



# An Overview of Third Party Logistics Industry

Chrisoula Papadopoulou, PhD

*Centre for Transportation Studies  
Massachusetts Institute of Technology*

# Overview

- ☀ Introduction

- Definition of Third Party Logistics (TPL)
- A Brief History of TPL Evolution
- A Snapshot of the Current TPL Market

- ☀ Types of TPL Providers

- By Services
- By Operations
- By Contract Type

- ☀ Role of Third Party Logistics in Supply Chain & Company Performance

- Logistics Outsourcing
- Selection Criteria for TPL Selection
- TPL Relationships

- ☀ Current TPL Challenges

- ☀ Discussion & Questions



# TPL Definition

# Several TPL Definitions...

- ☀ “Third-party Logistics is simply the use of an outside company to perform all or part of the firm’s materials management and product distribution function.” (*Simchi-Levi, 2000*)
- ☀ “A relationship between a shipper and third party which, compared with the basic services, has more customized offerings, encompasses a broad number of service functions and is characterized by a long-term, more mutually beneficial relationship.”  
(*Murphy & Poist, 1998*)

# Definition of TPL

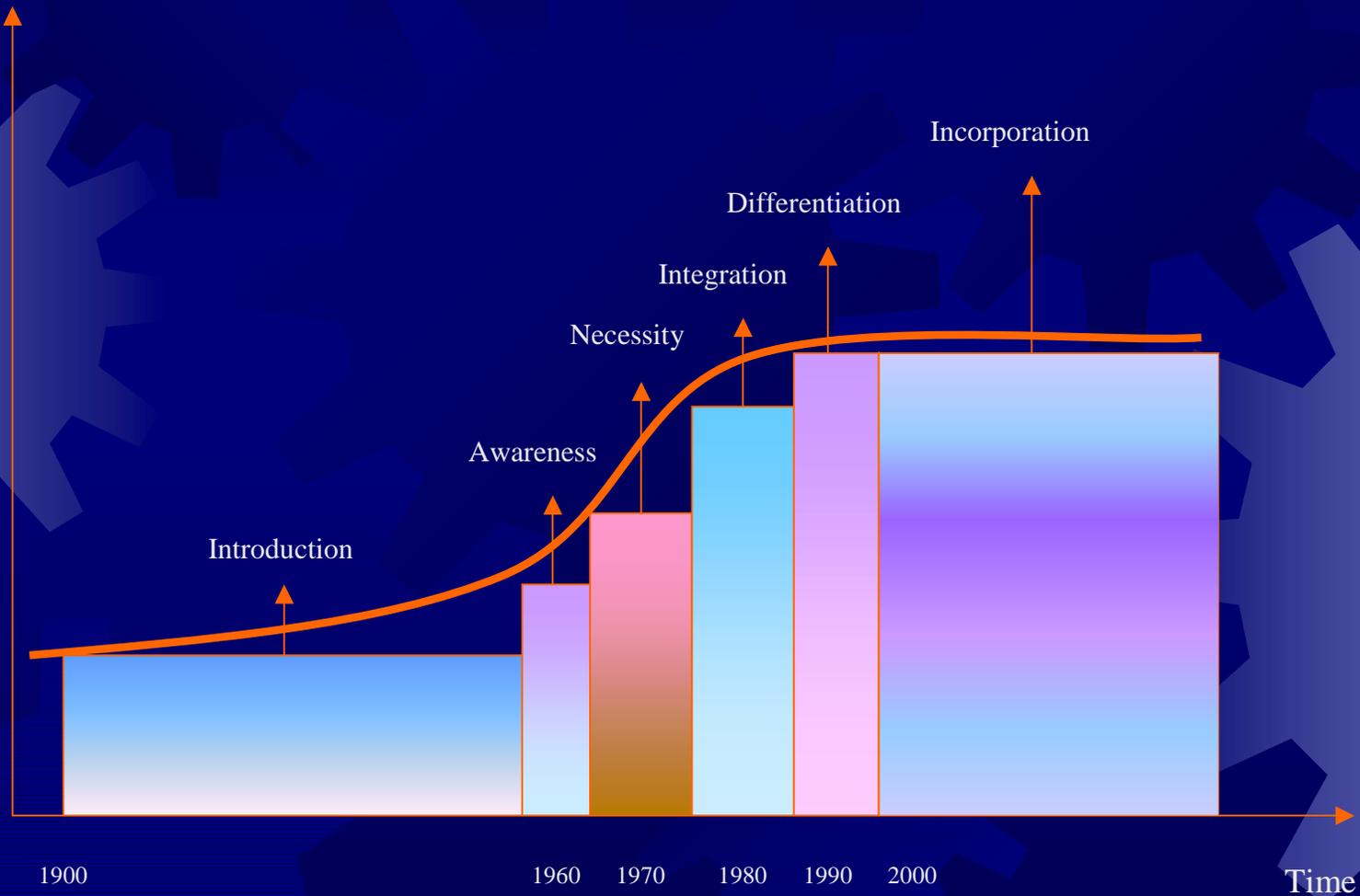
- ★ “Third party logistics providers are independent companies providing single or multiple logistics services to a purchasing company. Third party logistics providers, although they do not hold ownership of the product for distribution, are legally bound and responsible to perform the requested logistics activities of the purchasing company. The relationship between the two parties is long-term and beneficial.”

*(Papadopoulou, 2001)*

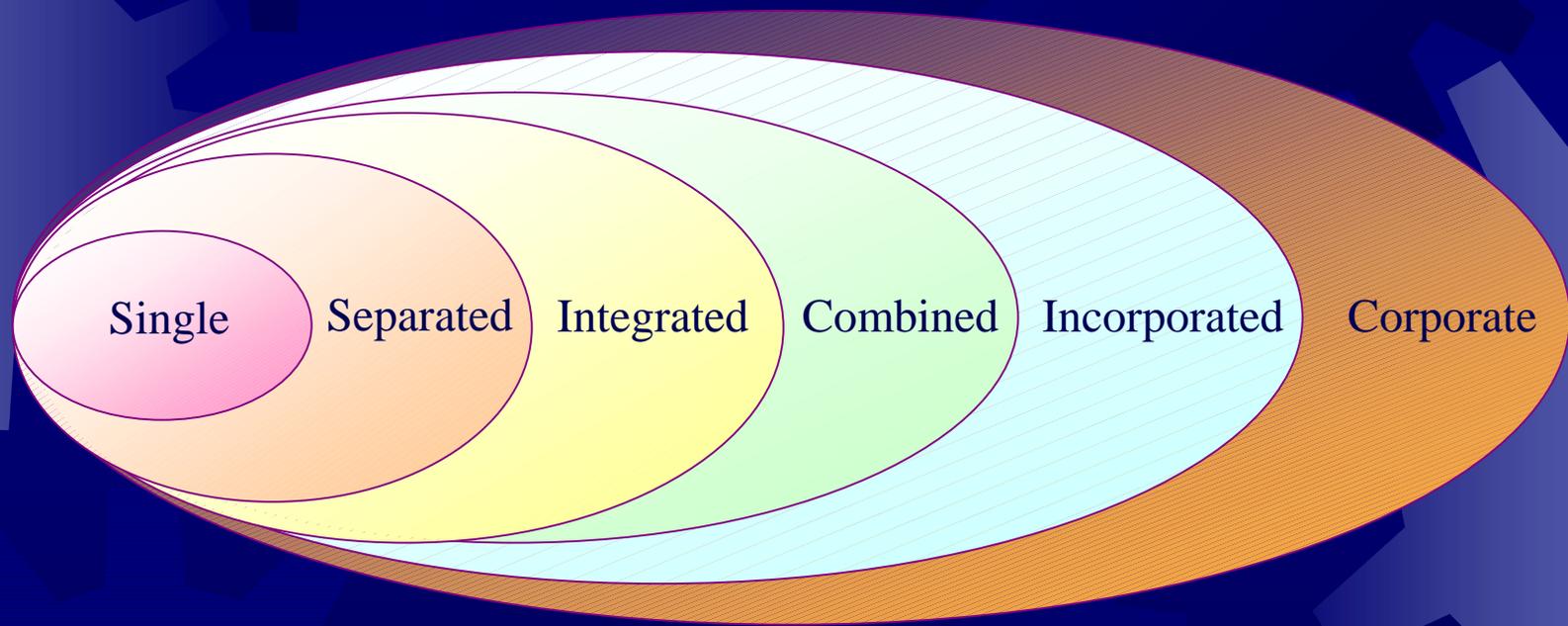


# A Brief History of TPL Evolution

# 6 Phases of TPL Evolution



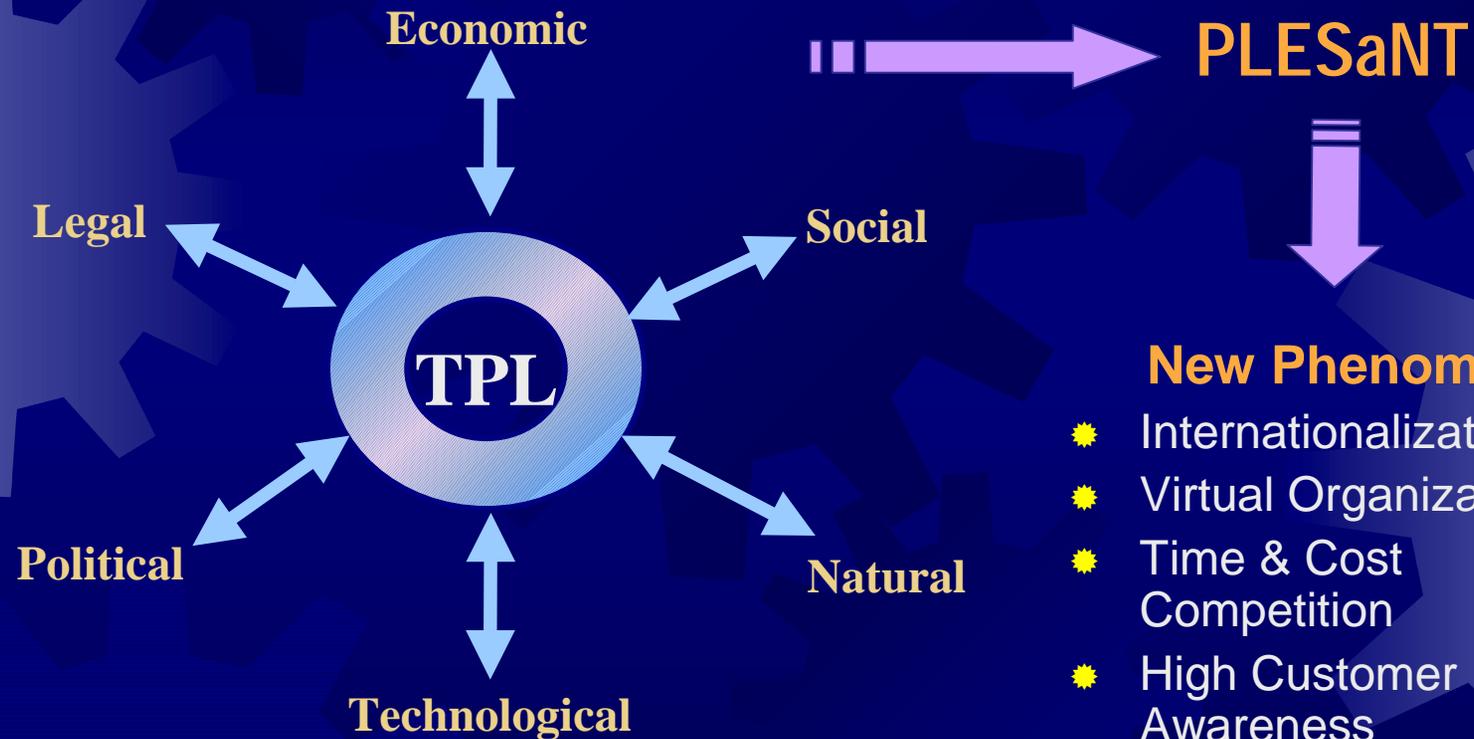
# Service Classification of TPL



# A Few Historical Facts...

Phase Period	Phase Name	Characteristic
Early 1900s - Late 1950s	Introductory Period	Single Services
Late 1950s - Mid 1960s	Awareness Period	Separate Services
Mid 1960s - Late 1970s	Necessity Period	Integrated Services
Late 1970s - Late 1980s	Integration Period	Combined Services
Late 1980s - Late 1990s	Differentiation Period	Incorporate Services
Late 1990s - Today	Corporate Period	Corporate Services

# Factors Influencing TPL Development



# The TPL Survival Guide

- ✦ Cost efficiency of services
  - Low but flexible costing
- ✦ Company control maintenance over the TPL services
  - Compatible information technology
- ✦ Operational efficiency
  - Technological development
- ✦ Specialization (service or industry)
  - Consistency & reliability of services
- ✦ Maintenance of long-term contracts



# Current TPL Market

# TPL Industry is Growing

Total logistics activities make up 15-20% of finished product costs  
(*International Warehouse Logistics Association*).

Inventory is expensive:  
U.S. companies spend \$4 billion a year on inventory interest, \$8 billion on taxes, obsolescence, depreciation and insurance, and \$2 billion on warehousing  
(*Cass Information Systems*).



TPL Market



Nearly 75 percent of U.S. manufacturers and suppliers are either using or considering a contract logistics service, and that figure is growing  
(*Ernst & Young LLP, 2000*)

About 60 percent of 123 companies surveyed using a third-party logistics firm said logistics was a core competency, and almost 80 percent thought that logistics represented a key competitive advantage  
(*Ernst & Young LLP, 2000*)

# Top TPL by Excellence

1. Ryder 
2. FedEx Supply Chain Services (tie)   
UPS Logistics 
3. Menlo Logistics 
4. C.H. Robinson 
5. Exel (tie)   
Schneider Logistics 
6. TLC 
7. Penske 
8. APL Logistics 
9. Danzas AEI (tie)   
Hub Group 
10. TNT Logistics (tie)   
USCO Logistics   
EGL Eagle Global Logistics 

*Inbound Logistics, 2001*

# Top 30 TPL by Profitability & Revenues (1998)

Top 30 3PLs in 1998 (Estimated Profitability and Revenues)			
3PL	Profitability Ratios	Net Revenue (\$millions)	Net Income (\$millions)
AEI	89.6	\$490	\$51
CH Robinson	82.4	\$237	\$42
Caliber	97	\$310	\$9
Cat Logistics	91.5	\$264	\$22
Circle	91.4	\$281	\$24
CTI	95.6	\$337	\$15
DSC	97.7	\$215	\$5
Exel	98.2	\$441	\$8
Expeditors	89.7	\$303	\$31
FedEx	94.3	\$104	\$6
Fritz	97.9	\$558	\$12
GATX	100.5	\$246	(\$1)
Hunt Dedicated	95.9	\$290	\$12
Hunt Logistics	61.6	\$16	\$6
Menlo	99.4	\$248	\$2
MS Dedicated	95.1	\$35	\$2
MS Logistics	90.9	\$6	\$1
Penske Logistics	96	\$600	\$24
Rollins	97.7	\$130	\$3
Ryder Logistics	96.8	\$588	\$12
Ryder Dedicated	98.1	\$851	\$20
Schneider Dedicated	93	\$740	\$52
Schneider Logistics	90.0	\$170	\$17
Swift	90	\$118	\$12
Tibbett & Britten	98	\$572	\$12
UPS WW Logistics	93	\$307	\$21
USF Logistics	96.3	\$125	\$5
Werner	90	\$140	\$14
<b>Total</b>	<b>95.0S</b>	<b>\$8,721</b>	<b>\$439</b>

*Armstrong & Associates, 2001*

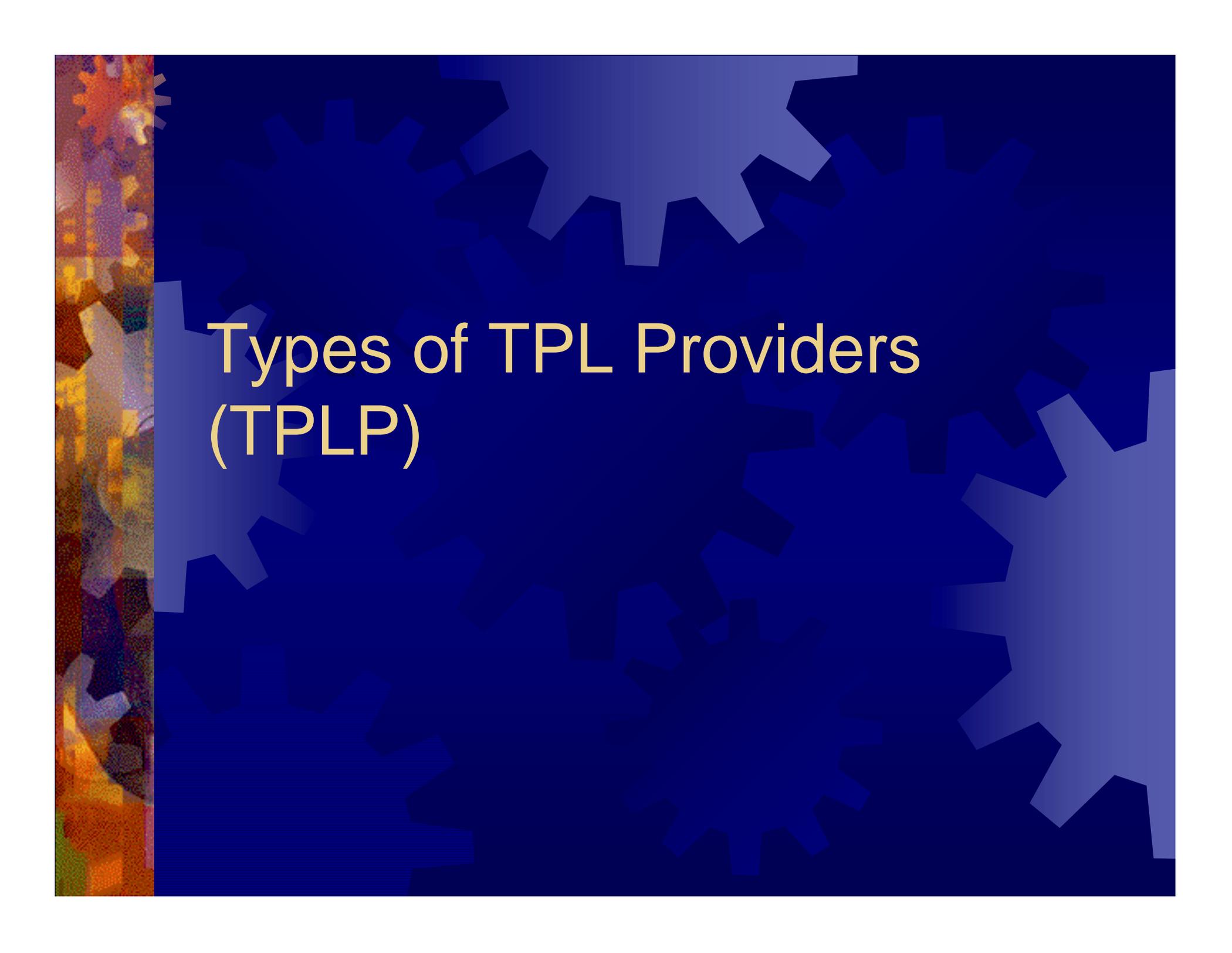
# Top 40 Largest TPL per Revenue (2000)

Largest 40 Providers		
Provider	(\$m) Net Logistics Revenue	(\$m) Gross Logistics Revenue
Danzas/AEI	3,624	11,180
Ryder	1,728	2,150
Exel Americas	1,550	2,287
Penske Logistics	1,060	2,212
Schneider Dedicated	1,035	1,035
NorthAmerican	845	845
UPS Logistics	815	1,021
T & B	766	766
EGL	720	1,861
APL	714	782
Americold	650	650
Fritz	619	1,613
TNT NA	602	720
Expeditors	548	1,695
USF Logistics	539	539
JB Hunt Dedicated	479	479
Menlo	445	891
C. H. Robinson	419	2,882
Cat Logistics	363	363
FedEx	350	545
Ruan	350	450
BAX	260	403
IM-Logistics	243	30,000
Airborne	240	240
USCO	235	235
DSC	213	213
GENCO	205	205
Schneider Logistics	205	819
Werner Dedicated	204	375
Hub	173	1,384
Swift	167	167
Kenco	145	184
Logistics Insights	134	342
NDC	129	129
Standard	122	122
Cardinal	118	130
TLC	110	130
Pacer	93	504
CCW	60	60
NFI	60	100

*Armstrong & Associates, 2001*

# Which TPL is the Oldest?

- ★ APL 1846 (but named APL 1953)
- ★ C.H.Robinson Worldwide 1905
- ★ UPS 1907
- ★ Caterpillar 1915
- ★ Ryder 1933
- ★ Tibbett & Britten (UK) 1958
- ★ Penske 1969
- ★ FedEx 1971 (Roberts Cartage 1947 Ohio & Viking Freight 1966 Cal)
- ★ EGL 1984
- ★ Exel Logistics (UK) 1989 (NFCo 1982 NFC acquires Merchants Home Delivery & Dauphin Distribution Services)
- ★ Menlo Worldwide Logistics 1990 by CNF Inc.



# Types of TPL Providers (TPLP)

# Classification of TPLP

## ☀ Service

- Simple service
- Combined service
- Added value services

## ☀ Industry

## ☀ Contract

- Public
- Private

# TPL/Service Examples

- **Warehousing**
  - Exel
  - Tibbet & Britten
  - USCO
- **Trucking**
  - Frans Maas
  - J.B. Hunt
  - Logix
  - Penske Logistics (Leaseway)
  - Ryder Integrated Logistics
  - Schneider
- **Ocean Carriers**
  - APL
  - Nedlloyd
- **Air Freight**
  - DHL
  - FedEx LEC&C / Caliber
  - UPS - WWL
- **Industry**
  - Caterpillar Logistics
  - Fluor Daniel
  - GATX
  - W.W. Grainger
- **Logistics Management**
  - Menlo
  - TNT Logistics
- **Value Added Logistics Services**
  - C.H. Robinson
  - Danzas
  - Fritz
  - Hub Group
  - Kuehne & Nagel
  - Schenker
- **Logistics Consulting**
  - Andersen Consulting
  - GE Capital

# Current Use of TPL by Industry

Industry

Percentage of 3PL use in different industries

Computer

82.2

Consumer

75.9

Retail

71.1

Chemical

61.4

Medical

56.2

Auto

53.8

*Modern Materials Handling, 2000*

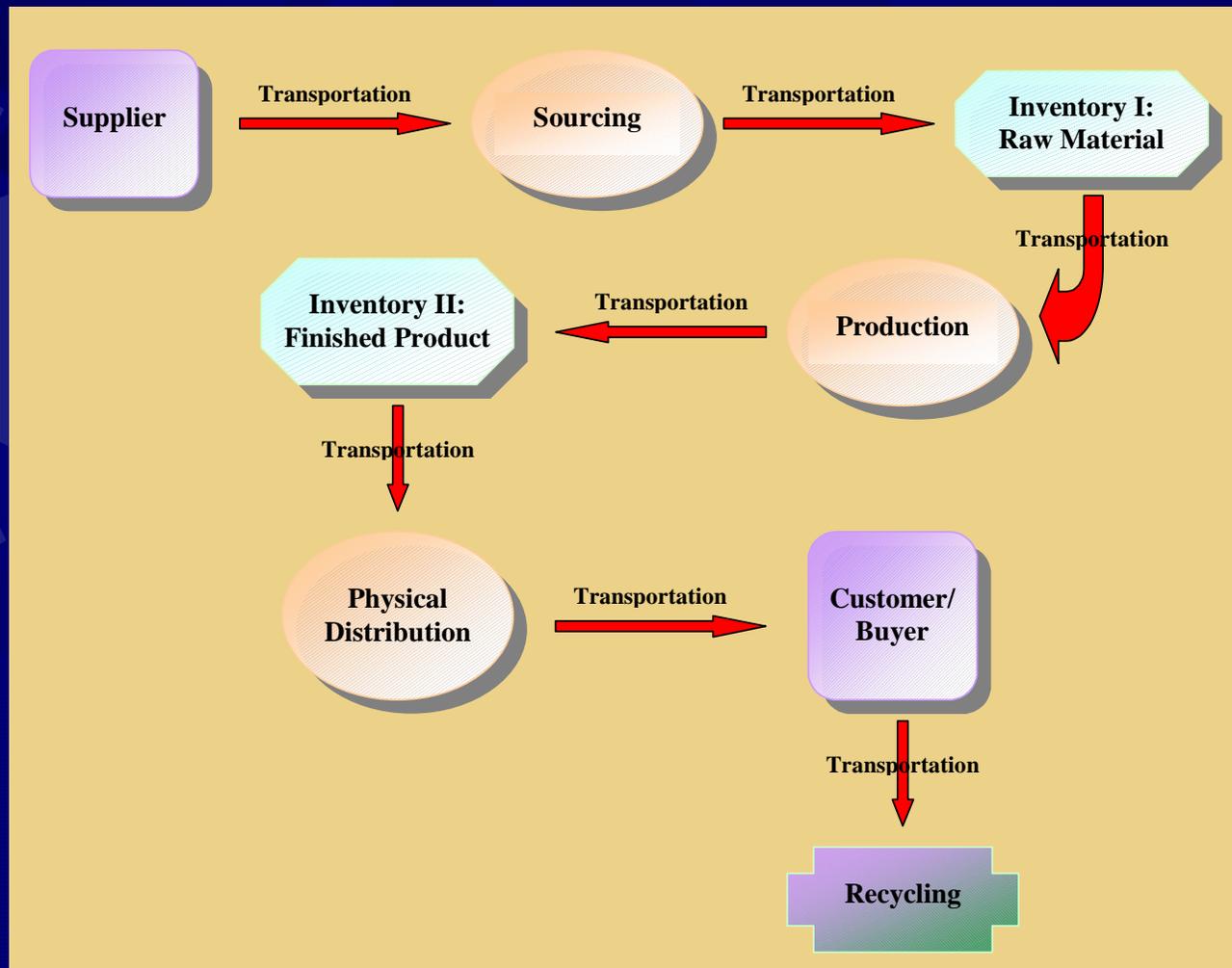
# Classification by Contract

- ☀ Public Carriers
  - Common carriers
  - Contract carriers
  - Exempt carriers
- ☀ Private carriers



# Role of TPL in Supply Chain & Company Performance

# Logistics Chain



# TPL Relations between Buyer-Supplier



# The Participation of TPL in the Supply Chain of A Product



➤ What is the role of third party logistics providers in this virtual supply chain?

➤ Can you guess how many third party logistics providers participate in the manufacture of cotton trousers?





# Some Issues to Think About...

- ✦ How much logistical knowledge and coordination do you estimate that is needed?
- ✦ At which stages of the supply chain of the product would you recommend logistics outsourcing and why? What would be the criteria?
- ✦ How the current events would affect the logistics flow of the products? What would be the issues raised?

# The Supply Chain of TPL...

## Suppliers

Resource Suppliers  
 Asset Based  
 Management Based  
 Integrated Service

Product Suppliers  
 Spare Parts  
 Final Product

## TPL Provider

## Buyers



Information Technology



Technology & Material Handling



Transportation Carriers



Warehousing & Property Brokerage



Human Resources



Banking



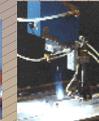
Exporting Arrangements



Legal Administration



Manufacturer I (Spare Parts)



Wholesaler



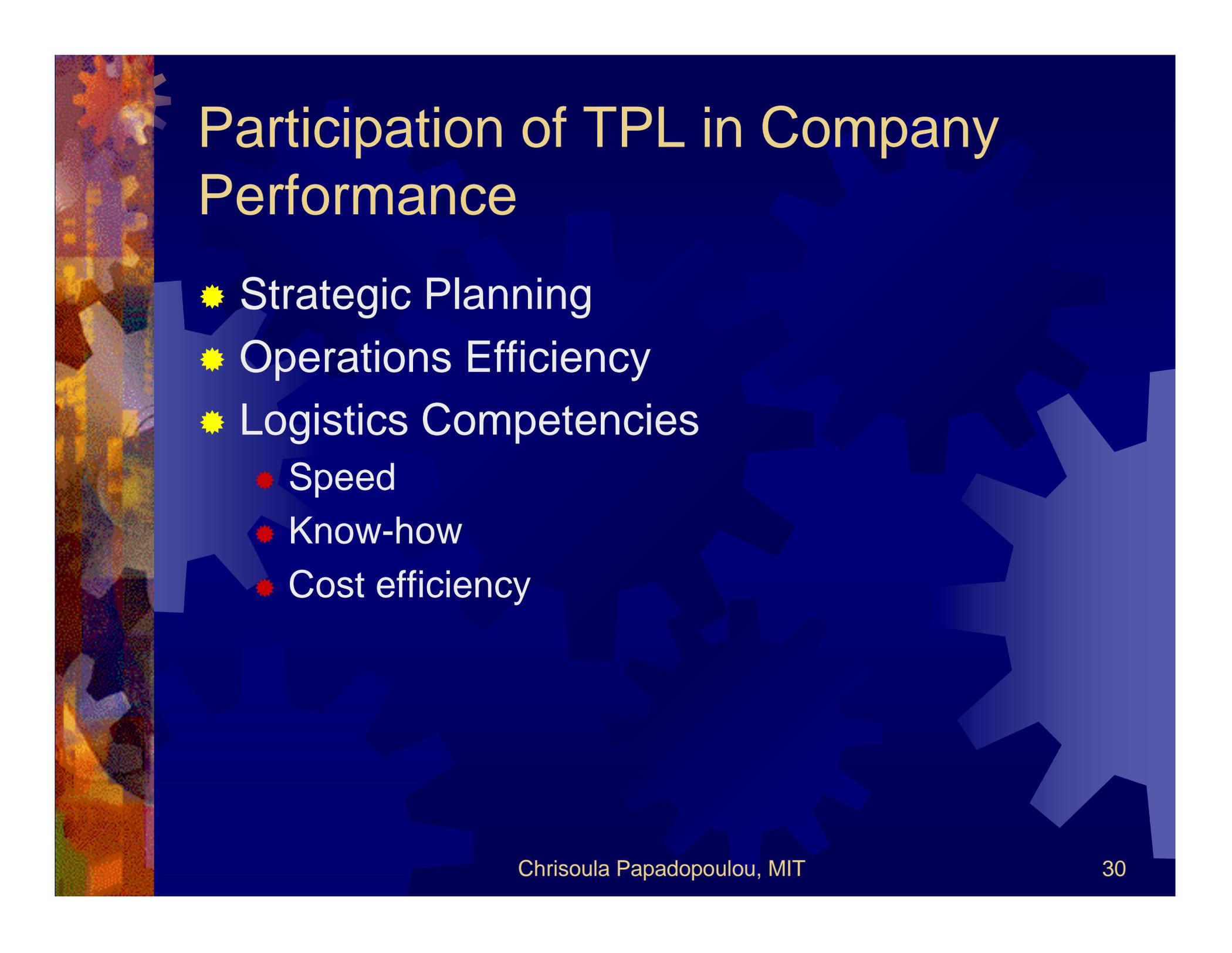
Manufacturer II



Dealer or Intermediate



Final Customer



# Participation of TPL in Company Performance

- ✦ Strategic Planning
- ✦ Operations Efficiency
- ✦ Logistics Competencies
  - ✦ Speed
  - ✦ Know-how
  - ✦ Cost efficiency



# Logistics Outsourcing

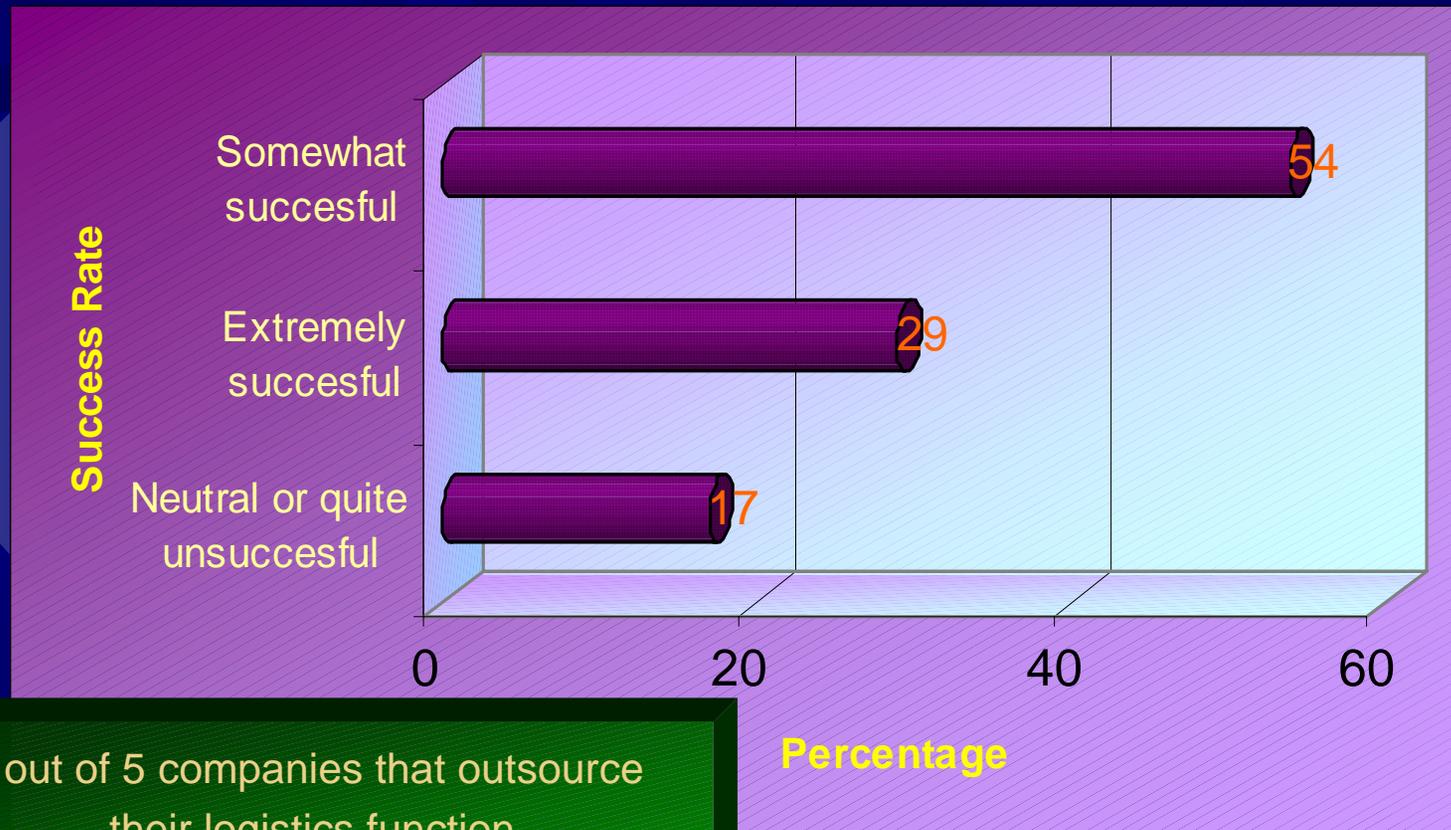
# Definition

- ✦ Outsourcing is the contracting of the management & operational control of logistics functions to unrelated third party companies.
- ✦ Companies providing contractual Logistics services are referred to as Third Party Logistics Providers (TPLP).

# Why Outsourcing?

- ✦ To acquire an expertise, talent and resources that don't exist internally, based on
  - competitive advantage
  - special resources
  - special knowledge
- ✦ To let the company focus on its core competencies
- ✦ To enhance operations and customer service
- ✦ To improve its processes by
  - cutting costs and avoiding capital expenditures
  - passing up labor problems
  - shun costs of regulations

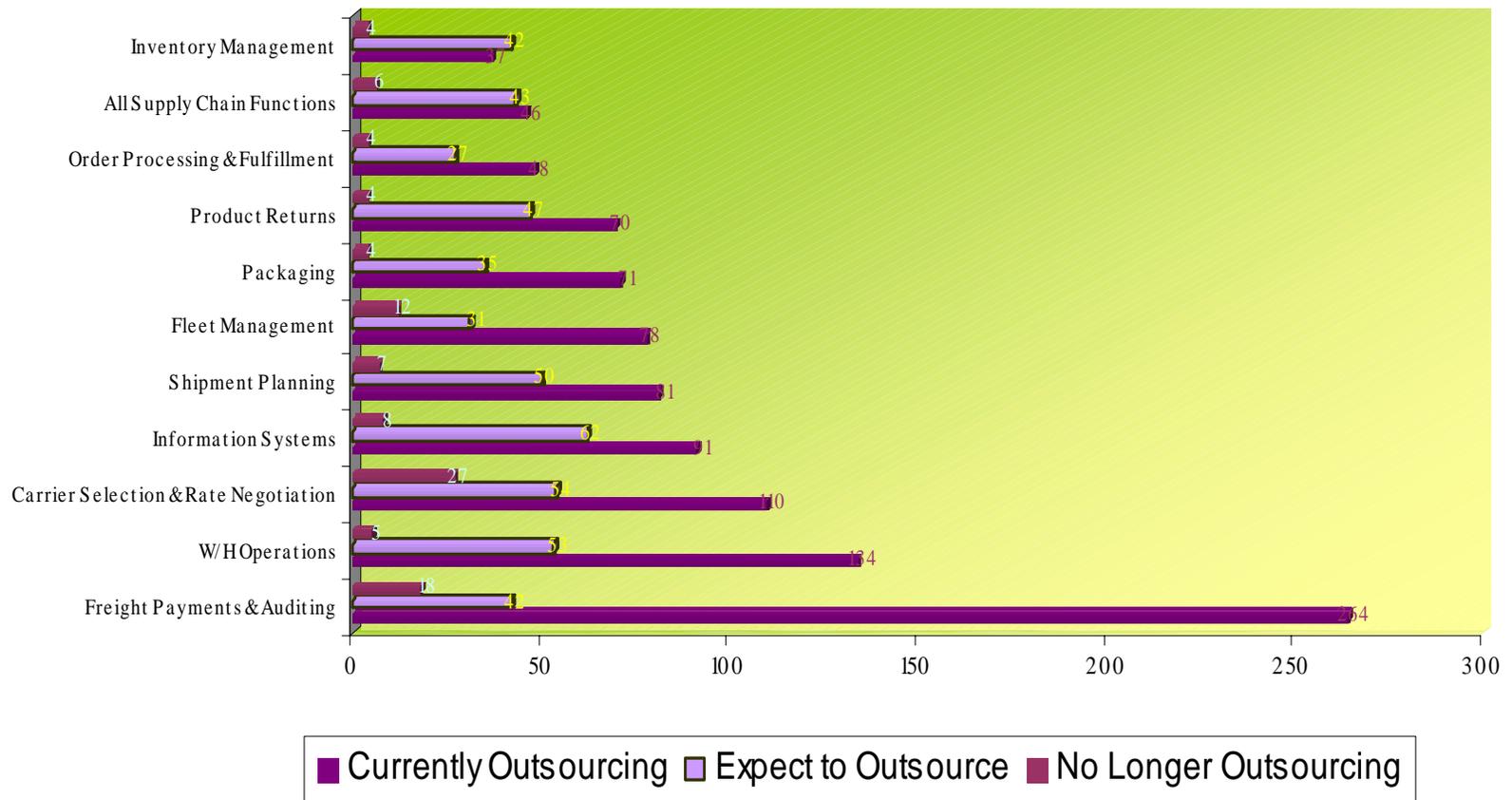
# Customer Evaluation of Outsourcing



4 out of 5 companies that outsource their logistics function are satisfied with their TPL performance.

*Key Market/Key Customer Study, 1997*

# Outsourcing Trends in US



# What to Consider (1)

## ✦ Purpose & Scope

- Level of outsourcing
- Type of operations for outsourcing
- Specifications of company logistics operations
- Fixed and variable of costs of the operation to be outsourced
- Strengths and limitations
- Customers requirements of each of their own supply chain specifications
- Impact on customer service
- Implications of potential outsourcing problems on the company service
- Company's expectations from the TPL
- Company and TPL compatibility level

# What to Consider (2)

## ✦ **Operational Issues**

- Management responsibility of the TPL introduction
- Transition outsourcing analysis
- Impact of potential failure on business and my customers

## ✦ **Potential Barriers & Issues**

- Open discussions on TPL past experience on the specific industry or services to be outsourced
- Current customer evaluation and issues that have been encountered in the past while setting up the TPL outsourcing

# What to Consider (3)

## ✦ Financial & Time Implications

- Cost requirements
- Operations requirements
- Required time to set up and have running properly the outsourcing operations

## ✦ Requirements & Processes

- Feasibility of making necessary changes and/or requiring new technology
- Level of compatibility

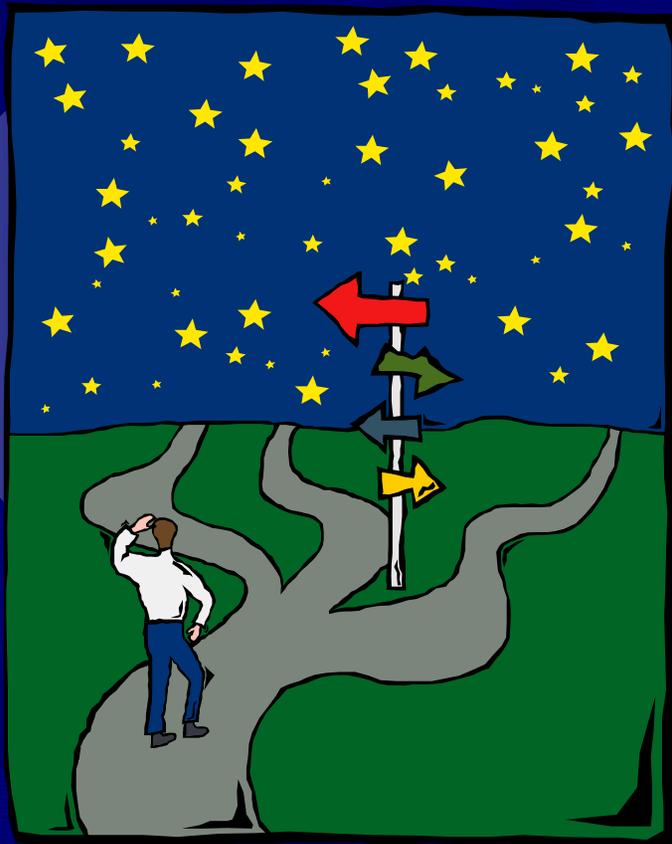
## ✦ Potential Benefits

- Why do you want my business?
- Why should I select you?



# Selection Criteria for TPL

# TPL Selection



- What is the best way to choose a third party logistics provider?

It **DEPENDS** on the **COMPANY SITUATION!!!**

# Some Selection Criteria (1)

- ☀ Technology, quality, expertise, leverage
  - Is this function or business their core competency?
- ☀ Responsiveness, delivery, cost, price
  - Can this firm improve our performance (e.g., customer support &/or our bottom line)?
- ☀ Reputation, references, track record
  - Is this firm already expertly performing this function for other firms?
- ☀ Balance sheet, access to capital, resources
  - Does this firm have the wherewithal & drive to invest in itself & the partnership over the long term?

# Some Selection Criteria (2)

- ✦ Corporate culture fit, prospects for partnership, commitment & flexibility
  - Can we work comfortably & smoothly with this firm to achieve our joint strategic objectives?
- ✦ Reputation & recommendations
  - Customer level satisfaction
  - Customer turnover rate
- ✦ Area of service coverage
- ✦ Added value services
- ✦ Order processing
- ✦ Financial stability and punctuality



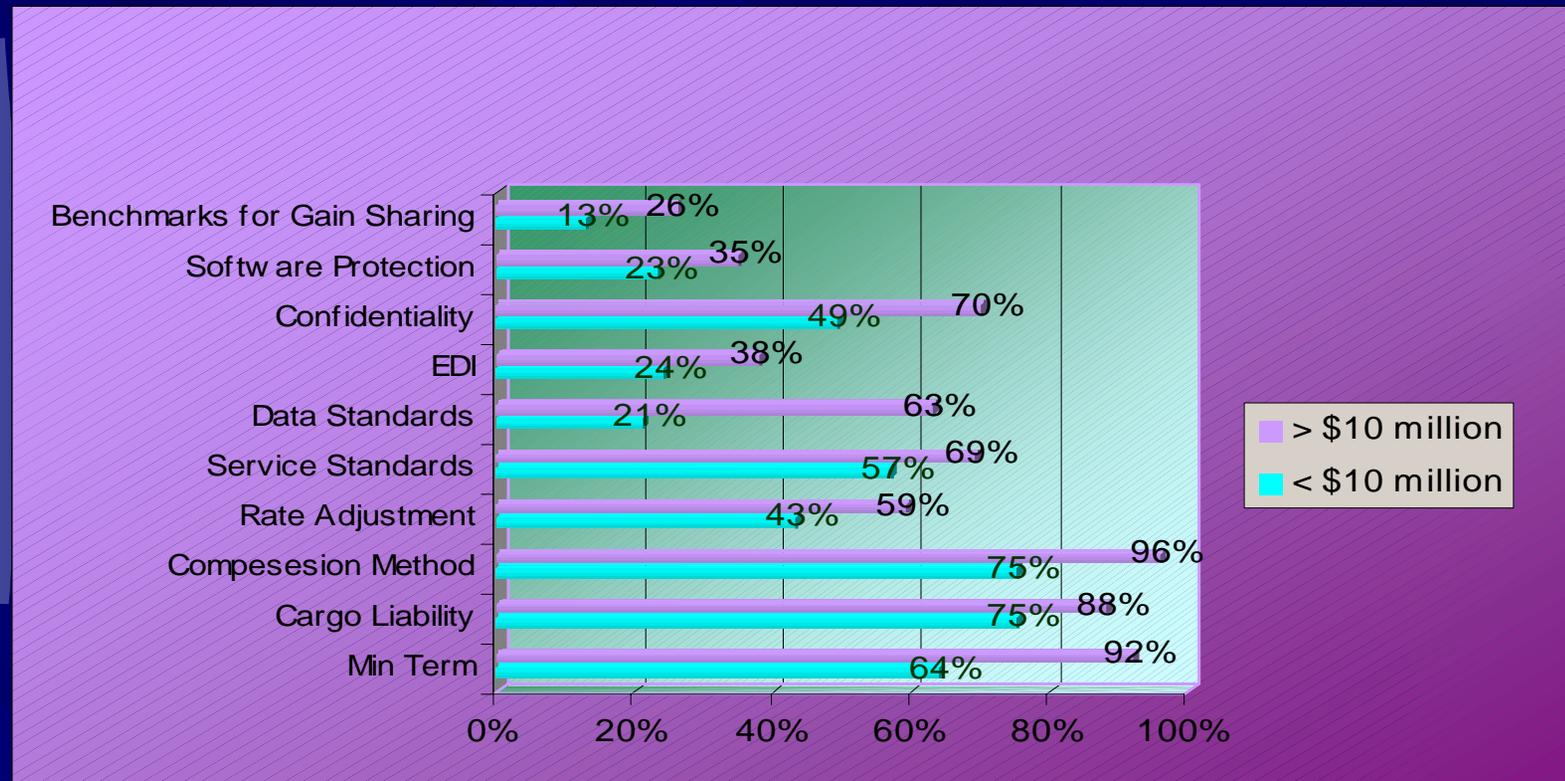
# Successful TPL Contracts

# Logistics Contracts

- ✦ Scope of services – Removing the Barriers
  - Must consider both the functions (i.e. W/H) and the geographical region involved (i.e.: North America)
  - One technique is to divide the total scope into function/region pairs
- ✦ Supply chain alignment
- ✦ Business & provider communication alignment
- ✦ Level of data sharing
- ✦ International issues & contract barriers

*Berzon, M., 1999*

# Contract Issues/Revenue



Total participants = 110 (40% shippers, 60% TPL), with 40% < \$10 million, 25% < \$30 million revenues, and 44% < 3 contracts/year, 21% >10 contracts/year

*Spira, R. 1999*

# Successful Contracts (1)

## ✦ Focus on performance and value

- employ specific measures
- specify performance objectives based on the measure (the what - not the how) & value

## ✦ Emphasize flexibility

- written cooperative to balance risk
- contain contract adjustment mechanisms
- often provide rewards & penalties tied to performance
- incentive contracts

# Successful Contracts (2)

Also look at...

- ✦ Fair allocation of revenue and costs
- ✦ Open flow of information
- ✦ Long-term view
- ✦ Contacts on several levels of the organisation  
i.e. from transactions based to partnership business arrangement

# A Checklist for Logistics Contracts (1)

- ☀ Financial Strength
  - Total annual revenues
  - Annual revenues in contract
  - Logistics services
  - Total assets
  - Assets employed contract
  - Logistics services
  - Financial rating
- ☀ Business experience
  - Years providing contract logistic services
  - Depth of management experience
  - Strength of operating management
  - Quality of workforce
  - Labor/management relations
- ☀ Business development
  - Corporate commitment to contract logistics
  - Overall corporate strategy
- Leading accounts
- Trends in business development
- Accounts lost
- ☀ Support services
  - Can human resources be phased in & out?
  - Is the insurance program adequate?
  - Does the safety program support the insurance strategy?
  - Are information systems robust?
  - Are communications state of the art?
- ☀ Business arrangements
  - Open book cost disclosure
  - Incentives for performance
  - Recapture of excess profits
  - Provisions for replacement
  - Independent financial audits

*Delaney, R., Cass Logistics, 1996*

# TPL Relationship Management



# Secrets to Success

- ✦ Communications
- ✦ Flexibility
- ✦ Innovation
- ✦ Integrity
- ✦ Personal service
- ✦ Productivity
- ✦ Relationship management
- ✦ Responsiveness
- ✦ Technical competence
- ✦ Value

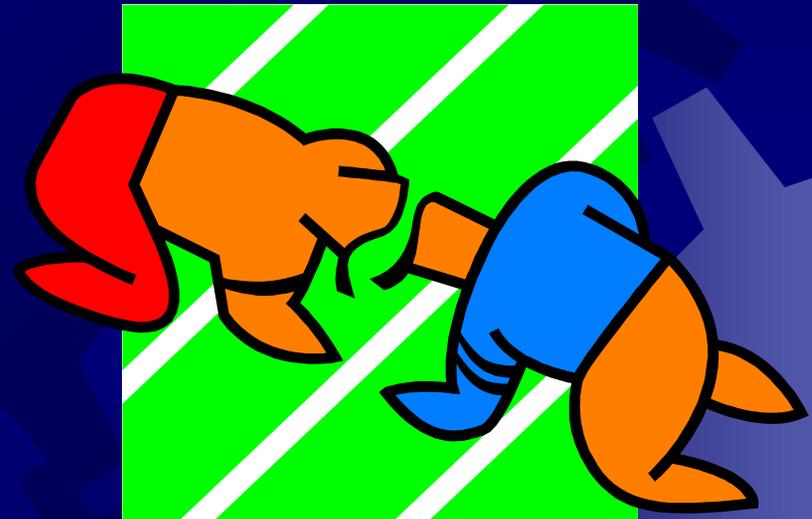
*Michael F. Corbett & Associates*



# Current TPL Challenges

# Current TPL Challenges

- ✦ Industrial Dynamics
- ✦ Logistics Flexibility
- ✦ Technological Advancements
- ✦ Anticipation of Future Trends



# Looking for the Future....



## So the bottom line is:

- Real-Time and Real-Cost Competition
- Customer Service
- Vision & Diversification

# Discussion & Questions

