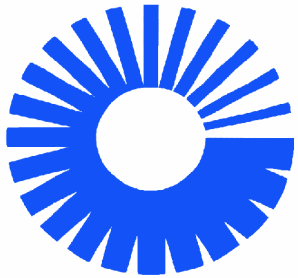


United Technologies

The Competitive Supply Chain
The Value of Integration

K. L. Brittan

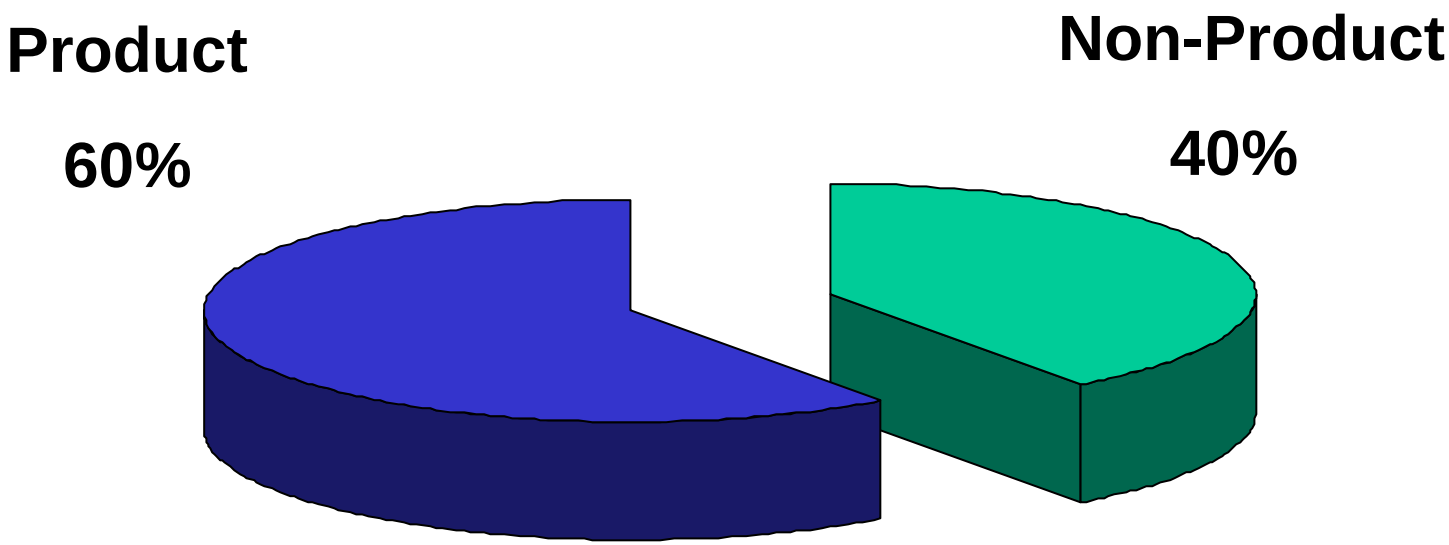
November 2002

United Technologies

UTC Fuel Cells
A United Technologies Company

Hamilton Sundstrand
A United Technologies Company

UTC TOTAL PURCHASES



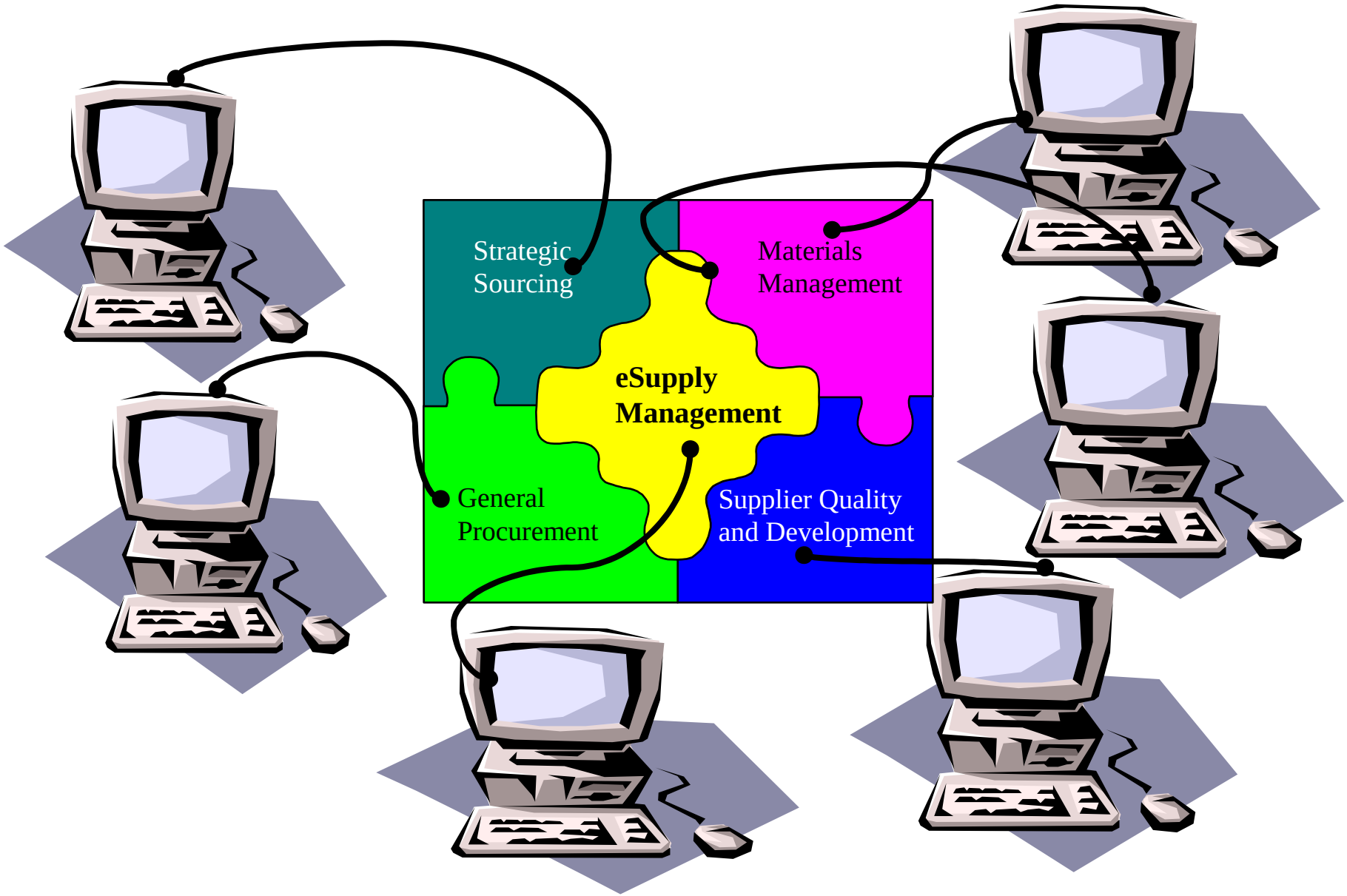
$ 14.5 billion

1997 - 2002

- Master the data problem
- Transform the purchasing function
- Communicate & share knowledge
- Save $750 million
- Velocity

TECHNOLOGY

SUPPLY MANAGEMENT & TECHNOLOGY



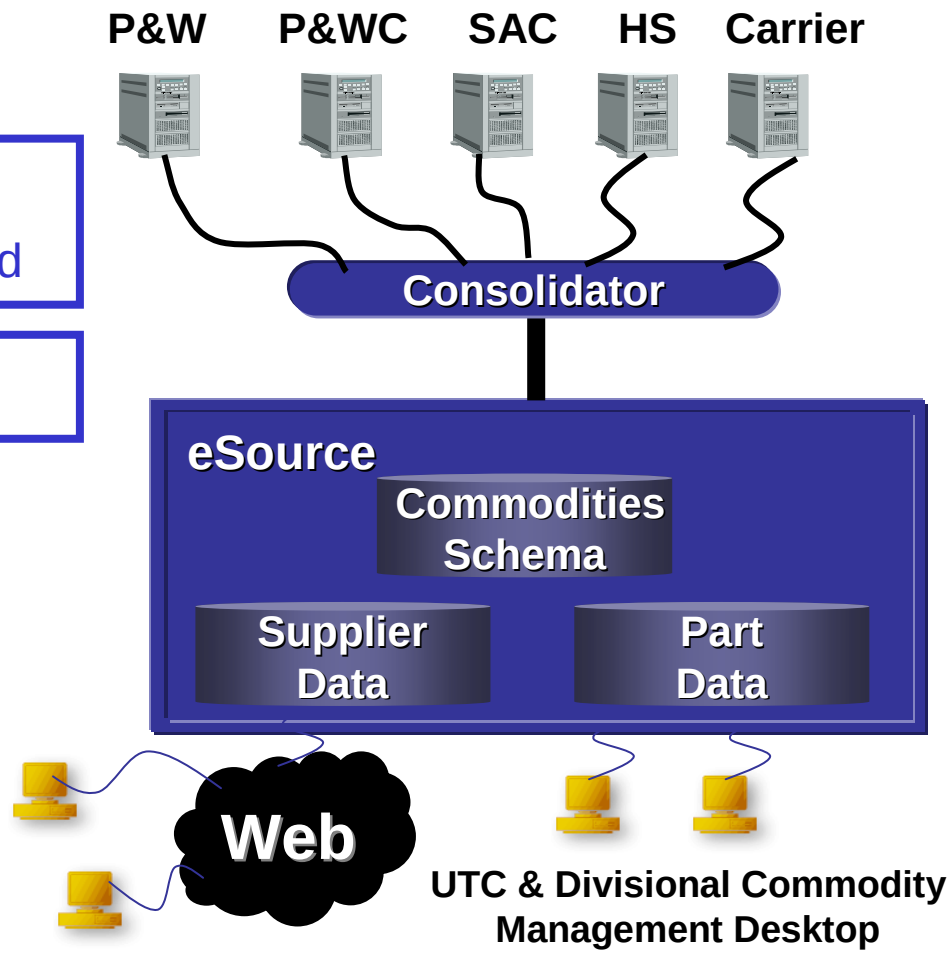
Supply Management & IT

PRODUCT DATA SOLUTION - eSOURCE

16,616 Sites Identified

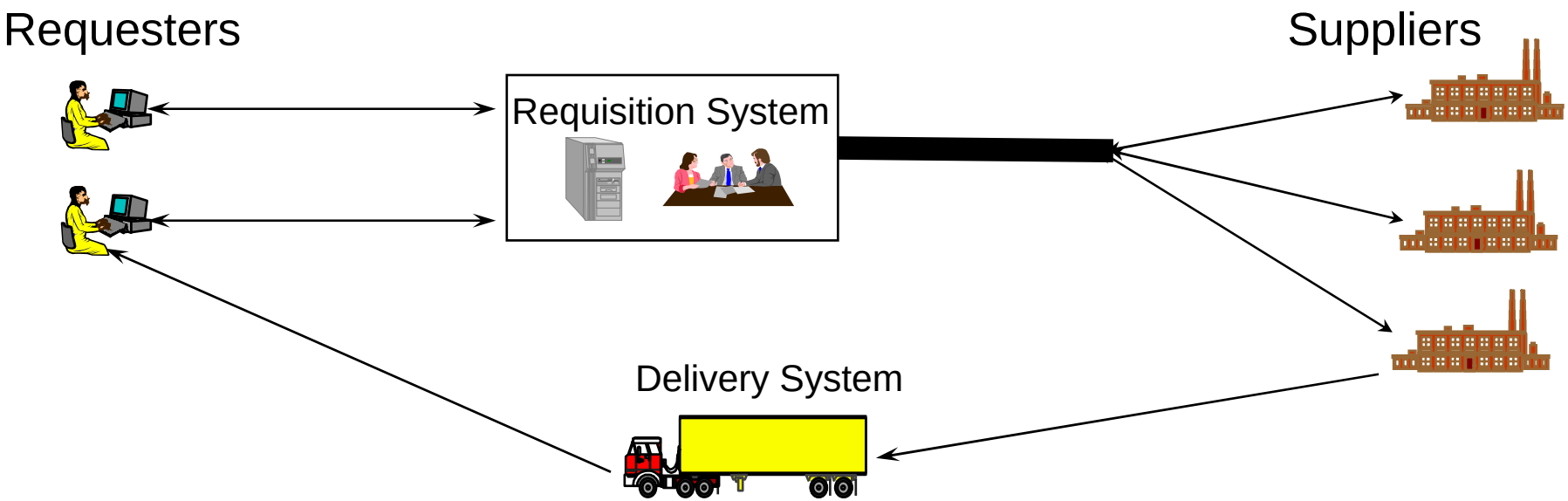
853,000 Part Numbers Identified

Total P/N's >2 million



GENERAL PROCUREMENT - AZURE (IBM)

Volume **$ 300M in 2000**
$ 600M in 2001
$ 1000M in 2002
$ 1500M in 2003



Supply Management & Finance

ACHIEVED $1B SAVINGS

Consistent Approach

A HISTORY OF SUCCESS WITH FreeMarkets

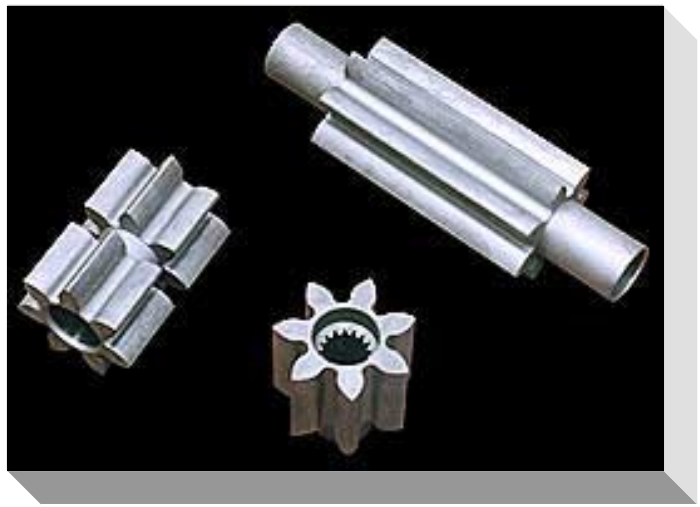
Over $2.0 Billion in Cumulative Bid Volume

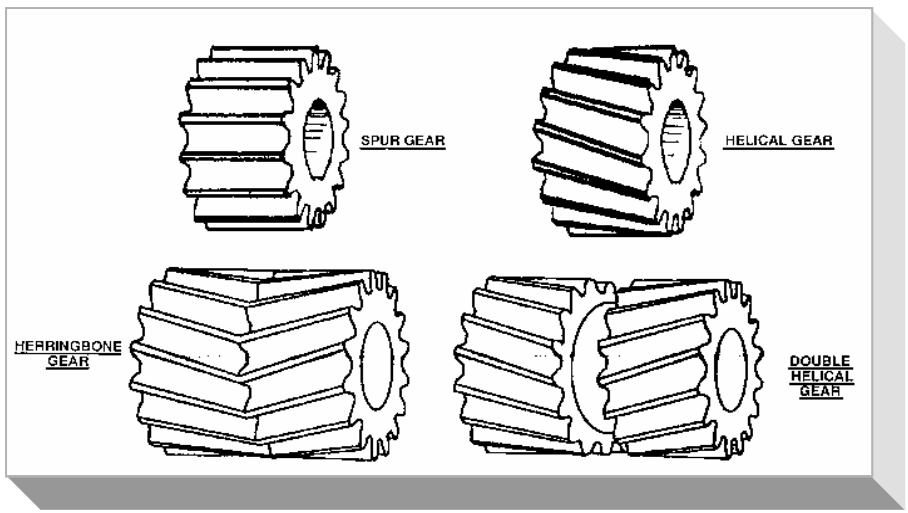
Over $374 Million in Identified Savings

Over 3,000 Individual Auctions Conducted

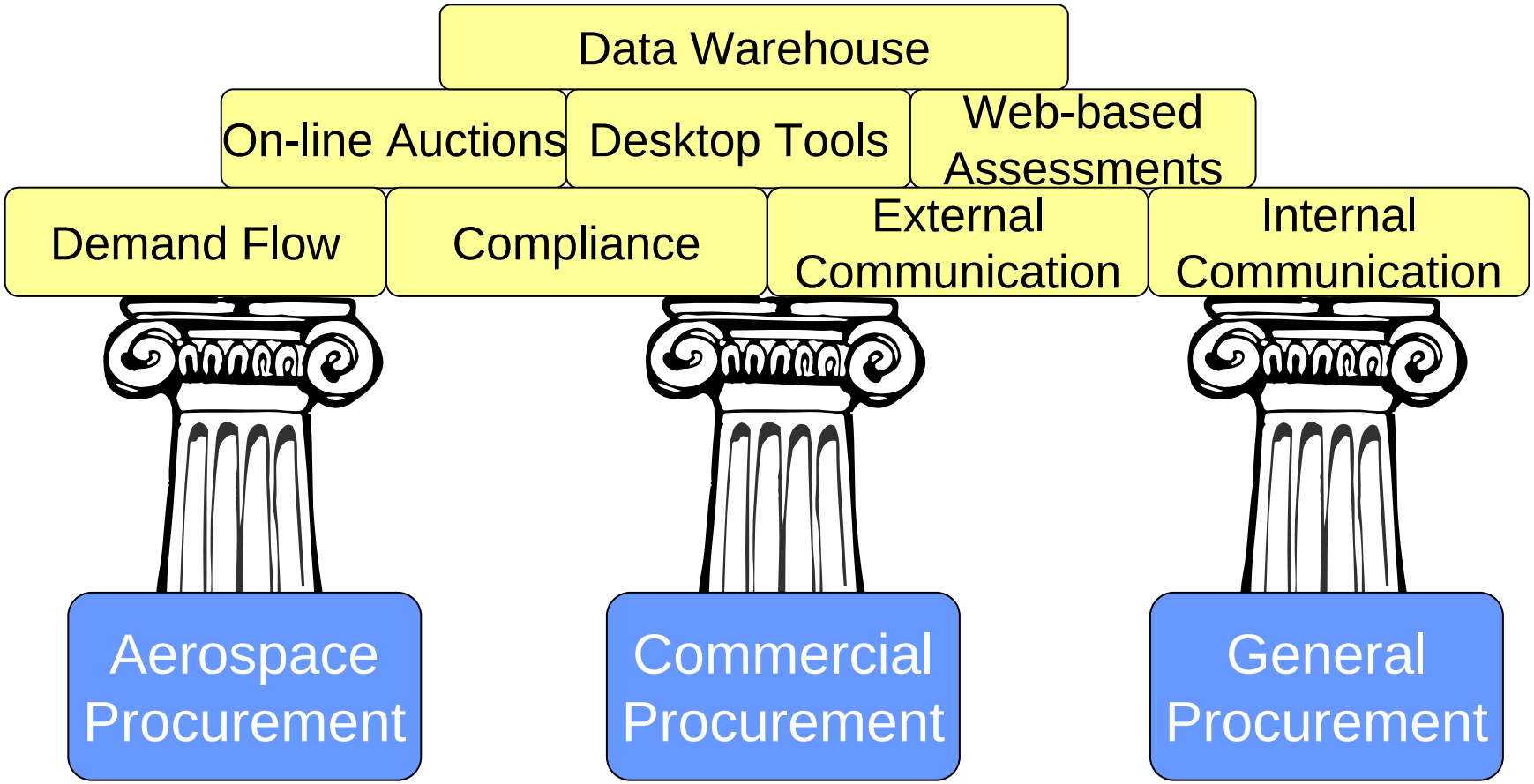
All Divisions, All Regions

Supply Management & Engineering





COMMODITY MANAGEMENT

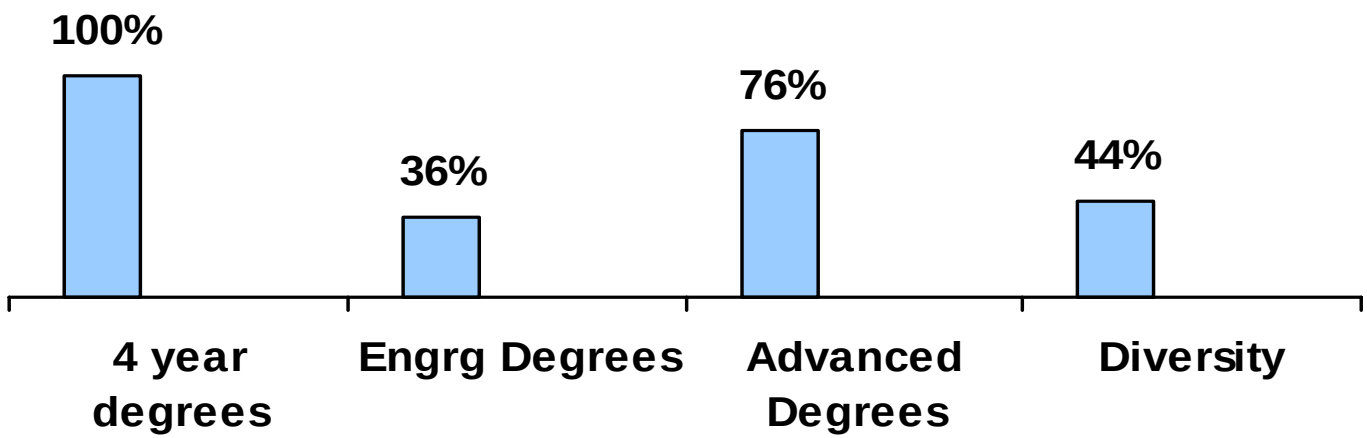


TECHNOLOGY NEEDS AN ORGANIZATION STRUCTURE

Supply Management & Human Resources

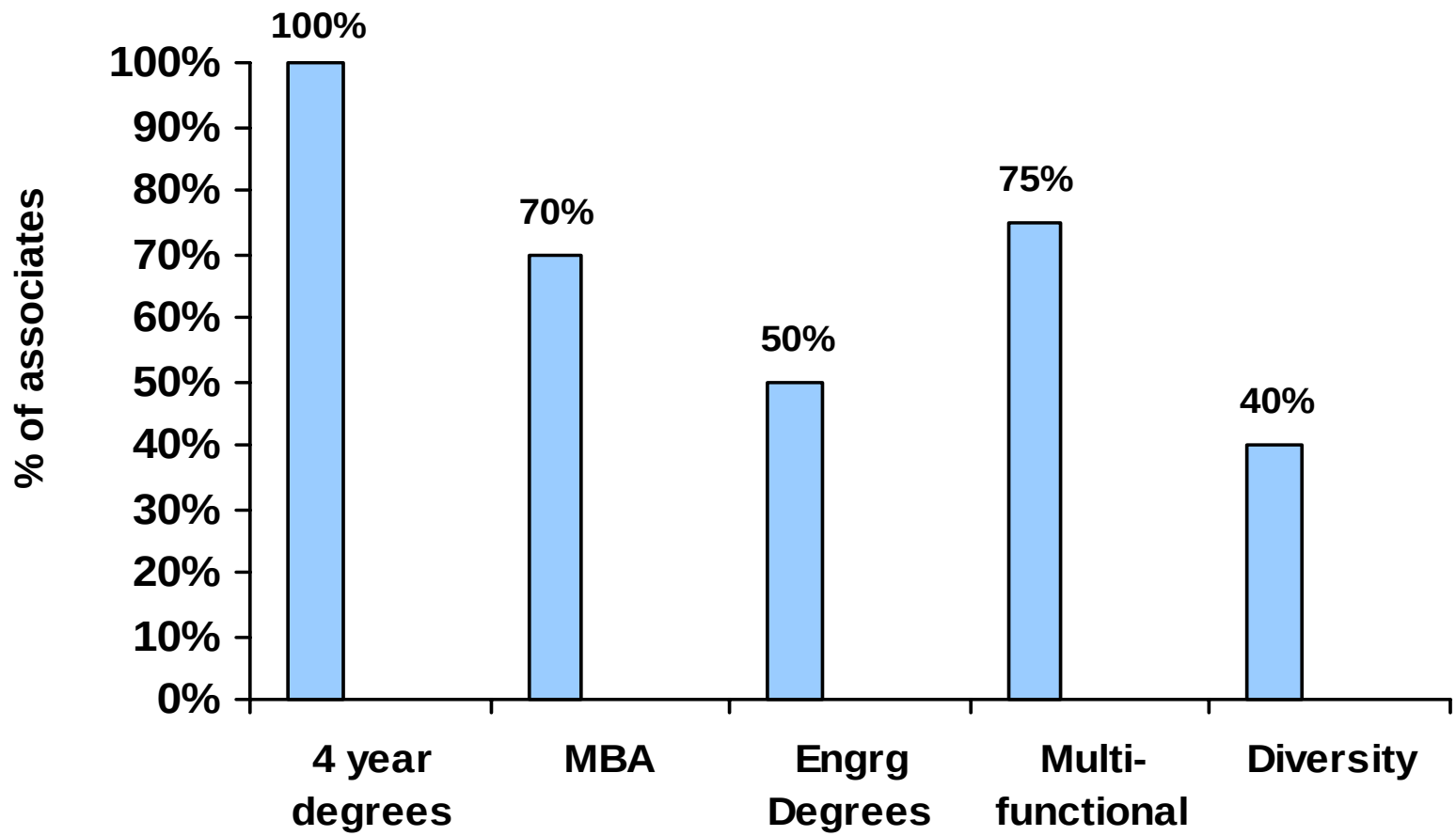
Supply Management Professional Hiring Trends

172 in Past Four Years



ATTRACTING TOP TALENT

COMMODITY MANAGERS



THE NEXT 5 YEARS

“Attacking the entire process”

Attacking the entire ‘non-product’ process

UT 500

Usage Volume 80%

- Management Control
- Baseline
- Measurement
- Policy
- Compliance

Process

- Hidden Inventory
- Fixed Assets
- Administration cost
- Standardization

Price Savings 20%

- 8 Step Sourcing Process
- FreeMarkets
- Leverage

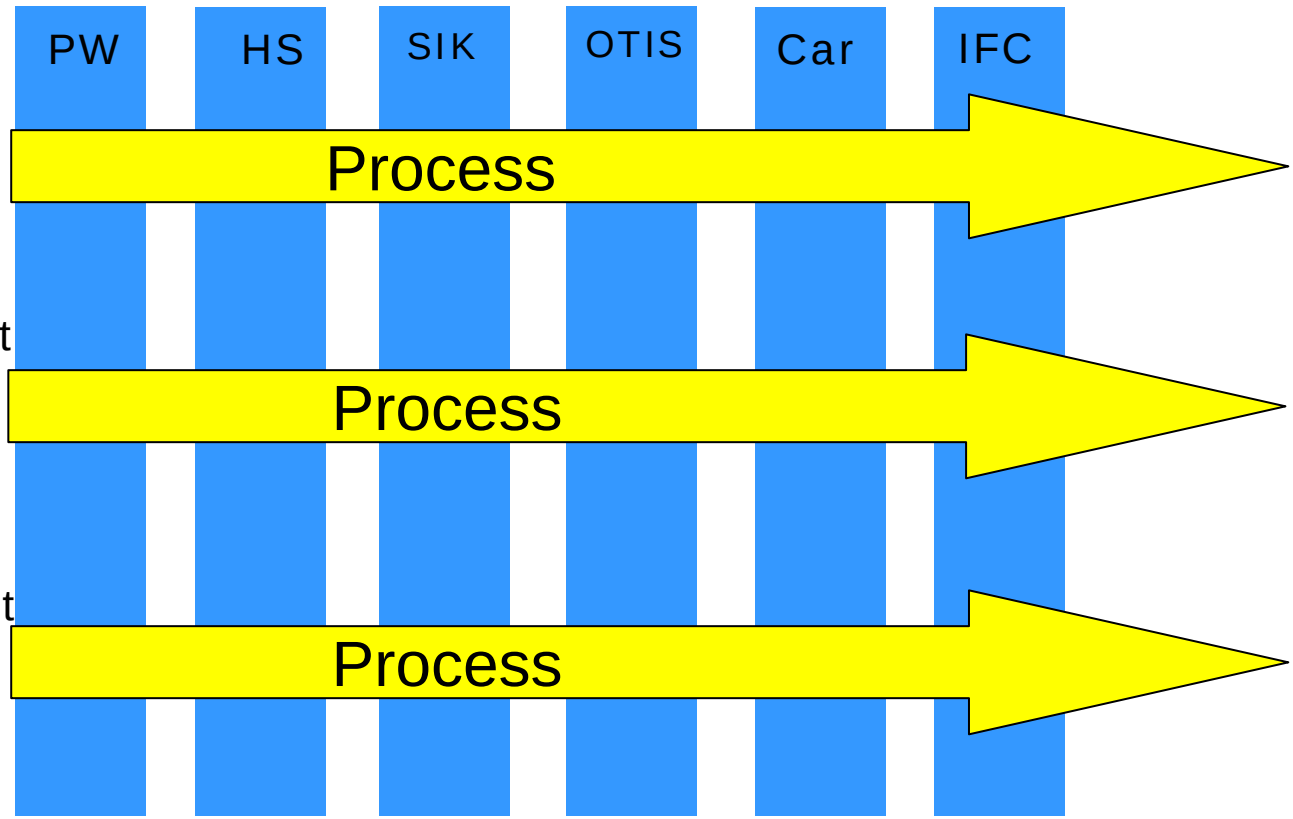
Reduce Spend

Supply Management & The Organization

Chemicals
- Executive
- Finance
- Supply management
- Commodity management

MRO
- Executive
- Finance
- Supply management
- Commodity management

Others
- Executive
- Finance
- Supply management
- Commodity management

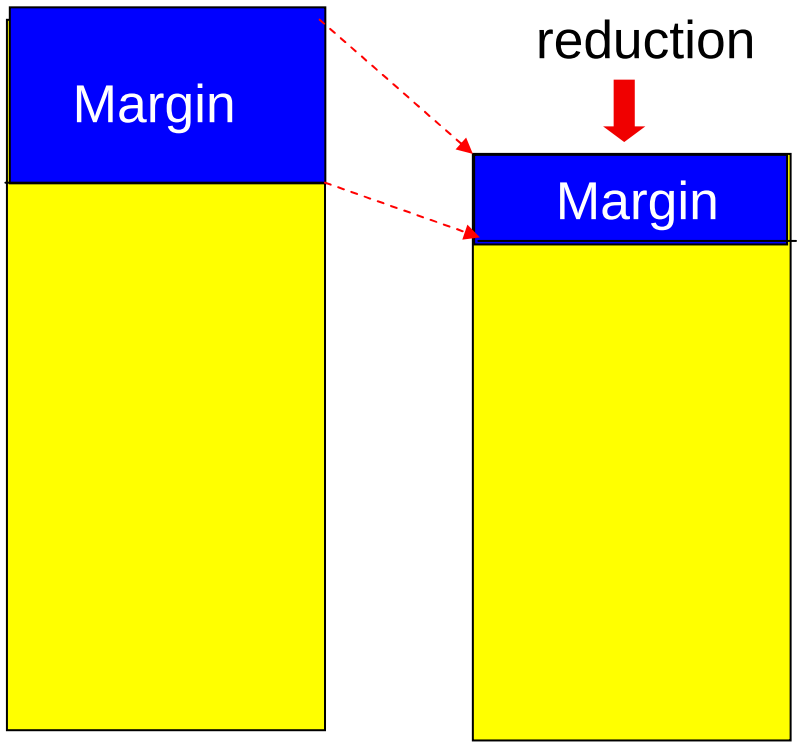


IMPLEMENTATION SPEED

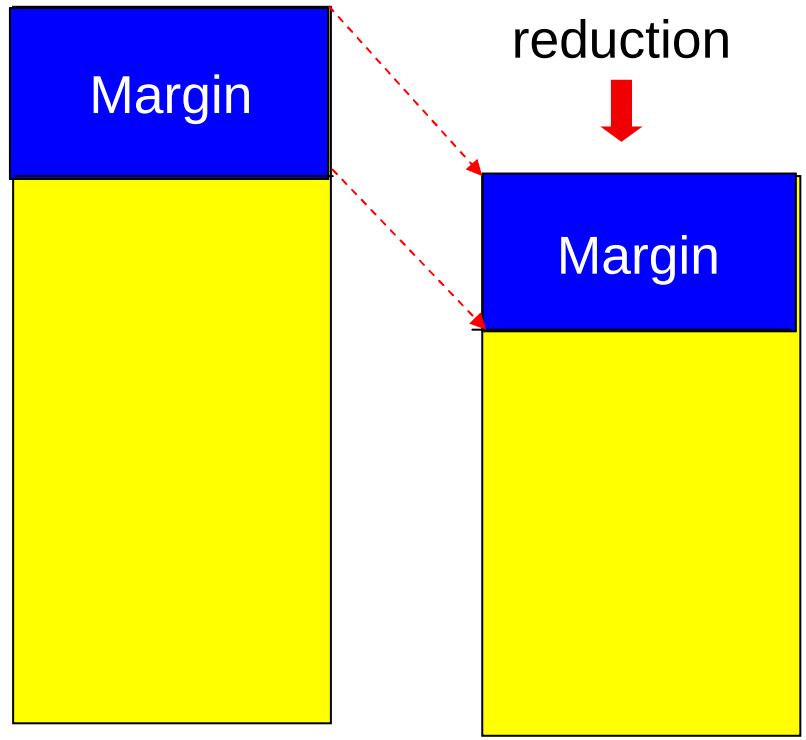
Supply Management & Suppliers

Attacking the entire ‘product’ process

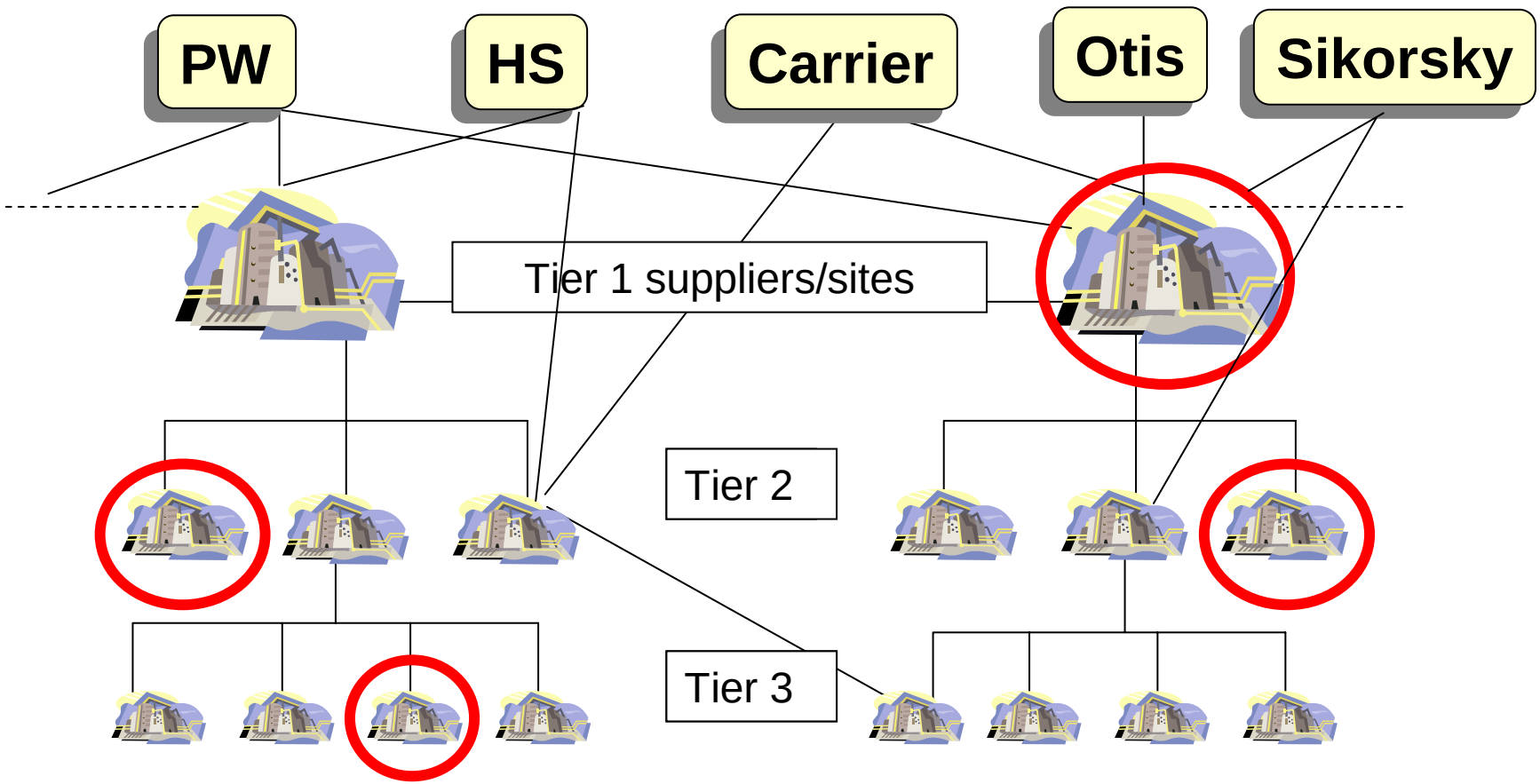
Yesterday & Today



Future

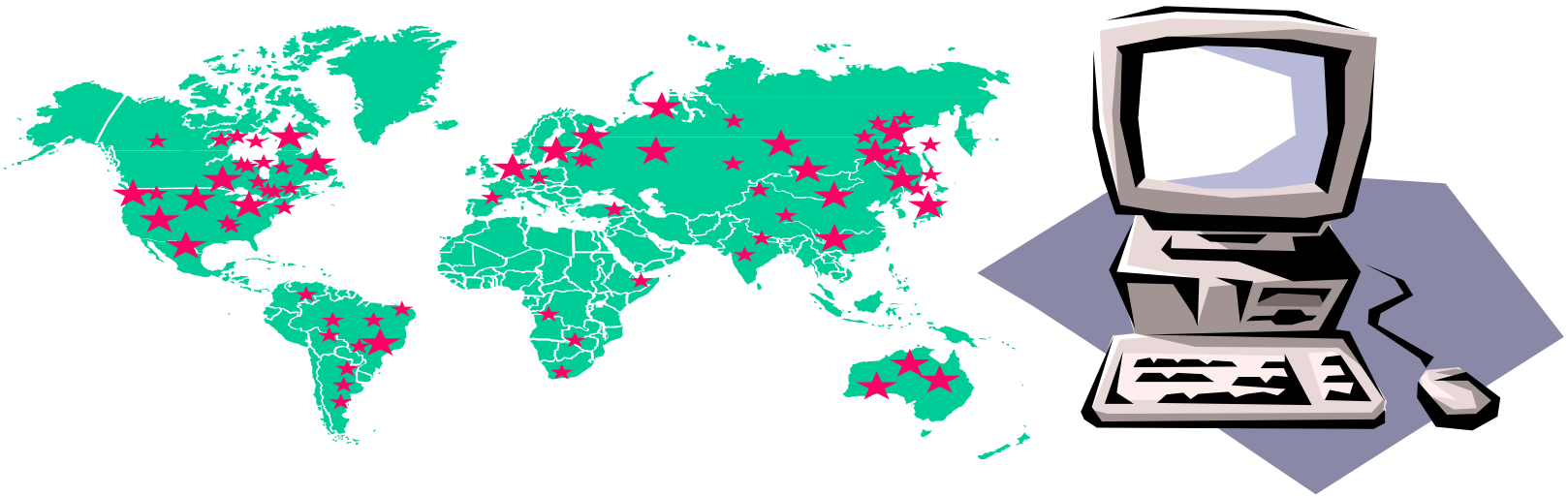


MANPOWER DILEMMA



WHO HAS THE RESOURCES?

SOLUTION

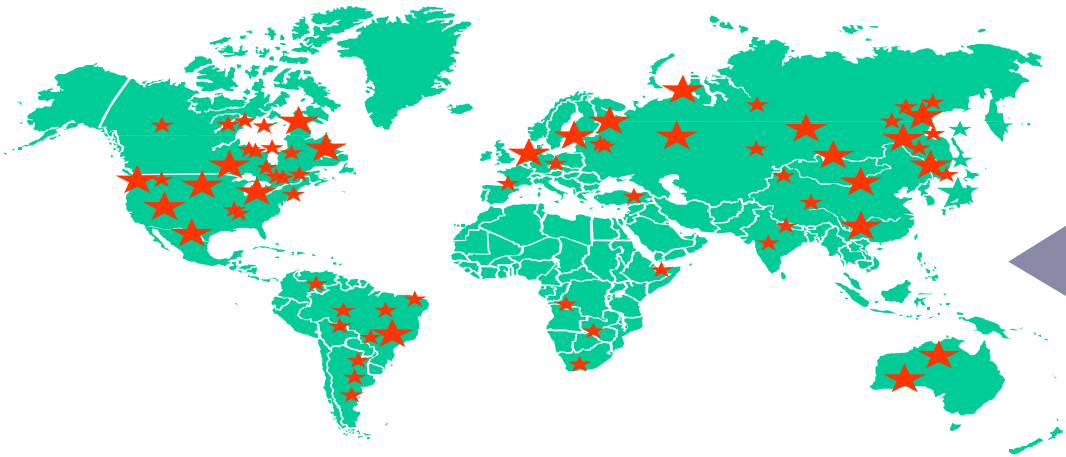


Change how we

monitor, assess, improve

the supply base

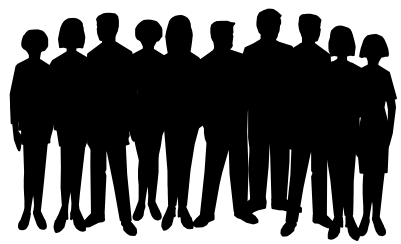
WEB-BASED ASSESSMENTS



Supplier completes assessment on-line

Improvement plan monitored on-line

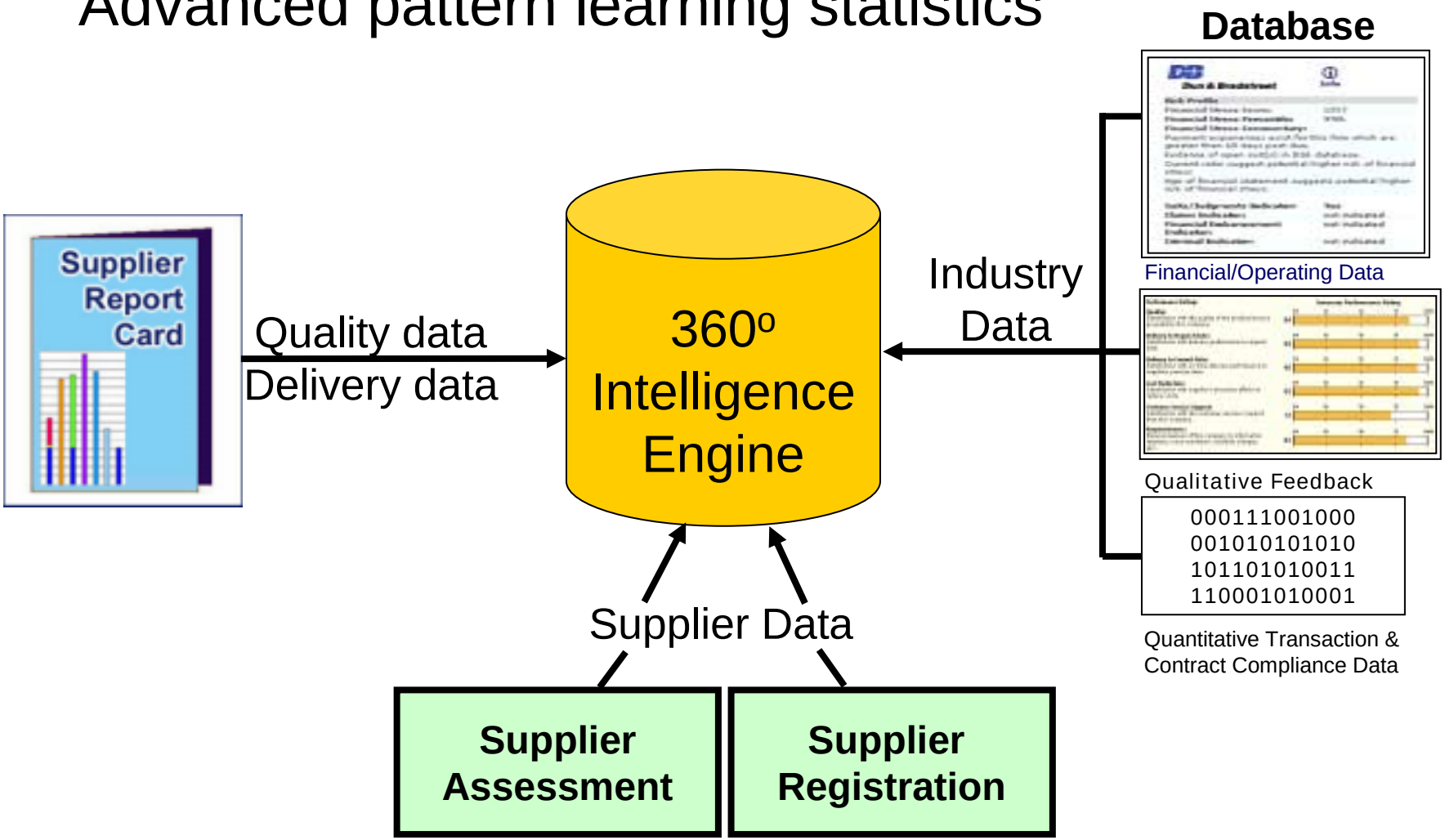
Resources deployed as needed



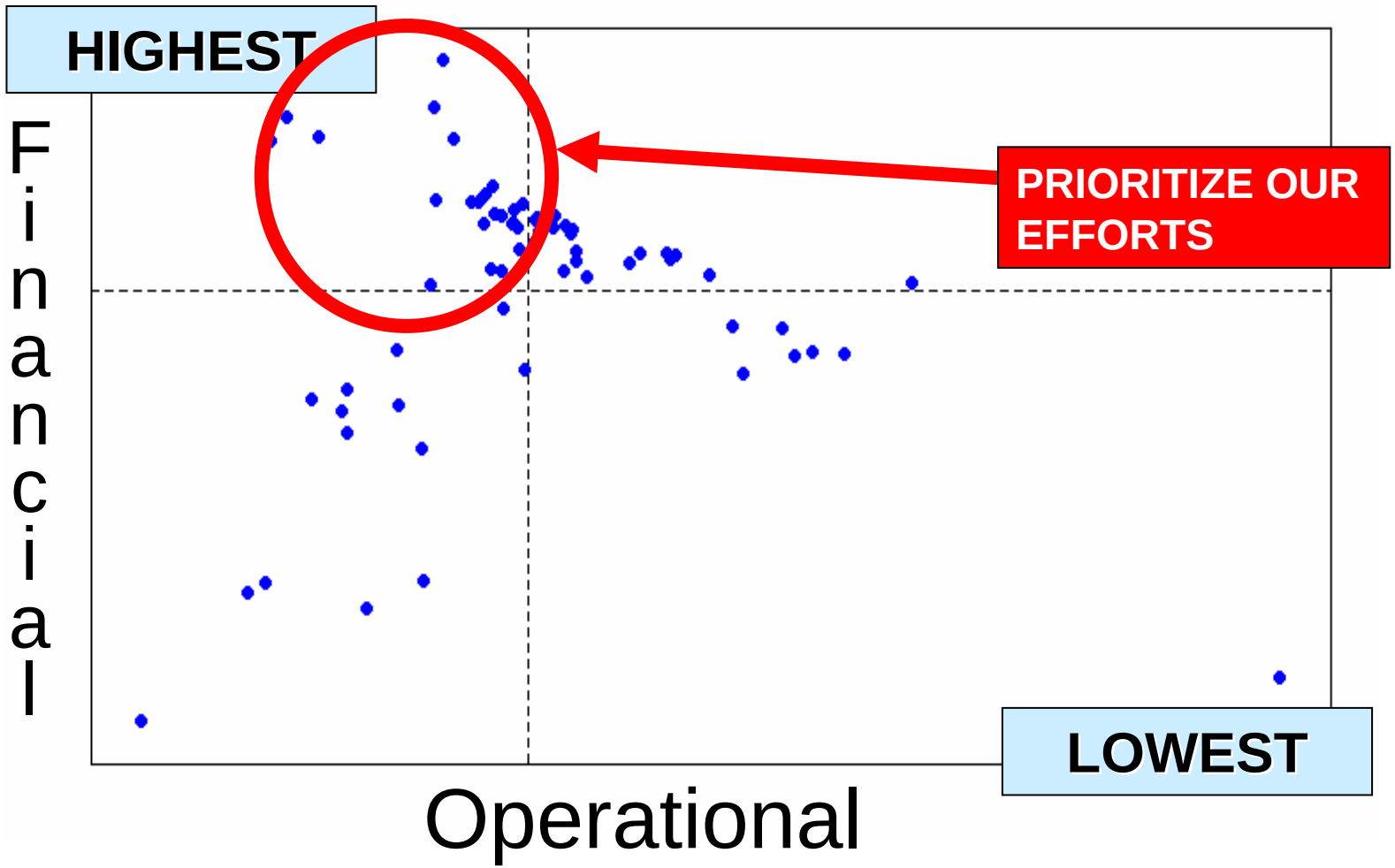
THE CRYSTAL BALL

Open Ratings

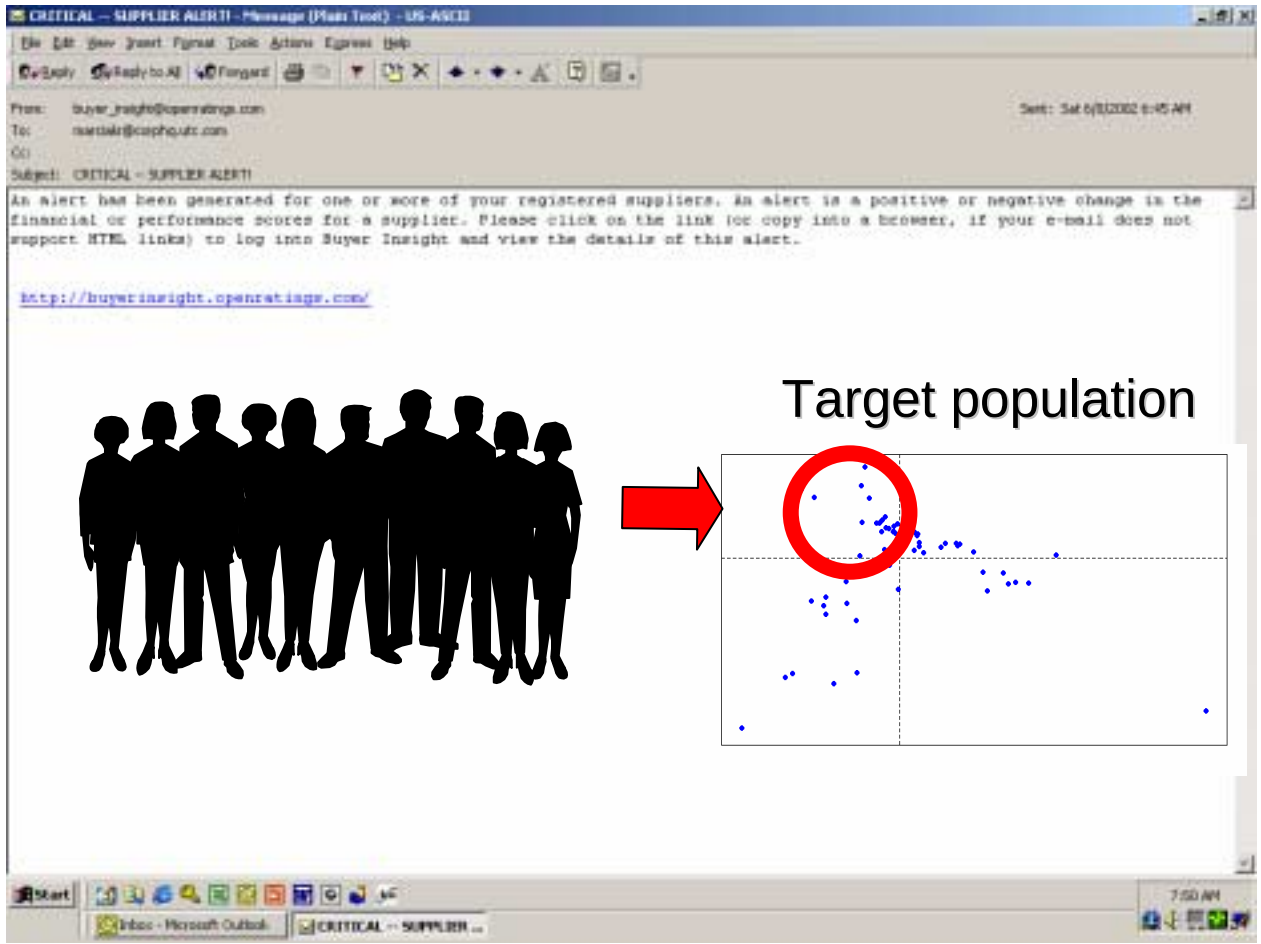
Advanced pattern learning statistics



PREDICTING RISK – COMMODITY “A”



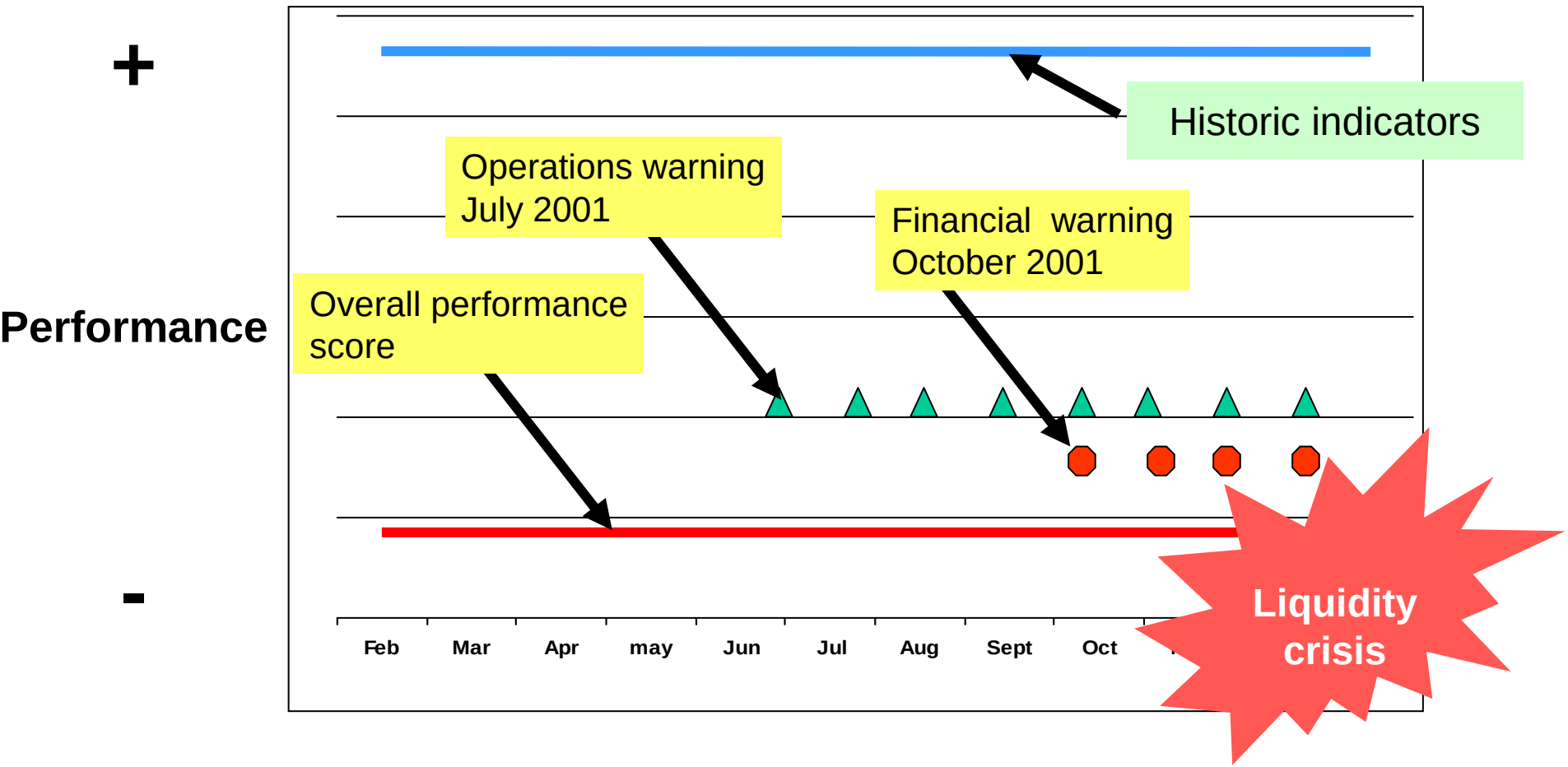
E MAIL ALERTS



MAXIMIZE RESOURCE IMPACT

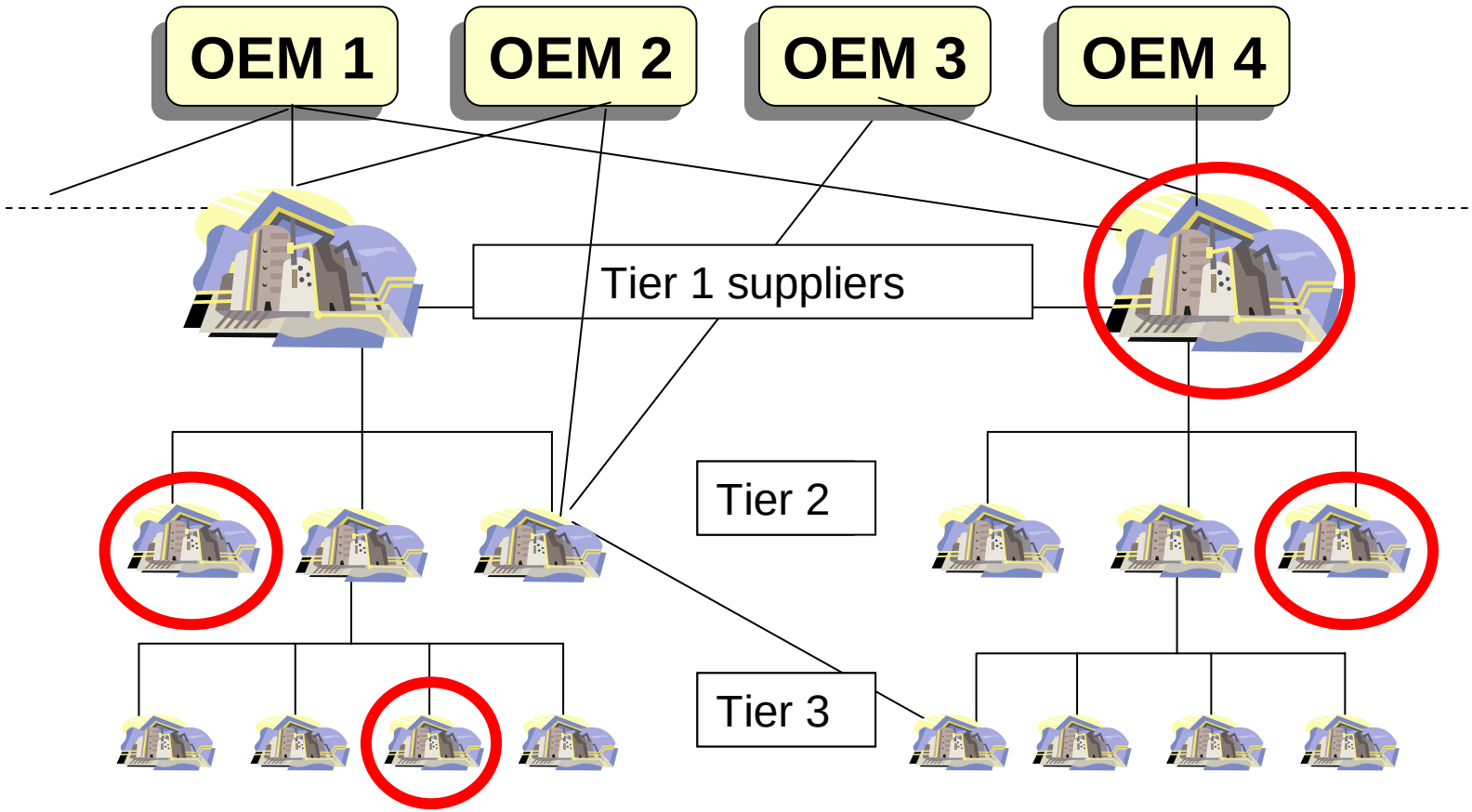
XYZ MANUFACTURING

Advanced pattern learning statistics



Open Ratings

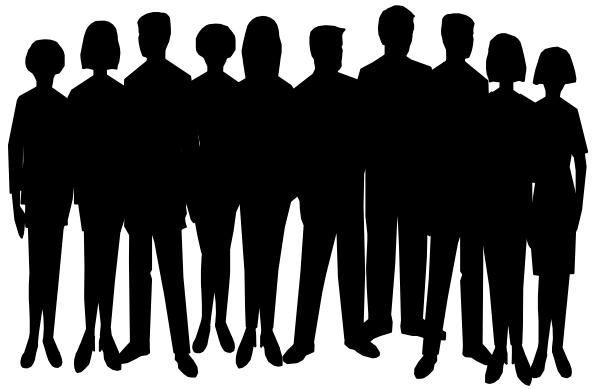
MANPOWER DILEMMA



WHO HAS THE RESOURCES?

INFRASTRUCTURE TRANSFORMATION

Technology will supplement manual assessments/audits



Resources will be deployed based on advanced *RISK* models

LEAN SUPPLY BASE

Supply Management & The Customer

Sales and Operational Planning

Materials Plan

Inventory Plan

Service Levels

Demand Plan

Production Plan

S&OP –Balancing Capacity and Demand

S&OP Process - Shop Visit Forecast Sheet

SV Forcasting worksheet

Historical:	1999	2000	2001
Number of engine in fleet			
Number of shop visits			

	2002 J	F	M	A	M	J	J	A	S	O	N	D	1Q03	2Q03	YE03	2004	2005
Historical Forecast (SVR)																	
Statistical Forecast (SVR)	49	47	64	57	66	55	51	46	45	47	46	44	150	165	665	660	660
Actual SV	49	41	50	62	55	62	48										
Delta	0	-6	-14	5	-11	7	-3										
STD of actual	9	9	9	9	9	9	9										
CSTARS Forecast	60	50	53	64	65	73	73	54	61	54	60	50	147	147	704	704	680
Delta to actual	-11	-9	-3	-2	-10	-11	-25										
EIBS Forecast																	
Adjustments:																	
Sales Campaign Activity																	
New engine sales													2	3	3	5	5
FMP								1	1	3							
Product Specific																	
Issue:																	
Issue:								2			2			2			
												2	3	3			
Issue:																	
Issue:																	
Issue:																	
Issue:																	
Adjusted SV Forecast	55	49	59	61	66	64	62	50	53	51	53	47	149	156	685	682	670

Forecast Issues / Concerns

1) 94" surge sv more loaded to end of this year due to xyz
2)

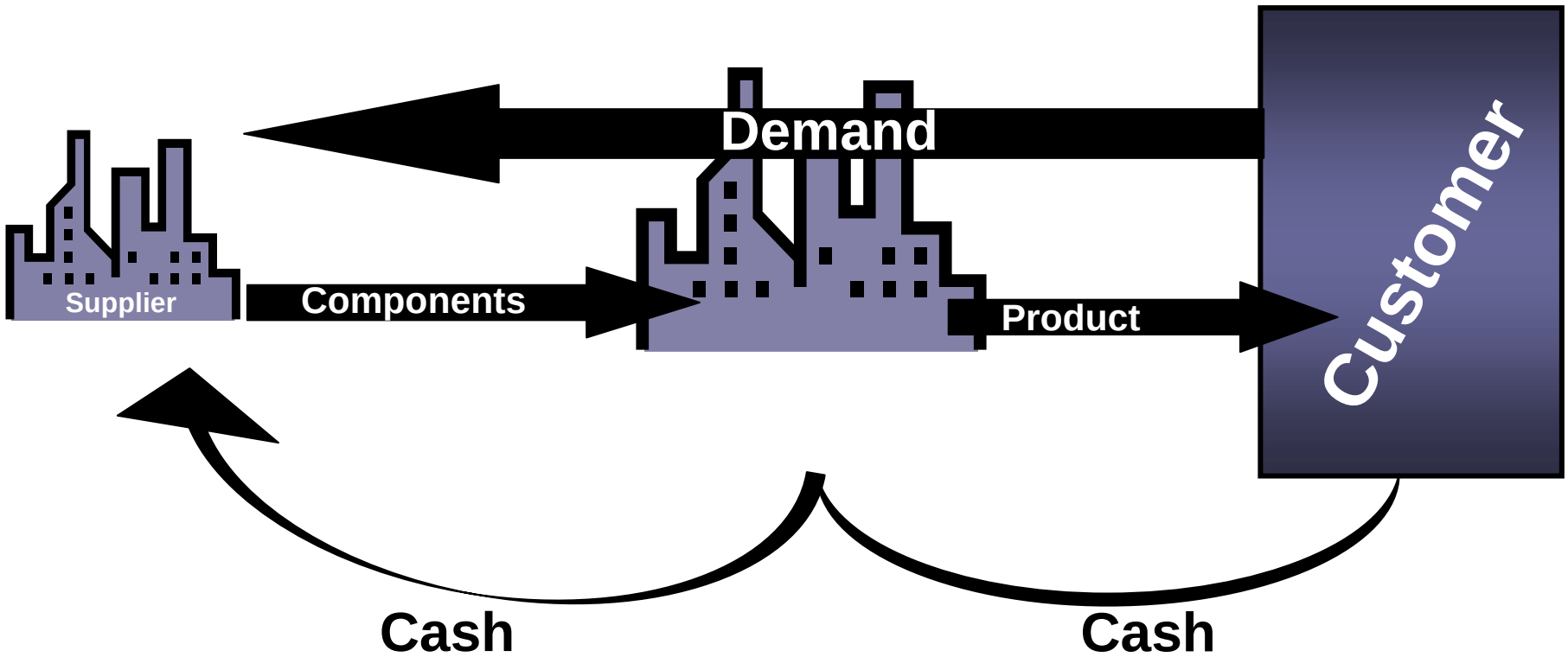
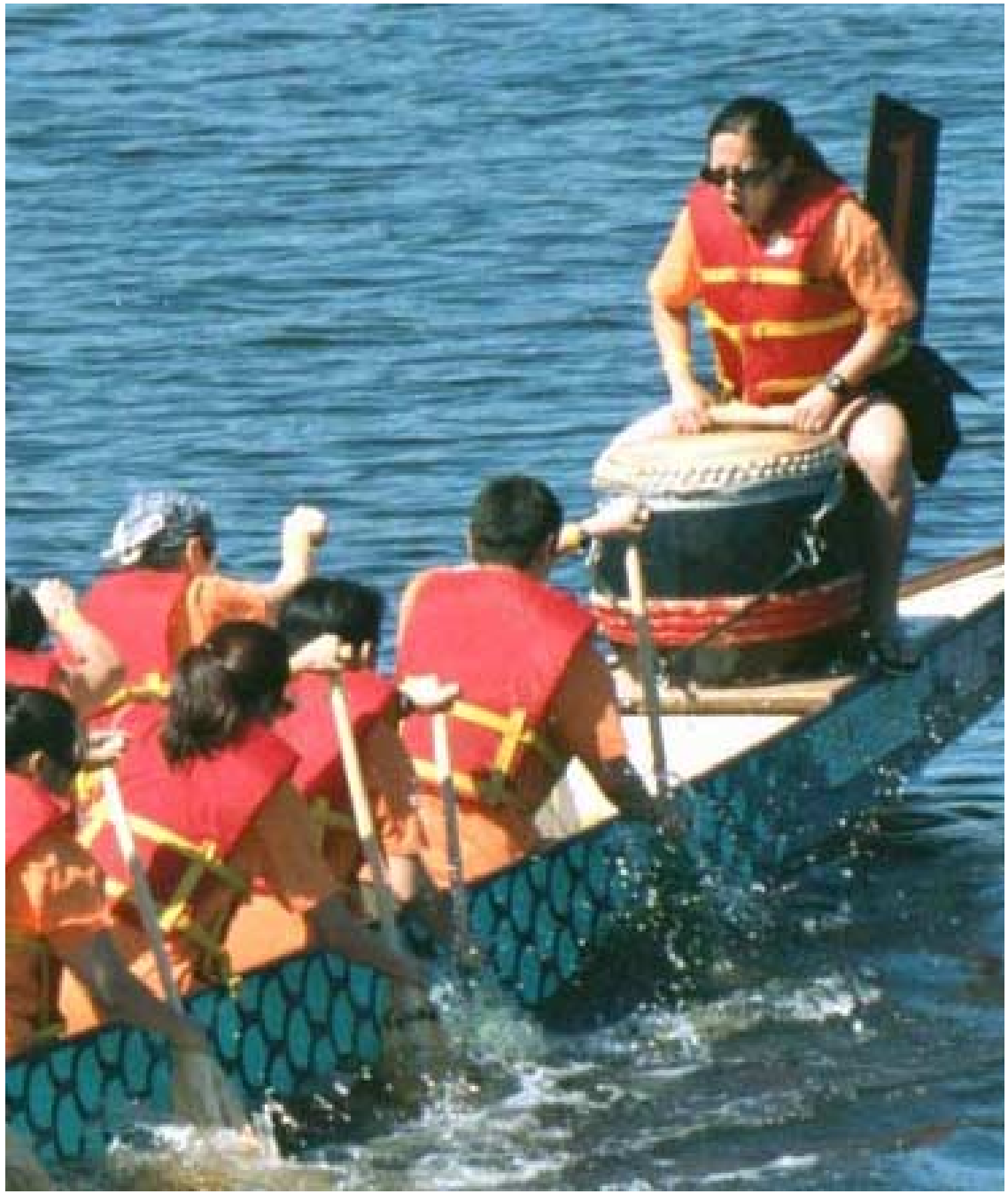
WHY?

Velocity

Urgency

Future State

Synchronization and Resource Leverage



Demand Pull