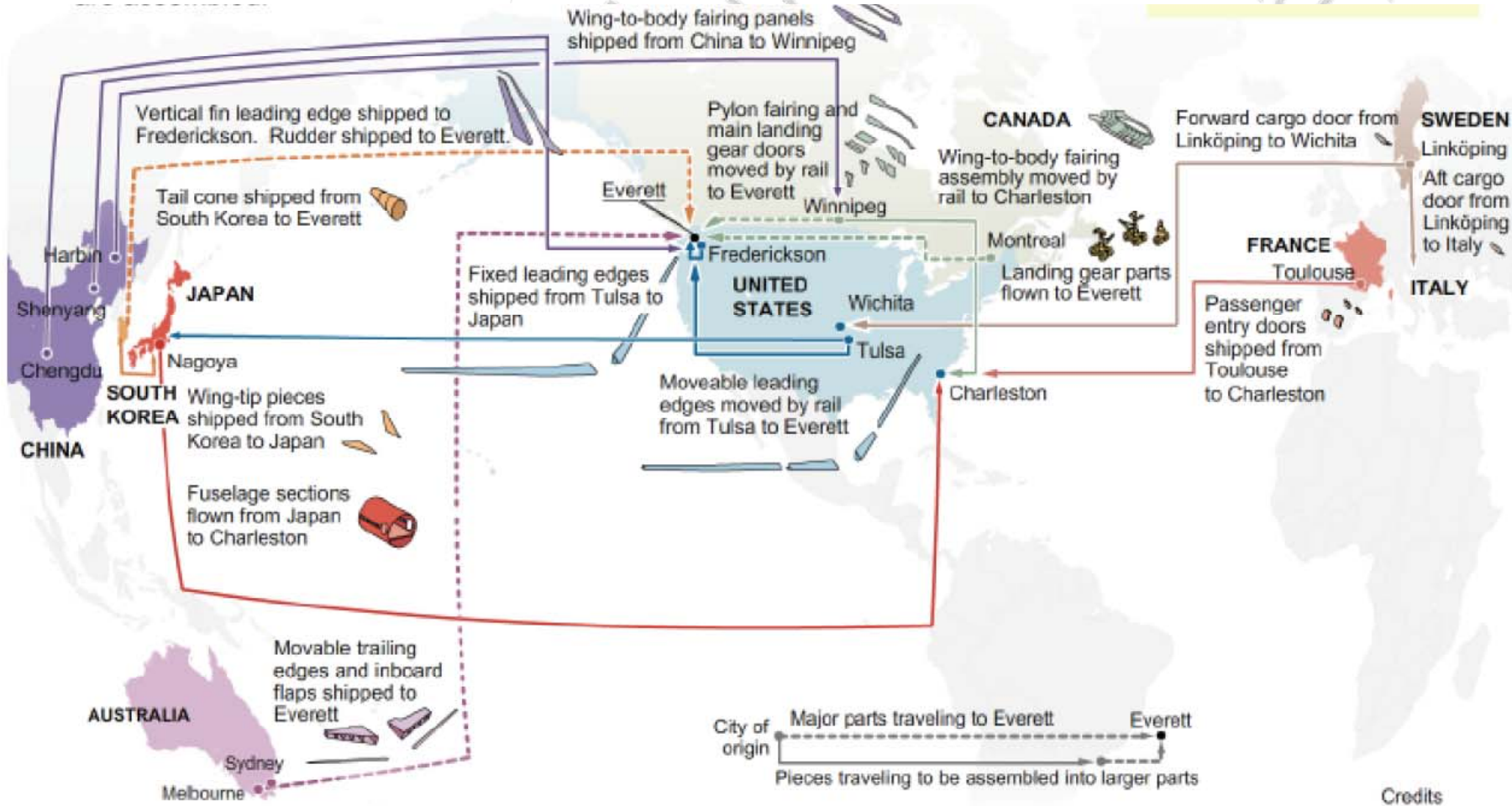
A Supply Chain



Boeing Dreamliner



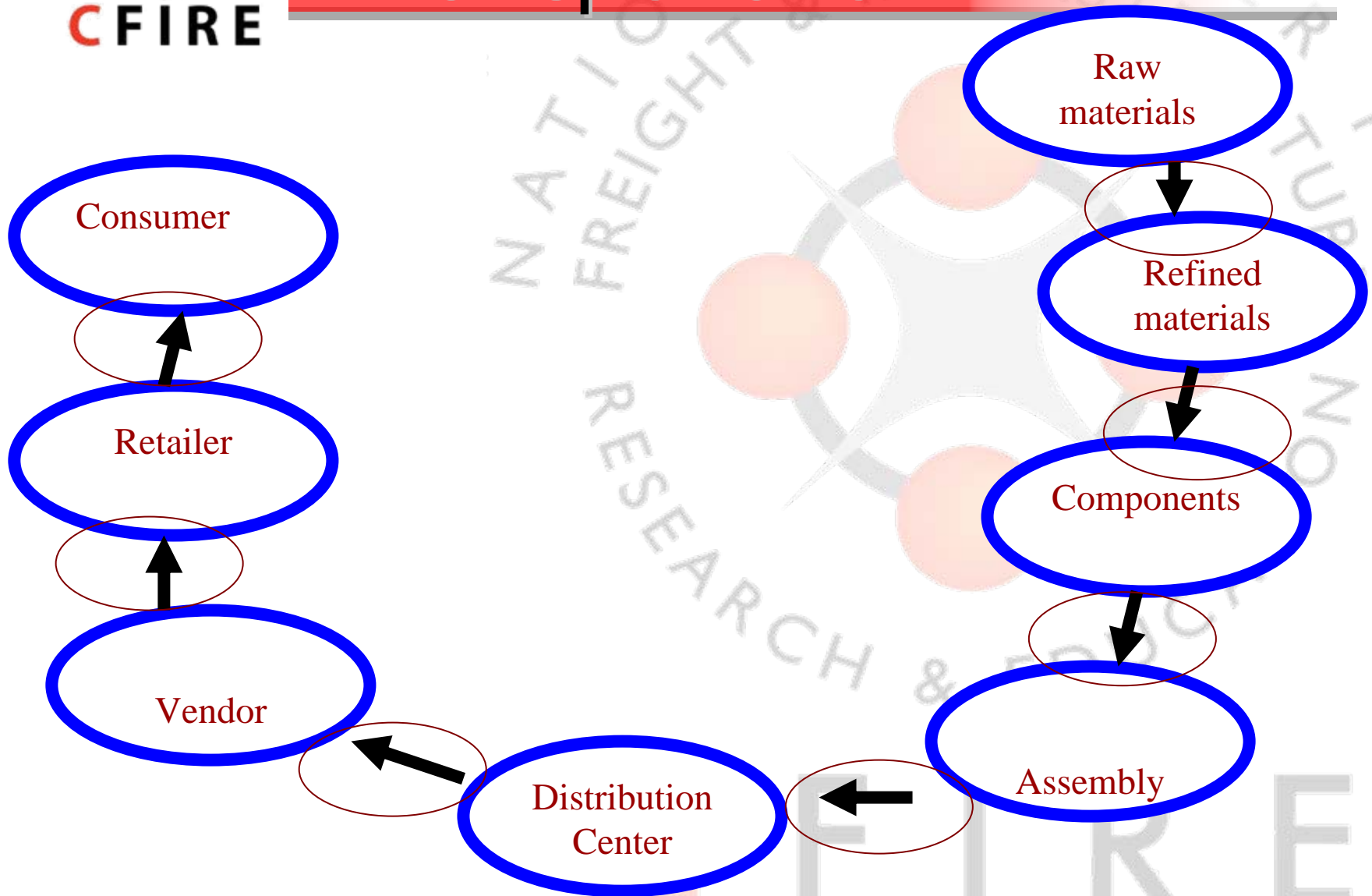
Dreamliner Assembly



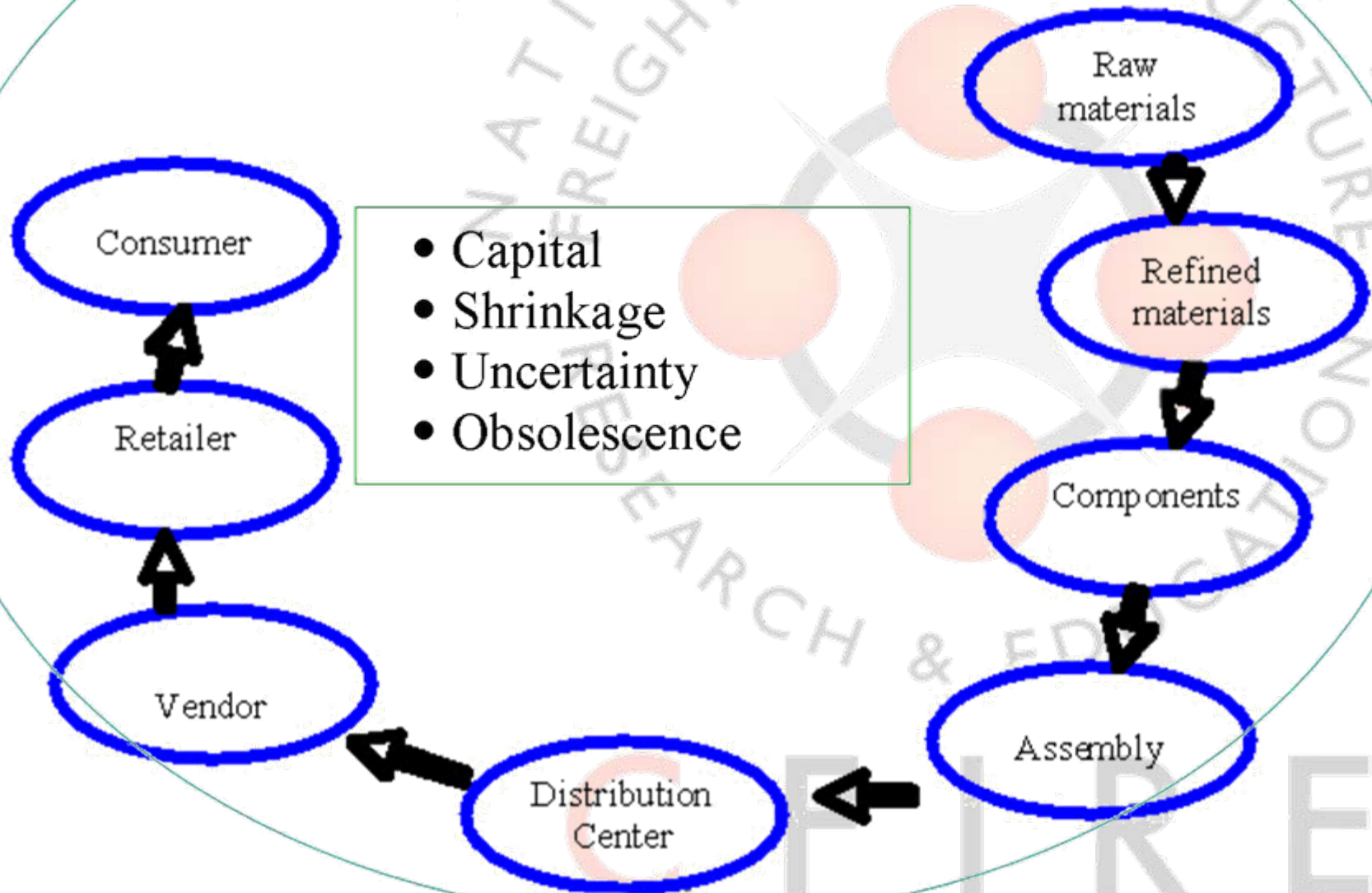
What are the Costs in the Chain?

- ❖ Extraction
- ❖ Manufacturing
- ❖ Transportation
- ❖ Inventory
- ❖ Administration
- ❖ Information technology

Transportation

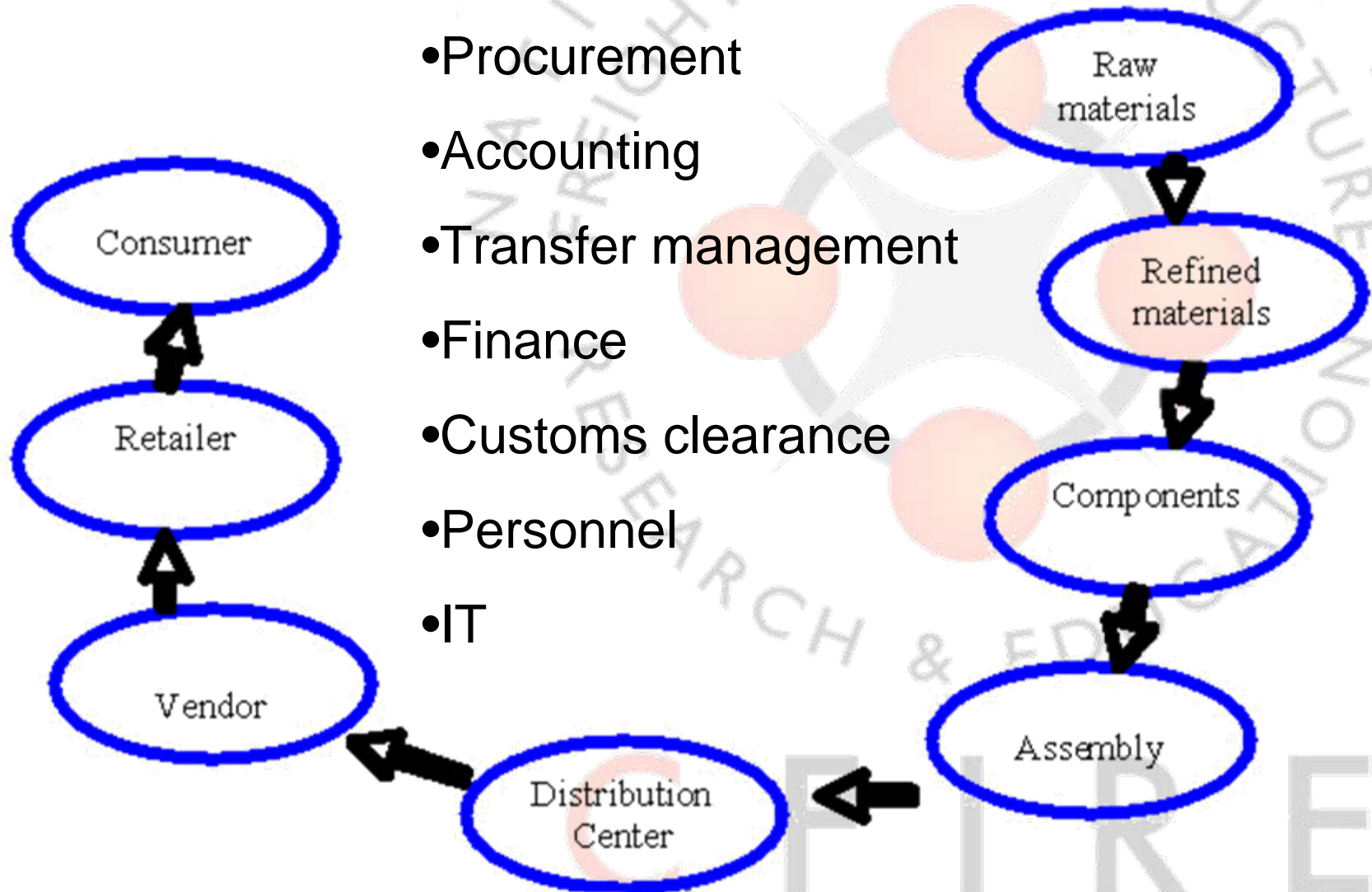


Inventory

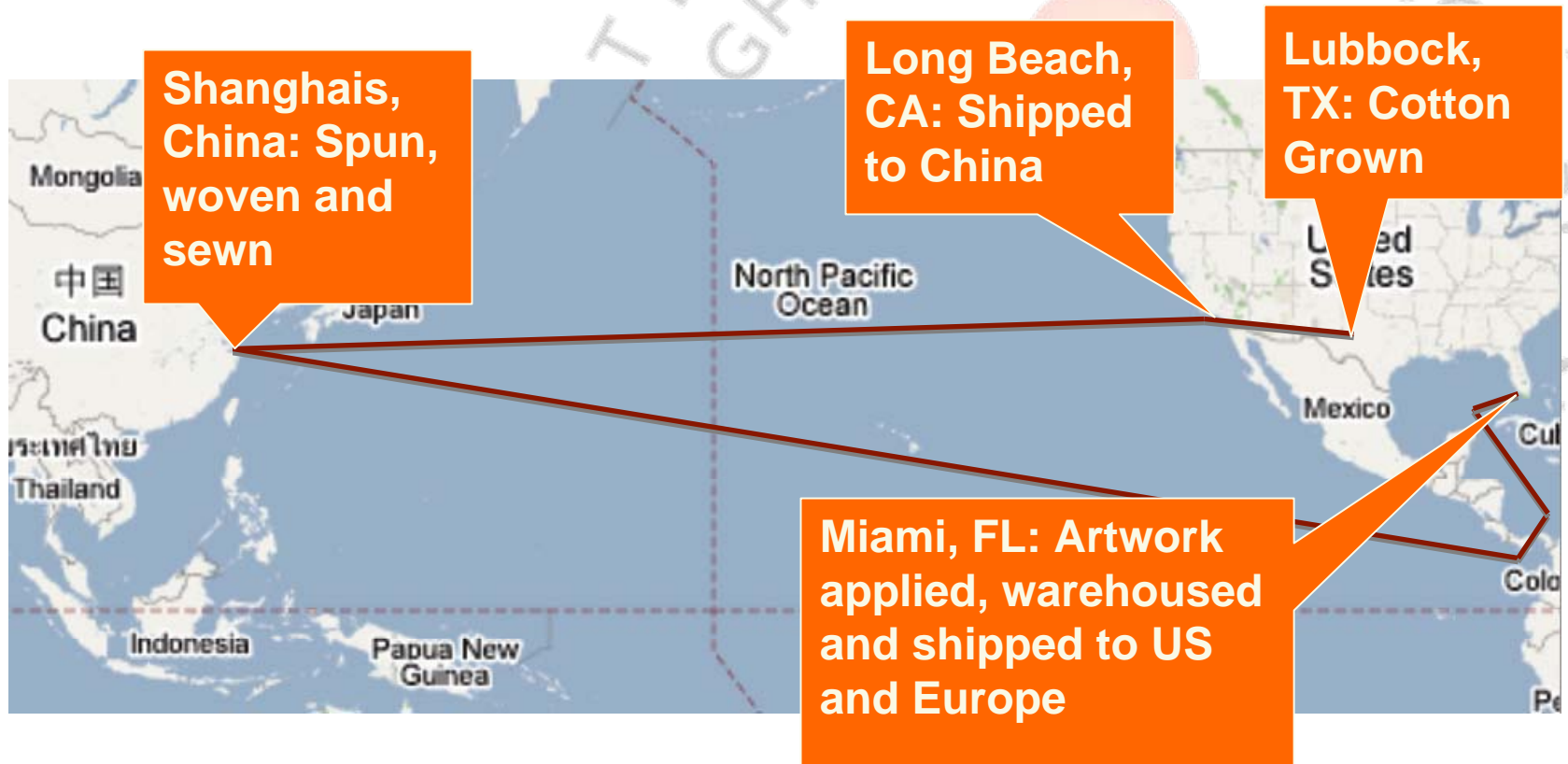


Administration

- Procurement
- Accounting
- Transfer management
- Finance
- Customs clearance
- Personnel
- IT



The T-Shirt





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International Competition

Cost of Soybeans Delivered to Rotterdam

	US	Brazil	Argentina	
<i>Cost Item</i> (\$/bu.)	Hinterland	Mato Grasso	Parana	SantaFe
Production	5.11	4.16	3.89	3.92
Internal transport & marketing	0.43	0.85	1.34	0.81
Cost at border	5.54	5.01	5.23	4.73
Freight to Rotterdam	0.38	0.57	0.57	0.49
Price at Rotterdam	5.92	5.58	5.80	5.22

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Total Cost Competition

	Case #1	Case #2	Case #3
Extraction	\$5.00	\$4.00	\$5.00
Manufacturing	10.00	\$6.00	\$12.00
Product cost	\$15.00	\$10.00	\$17.00
Transportation	\$5.00	\$7.00	\$3.00
Inventory	\$3.00	\$4.00	\$1.00
Administration	\$3.00	\$4.00	\$1.00
IT	\$2.00	\$3.00	\$1.00
Total cost	\$28.00	\$28.00	\$23.00