

A satellite view of the Earth, showing the Americas in the center. The image is a high-resolution satellite photograph with a dark blue background on the left side where the text is located.

**accenture**

*High performance. Delivered.*

# *Creating Customer Value*

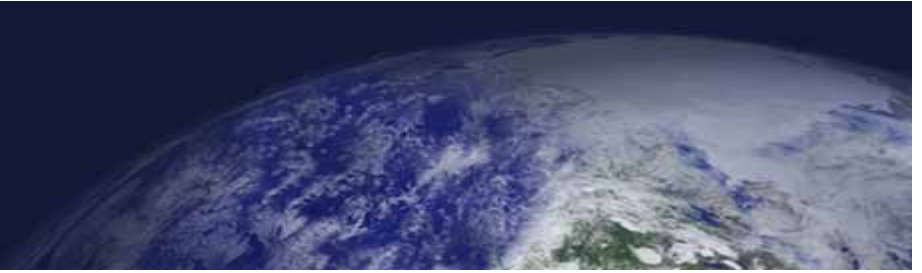
UIC Conference  
St. Petersburg  
7 July, 2010



**We have a saying at home...**

- A person who speaks 3 languages is: **Tri-lingual**

## We have a saying at home...



- A person who speaks 3 languages is: Tri-lingual
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- And a person who speaks 1 language is:      American

... so this presentation will be in English



# Agenda

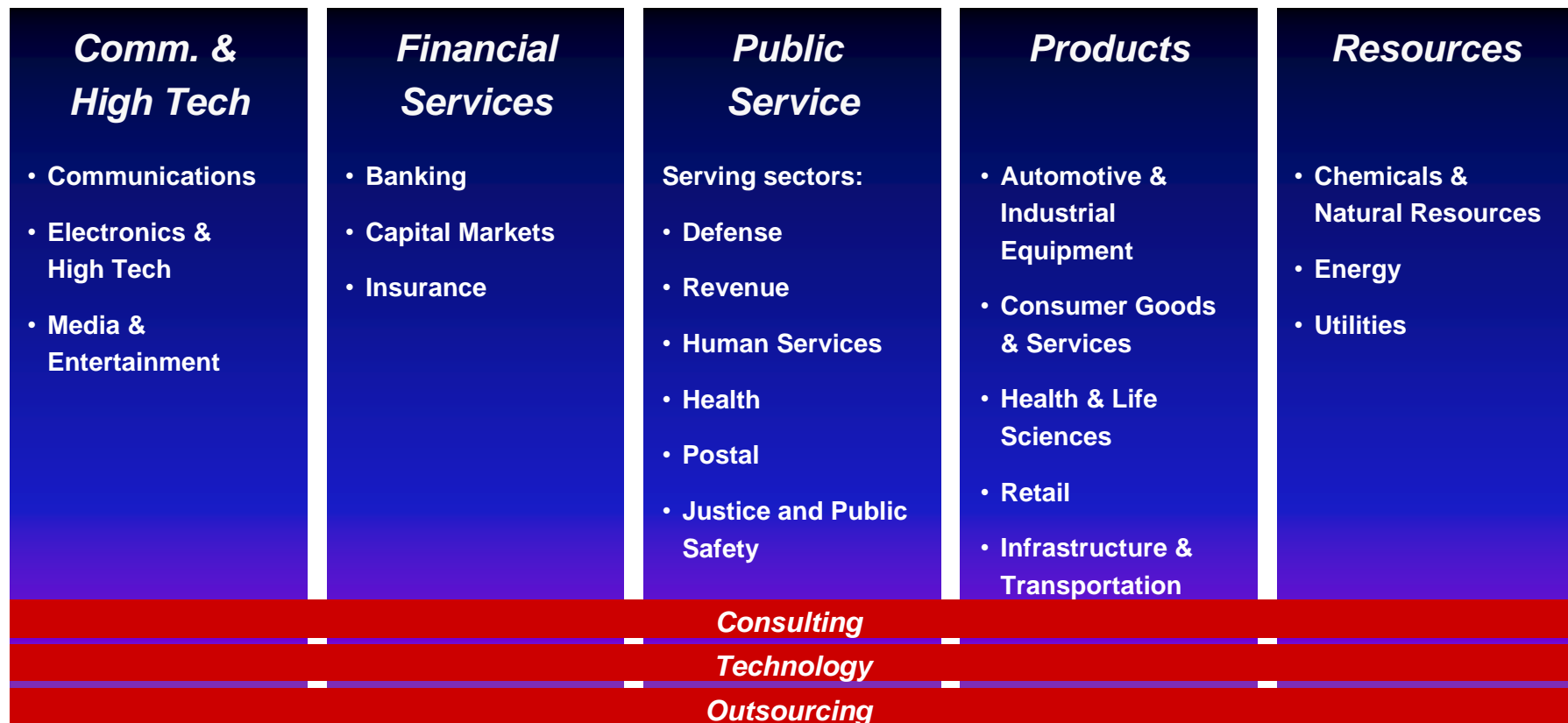
## ■ Overview & Strategic Context

- The Perfect Storm
- Changing Supply Chain Behavior
- Implications for Rail Leadership



## Who are we? – Our Global Alignment

***We are a \$22-billion dollar enterprise, with 180,000+ people in 200 offices in 52 countries around the globe (7,500 in Supply Chain Management), serving 4,000 clients, 96 of the Fortune-100 and 75% of the Fortune Global-500.***





# Who Are We? – Accenture Global Rail Experience



- Enterprise Resource Planning (ERP) Implementation
- EAM – Enterprise Asset Management/Maintenance, Repair and Overhaul – Rolling and Linear Assets
- Crew Management Technology (Ops & Non-Ops)
- Asset Accounting and Life Cycle Management
- Business Support Functions – Financials, Materials Management, and Procurement
- Transportation Systems
- Salesforce Enablement
- eCommerce Strategy and Implementation
- Performance Management
- Revenue Forecasting
- Passenger Distribution Systems
- Electronic Ticketing
- Business Simulation



# Strategic Context: An Era of Permanent Volatility

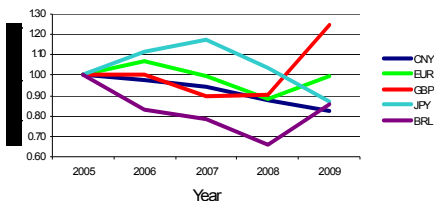
***Of all the challenges facing companies today, it is clear that this new era of “permanent volatility” is driving an increasingly large number of Supply Chain failures.***

## Financial/Market Volatility



## Currency Fluctuations

USD vs Other Currencies



**Expectations are up, lifecycles are down, and supply chains are not prepared**

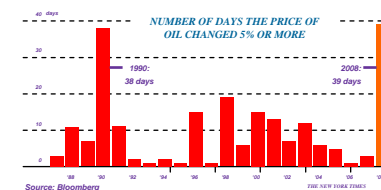
- Global economic forces affect everyone**
  - Nearly instant commoditization of innovations
  - Rapid access to low cost labor
  - Inflationary pressures on scarce resources
  - Constantly shifting supply lines

**Global footprints make companies much more vulnerable**

**Government policies are increasingly unpredictable**

**Volatility has increased dramatically**

## Commodity Volatility



## Geopolitical Events

**RUSSIA SHUTS OFF ALL GAS DELIVERIES TO EUROPE**

**19 MILLION TOYS SHIPPED FROM CHINA RECALLED**

**SOMALI PIRATES HIJACK SAUDI OIL TANKER**

***Volatility won't disappear – companies that mismanage it will!***

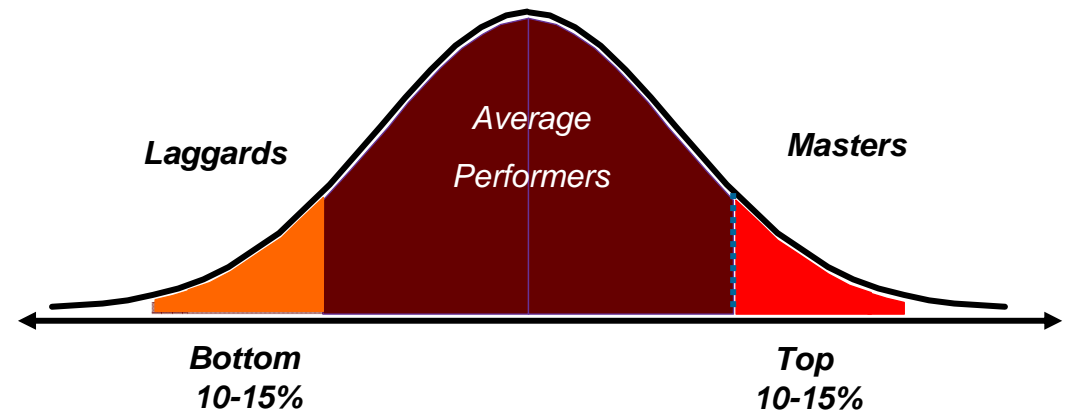
## Strategic Context: High Performance Research

***In a multi-year effort, Accenture conducted multiple surveys/interviews of nearly 3000 operating execs across 21 countries in major industries across 100s of companies to understand SCM challenges and emerging responses...***

***Surveyed across 7 supply chain domains ...***



***...to understand key challenges and what differentiates top performers***

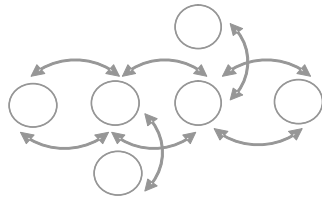


***... in addition, substantial financial analysis was conducted (in partnership with MIT and others) to validate impact, as well as divine methods of improvement.***

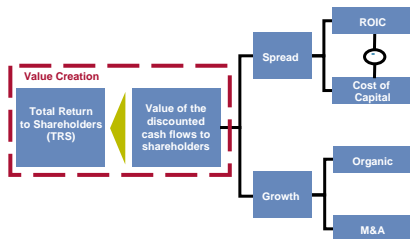
# Strategic Context: Key Research Themes



**The New Normal:** The world is rapidly changing, and *Permanent Volatility* is a reality with which all enterprises must deal



**Adaptiveness:** Companies must operate *Dynamic Supply Chains* that can adapt to the continuously changing conditions



**Making It Happen:** Dynamic Supply Chains must become *Financial Engines* that enable growth, generate cash flow, and drive higher ROICs

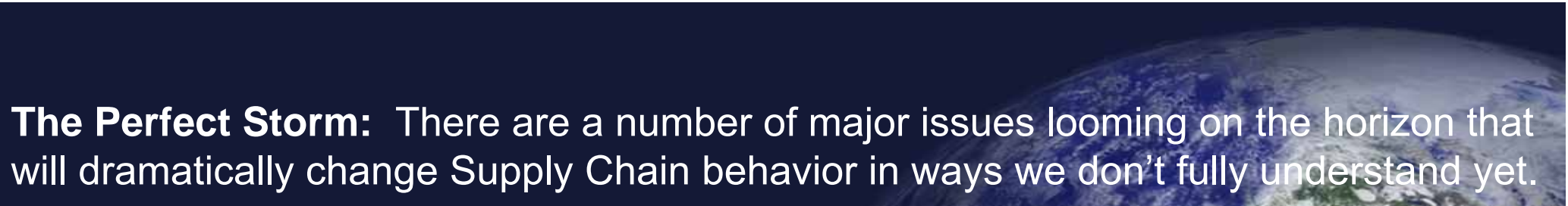


# Agenda

- Overview & Strategic Context

## ■ The Perfect Storm

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**The Perfect Storm:** There are a number of major issues looming on the horizon that will dramatically change Supply Chain behavior in ways we don't fully understand yet.

■ **Infrastructure**

■ **Demographics**

■ **Oil**



# Infrastructure: The “Transportation for Tomorrow” Study from 2007 poses some very challenging questions for the U.S., but they are far from unique.

## Report of the National Surface Transportation Policy and Revenue Study Commission

### *Transportation for Tomorrow*

December 2007



**“We need to invest at least \$225 billion (USD) annually...for the next 50 years to upgrade our existing system to a state of good repair...We are spending less than 40% of this amount today.”**



## Volume I

### Recommendations

#### A Call to Action

The surface transportation system of the United States is at a crossroads. The future of our Nation's well-being, vitality, and global economic leadership is at stake. We must take significant, decisive action now to create and sustain the pre-eminent surface transportation system in the world.

The first half of our Nation's history saw that economic development was directly tied to infrastructure development. The creation of roads for vehicles and the transcontinental railroad led to trade and prosperity across the vast continent. This in turn vaulted the Nation into a position of significance in the world. The second half of our history has been dominated by the move from an agrarian society, through the Industrial Revolution, into a largely urban society and the world's primary economic and military superpower. All of this was facilitated by the foresight of private and public sector leaders who further developed the country's infrastructure including the Interstate highway system, the Nation's freight rail system, and urban mass transit. Now we have outgrown this system and it is time for new leadership to step up with a vision for the next 50 years that will ensure U.S. prosperity and global preeminence for generations to come.

The U.S. now has incredible economic potential and significant transportation needs. We need at least \$225 billion annually from all sources for the next 50 years to upgrade our existing system to a state of good repair and create a more advanced surface transportation

system to sustain and ensure strong economic growth for our families. We are spending less than 40 percent of this amount today.

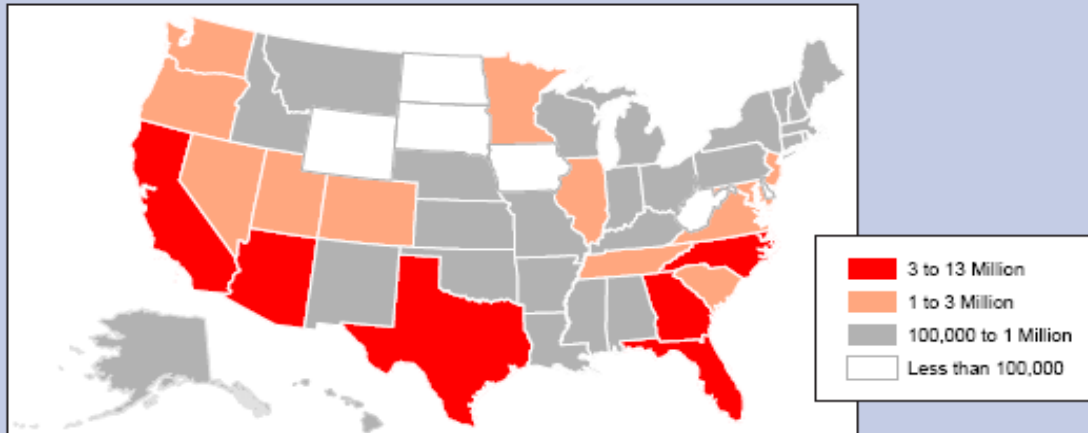
A significant increase in public funding is needed to keep America competitive. Additional private investment in our system is also needed. We will need to price for the use of our system. More tolling will need to be implemented and new and innovative ways of funding our future system will need to be employed. Maintenance and expansion of our freight system will require a set of policy tools that encourage more private investment and direct public funds toward projects which alleviate capacity constraints and allow for more traffic to flow across an efficient, sustainable, intermodal freight network. Chokepoints at our major gateways and trade corridors don't just represent congestion and environmental hot spots; they are a potential trade barrier as well. Trucks and rail will have to work even more closely in the coming years in order to deliver the commerce the Nation produces, imports, and exports.

Our Nation will need to put more emphasis on transit and intercity passenger rail and make them a priority for our country. A cultural shift will need to take place across America to encourage our citizens to take transit or passenger rail when the option is given. It is also important to increase the market share for freight rail, and to make significant increases in highway investment as part of developing a robust surface transportation network.



# Demographics: The U.S. is moving from 300 mil people to 420 mil by 2050, mostly in 6 key states, which will severely tax the existing network, even if we completely rebuild it.

Exhibit 2-3. Projected population growth by state, 2000–2030



This map shows that over 60 percent of the population growth in the U.S. between 2000 and 2030 is projected to be concentrated in just six states: Florida, California, Texas, Arizona, North Carolina, and Georgia.

## Future Population Growth

“Between 1950 and 2000, the total population of the U.S. grew from 150 million to 281 million, reaching 300 million in 2007.”

Population will “...reach 364 million by 2030 and 420 million by 2050.”



Several factors that contributed to VMT growth in the past do not appear to be as significant in the future. For instance, the growth in vehicle ownership per household may not be as significant, as there is near saturation of vehicle availability for the able-bodied adult population. While income growth may result in some increases in vehicle availability, the magnitude of the potential for new vehicle ownership is modest. Women entered the workforce in large numbers in recent decades, and the resulting shift in travel behavior cannot be duplicated in the future to the same degree. In addition, the maturation of the baby boom generation from children (who do not make single-occupant auto trips) to a highly mobile adult population with high labor force participation has placed upward pressure on travel demand. However, as this cohort leaves the labor force, it will have less effect on travel growth.

Similarly, mode shifts away from alternative modes such as biking, walking, transit, and multi-occupant vehicles to SOV travel cannot have as significant an impact on VMT growth in the future, simply because it is mathematically impossible for the proportionate use of these modes to drop as much as they have in the past. Thus, any continued decline in the travel share of alternative modes would likely be modest at most. Indeed, in some recent years transit use has grown at a faster rate than VMT, for the first time in decades.

### Future Population Growth

The most basic factor influencing the demand for passenger transportation is projected population growth. Between 1950 and 2000, the total population of the U.S. grew from 150 million to 281 million, reaching 300 million in 2007. Based on these trends, the Census Bureau projects the total U.S. population to reach 364 million

by 2030 and 420 million by 2050, an increase of roughly 50 percent over 50 years. Adding 120 million new Americans between now and 2050 will by itself create significant demands on our transportation system.

As fertility rates in the U.S. have stabilized, national population growth has largely become a function of immigration. Immigration rates themselves are primarily a function of relative economic conditions and government policies. While such considerations are beyond the scope of this report, it is clear that future immigration rates to the U.S. will have a significant impact on our population totals and thus our transportation system.

Regional migration and urban development patterns will also play a significant role. The last 50 years have seen a significant shift in the population of the U.S. to the South and West, a trend that is expected to continue. According to the Census Bureau, over 60 percent of total population growth between 2000 and 2030 is projected to occur in just six states, all of them located in the Sunbelt as shown in Exhibit 2-3. To the extent that future growth is concentrated in areas that do not have significant existing capacity in their transportation infrastructure, this will place additional burdens on the system.







**Oil:** Consumption is outstripping our ability to find and produce.

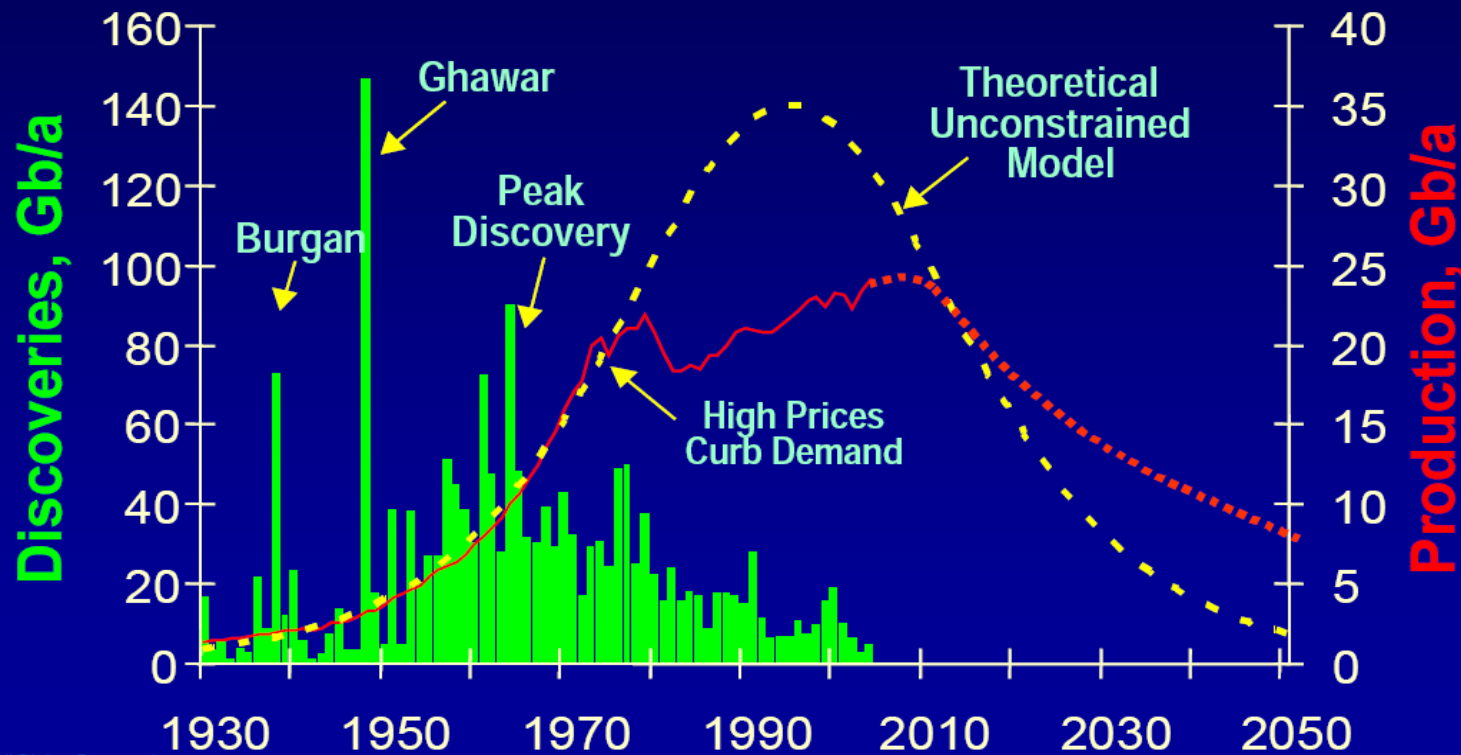
- A Giant Field is one with more than 500 million barrels of reserves
- World-wide we consume the equivalent of one of these giants every week!
- The oil industry finds only 20 of these per year

Oil: Add into the mix the looming challenge of World Peak Oil...

Peak Discovery 1965  
Peak Production 2010  
Time-lag: 45 years

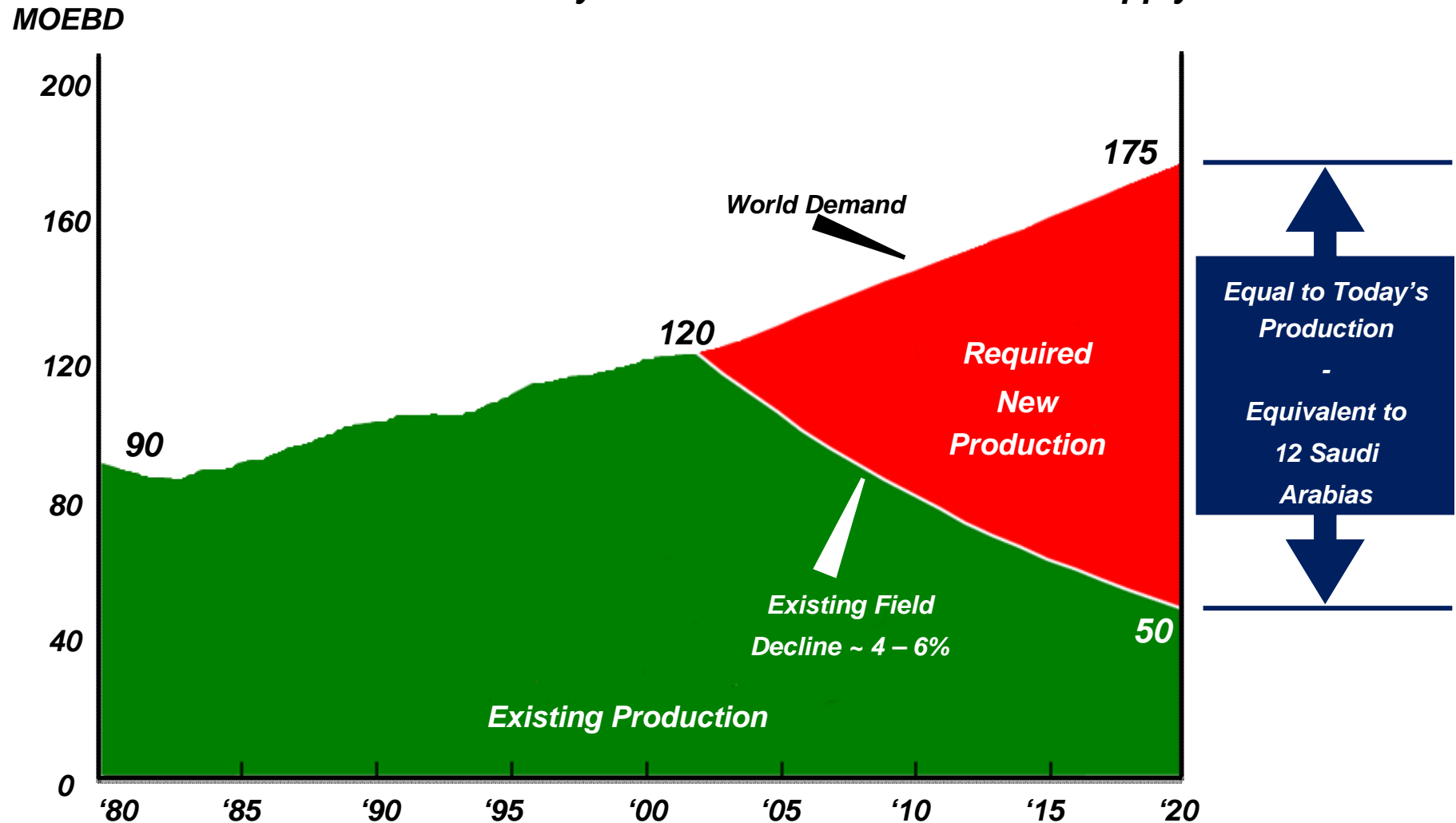
## World - conventional oil

Mid-point year: 2003  
Ultimate YE 2050: 1875 Gb  
Current, YE 2007: 1008 Gb



# Oil: Supply and Demand are Headed in Opposite Directions

## Exxon View and Industry Outlook – Oil & Gas Demand/Supply





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**Oil:** The rising cost of fuel will make lower-cost modes increasingly more viable as an alternative choice. The premium for speed will eventually become too expensive.

- As crude oil price increases, transportation costs become more important relative to production and facility fixed costs. We expect:
  - Production to move nearer demand: Cheaper manufacturing is offset by higher transportation costs
  - Additional DC's are more attractive: As outbound transportation becomes more expensive, it becomes more important to minimize the final leg
  - Rising costs will drive modal shifts to cheaper modes (e.g., rail and water)

Date	Oil Price (Per Barrel)	Relative Change in diesel price (per gallon)	Standard fuel surcharge adjustment (cost per mile)	Cost impact on 500 mile shipment
2006	66.02 <sup>1</sup>	NA	NA	NA
2007	72.32 <sup>1</sup>	.15	.02	\$10
2008 (May)	122.00	1.44	.24	\$120
Projected	150.00	2.02	.33	\$165
Projected	200.00	3.22	.53	\$265

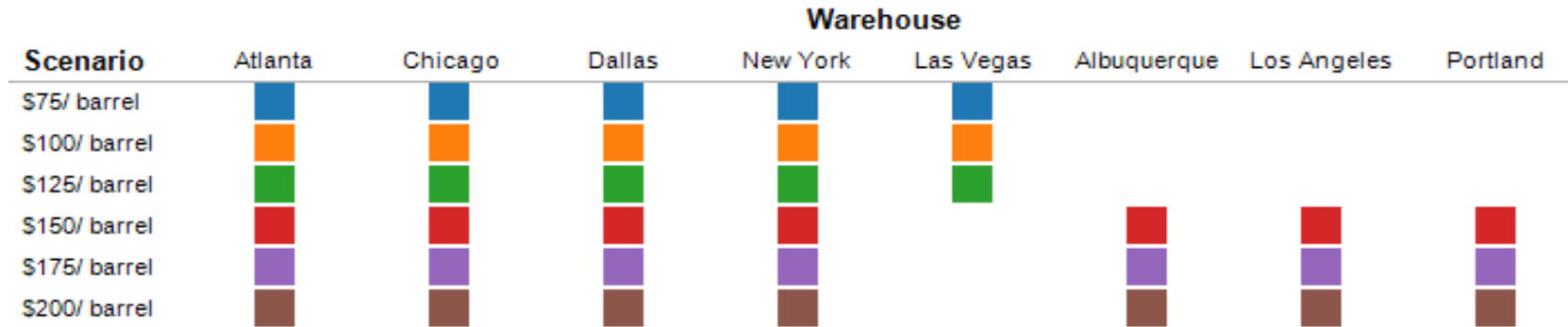
\$675 USD @\$1.35/mile

\$940 USD = \$1.88/mile

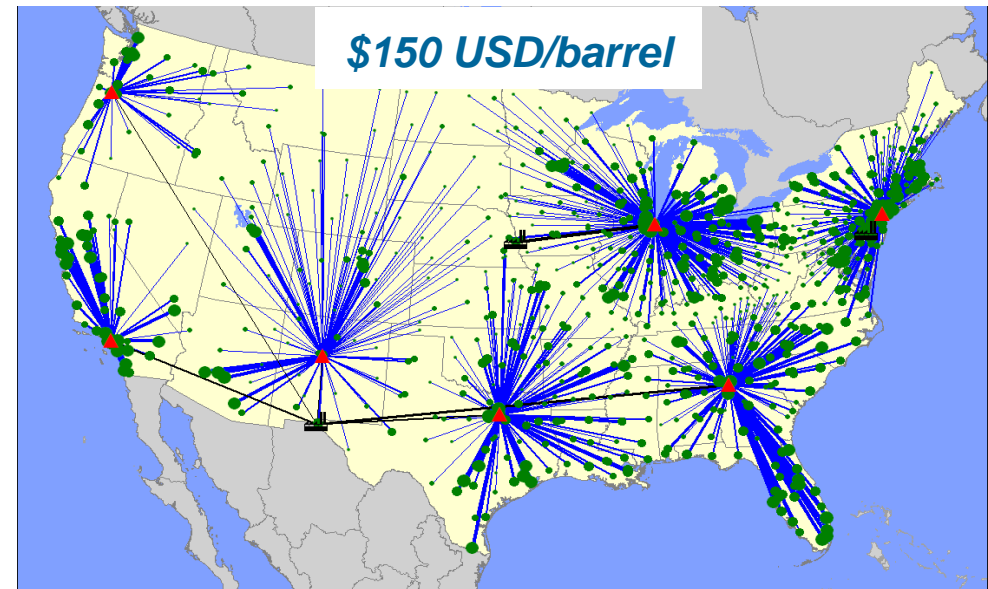
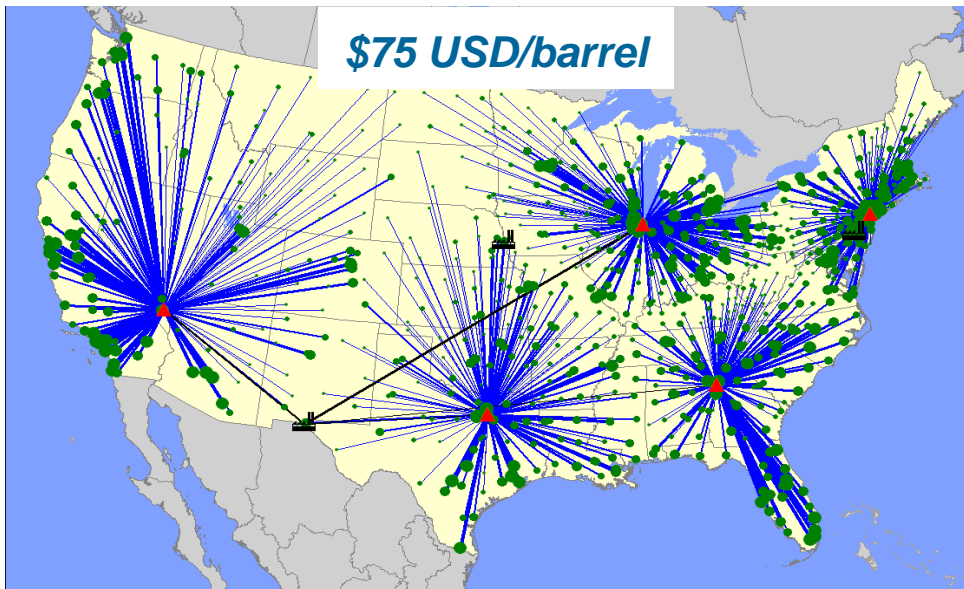
<sup>1</sup>Source: Energy Information Administration

**+ 40%**

# Oil: How the cost of fuel alters Supply Chain behavior...



***Moving from \$125/barrel to \$150/barrel changes the optimal number of DCs from 5 to 7. In this example, Las Vegas is replaced by Los Angeles, Albuquerque, and Portland.***





**Summarizing:** What does all this mean for Supply Chain behavior? We can make some presumptions that are likely to morph into facts.

- Population will continue to grow worldwide
- Fuel will continue to rise, not steadily, but inexorably
- Infrastructure will remain a challenge for the foreseeable future in terms of
  - Achieving a state of good repair
  - Expanding to meet increasing demands
- Modal shifts to lower cost transportation will be driven more by increasing costs and infrastructure issues than speed-to-market
- Off-shoring will diminish and be replaced by near-shoring and on-shoring as benefits are increasingly offset by
  - Rising wages around the world
  - Increasing fuel cost
- Pressure will continue increasing to more tightly control inventory and related carrying costs
- Customers don't care about "Interoperability," except when it doesn't work





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## ■ Implications for Rail Leadership

# Implications for Rail Leadership

## European CEOs sign joint resolutions



Monday, June 28, 2010

RESHAPING Europe's railways to meet the economic challenges of the next decade, a greater role for the European Railway Agency, and the continuation of the Innotrack project were central themes at the 10th summit of European railway CEOs, which was held in Rome on June 26.

The most significant agreement was a resolution founding Railway2020, a working group of industry leaders coordinated by EU transport commissioner Mr Siim Kallas, which will examine measures to improve the performance of Europe's railways with the aim of supporting the economic recovery.

Under a second resolution passed at the summit, the CEOs agreed to lobby the European Commission to strengthen the remit of the ERA, allowing it to take a more active position in coordinating and controlling national safety authorities. The CEOs believe the ERA could play a unique role in guaranteeing operators fair and objective access to the network, with homogenous legislation, a push towards interoperability and uniform conditions for newcomers to obtain licences and safety certificates.

Finally, it was agreed to continue the Innotrack project, which seeks to improve capacity and productivity of track infrastructure while reducing costs.

*International Railway Journal*



## What does this mean for rail leadership?

*Railroads are historically receivers rather than producers of demand, but they can influence how that demand is distributed in moving people and products to market.*

### KEY ATTRIBUTES

- Adaptive
- Innovative
- Price competitive (TCO/TLC)
- Solution provider v. carrier
- Information Driven/Technology enabled

### COMPELLING VALUE PROPOSITION

- Cost-effective
- “Green”/Sustainable
- Viable alternative

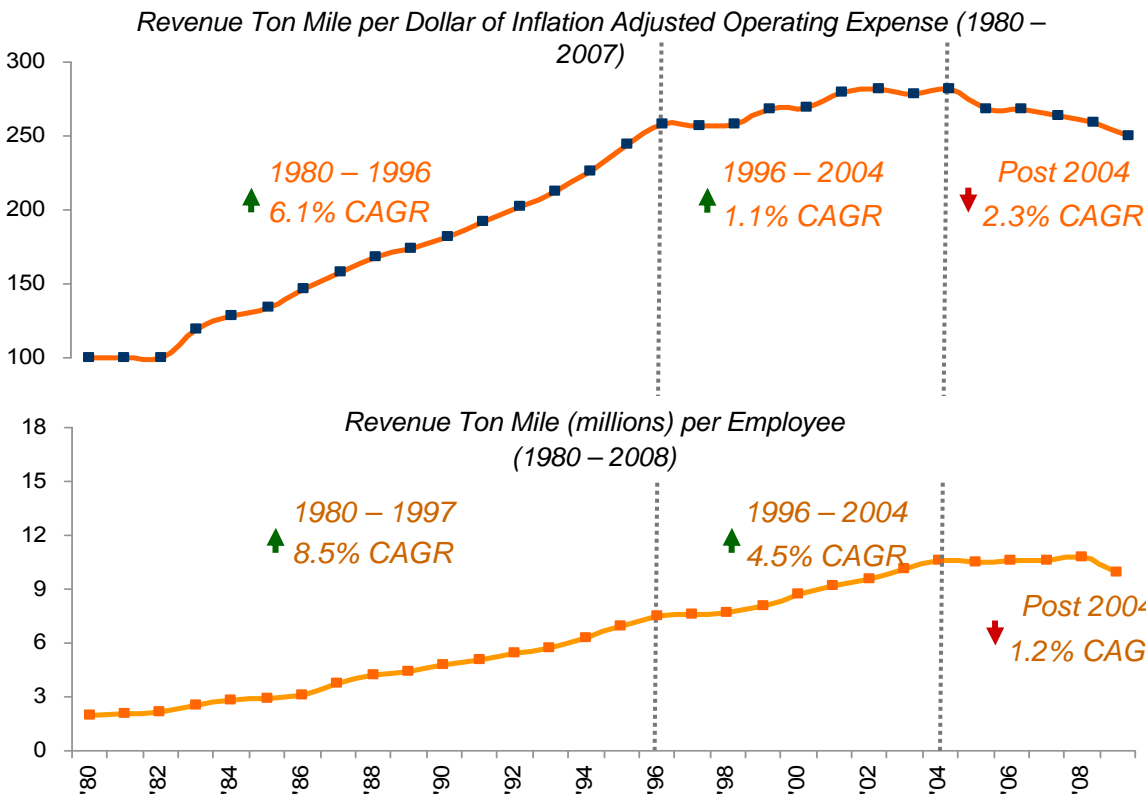
### CORE CHALLENGES

- Productivity
- Capacity
- ROIC

# North American railroads have had a rebirth since deregulation in 1980, but...historical productivity measures are showing signs of diminishing returns with significant investments looming.

## Searching for Incremental Productivity

Next generation productivity will be required as prior initiatives and tools begin to demonstrate saturation . . .



Source: AAR, Accenture Analysis

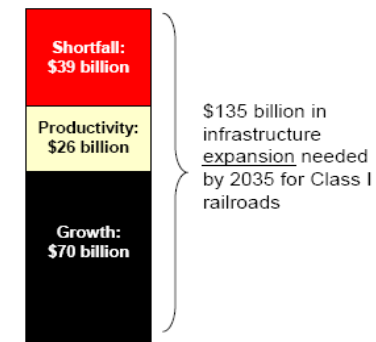
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. . . and required future infrastructure needs place a premium on asset efficiency

Forecasted Rail Capacity vs. Demand



**\$39 Billion Gap Between What Railroads Can Afford and the Capacity We Need**



# Technology will play a key role in driving the next wave of Industry productivity.

## Historical and Future Sources of Productivity

1980s – Mid 1990s

Mid 1990s – Mid 2000s

Mid 2000s – Today

2010 +

### Consolidation

- Significant M&A
- Less track for same freight
- Labor renegotiation
- Train crew consolidation (5-man to 2-man)

### Network Performance

- Physical infrastructure investments
- Network management & integrated planning
- Improved locomotive technology
- Extended crew days

### Continuous Improvement

- Optimization concepts
- Lean principles
- Predictive maintenance
- Fuel conservation

### Technology Driven Operations

- Communication-based train control
- Locomotive/Car innovation
- Operational transparency
- Integrated asset management

# Successfully capitalizing on these trends will require development across a distinct set of capabilities . . .

## From Trends to Capabilities

### Key Trends Shaping Future Performance

1. Seeking & Leveraging Next Generation Productivity



2. Getting Ahead of an Evolving Customer Base



3. Increasing Partnering & Configuration Flexibility



4. Managing Regulatory Uncertainty

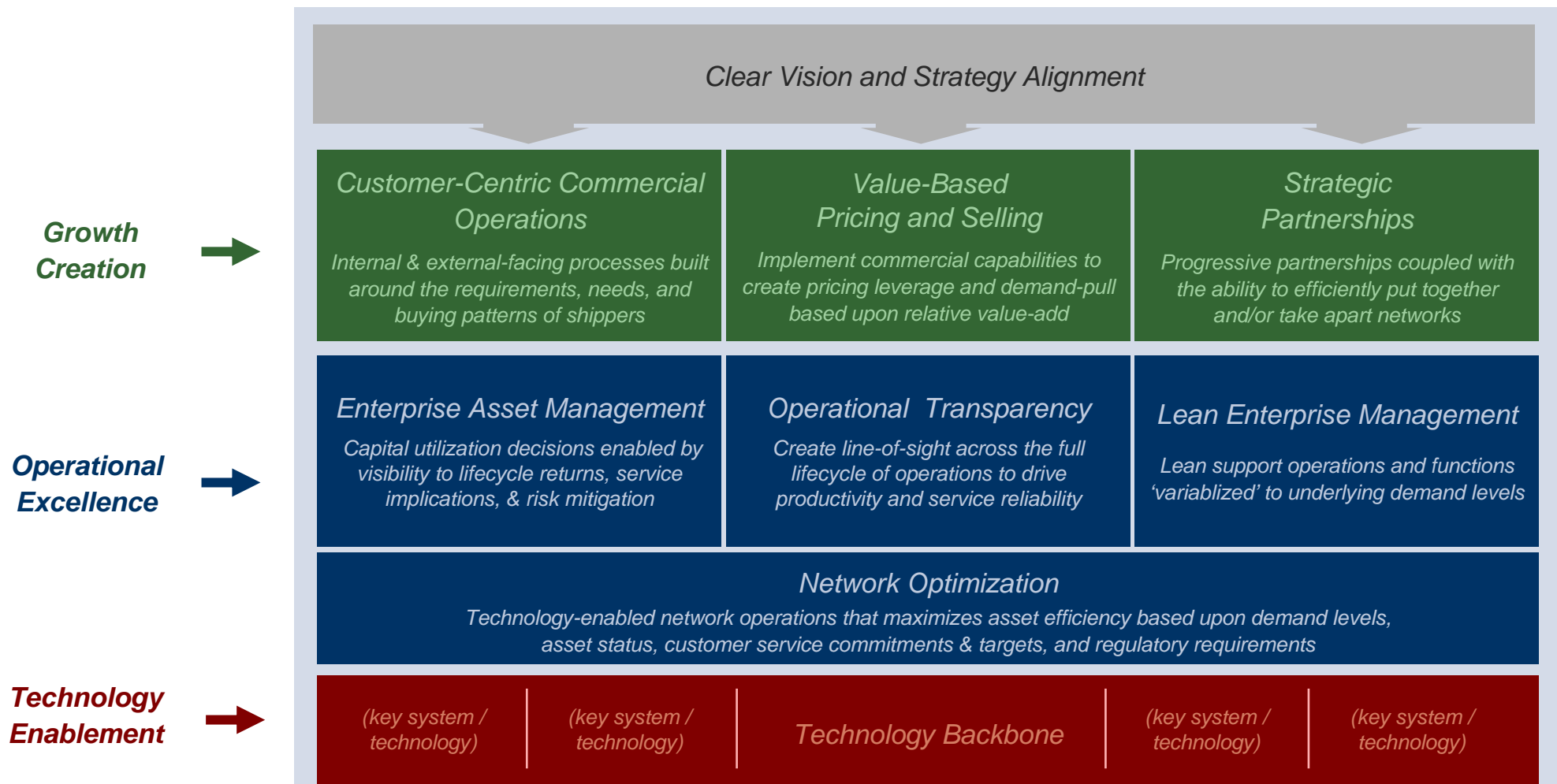


### Critical Capabilities

- Technology-Driven Operations
- World-Class Asset Management
- Line-of-Sight Operational Transparency
  
- Customer-Centric Commercial Operations
- Value-Based Pricing and Selling
- Embedment into Shipper Buying Processes
  
- Strategic Partnering and M&A
- Network Integration
- Technology Standardization & Integration
  
- ????
- ????

... that will define High Performance Rail in the future.

## High Performance Rail







**accenture**

*High performance. Delivered.*

**- Thank You -**