

Global Supply Chain Throughput



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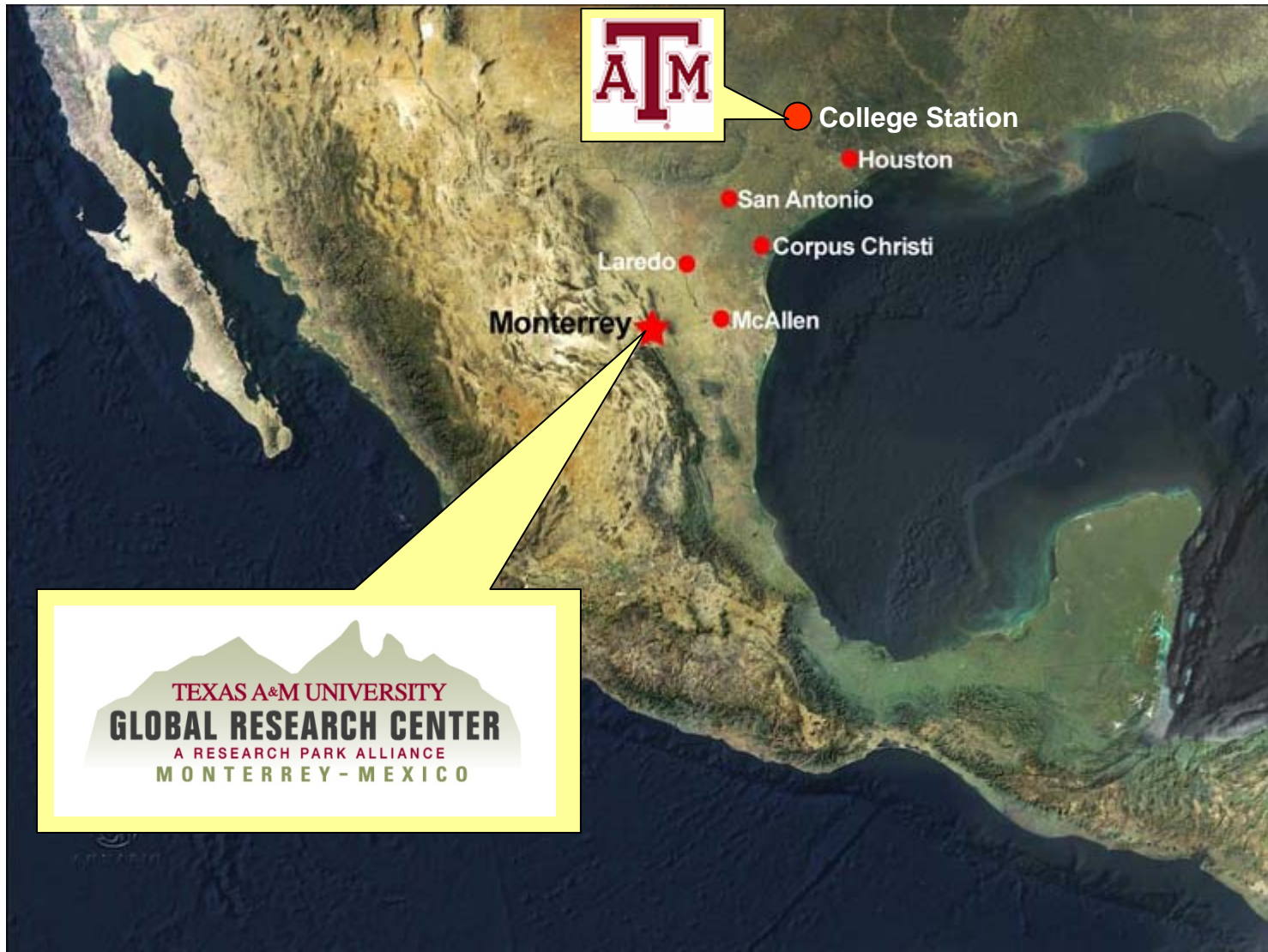
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Global Research Center

The center will focus on Optimizing Enterprise Throughput:

- Information, technology and logistics to manage inbound materials from worldwide suppliers
- Information flows & technology transfer to enhance product design, reducing time to market
- Advanced technology development and transfer to support manufacturing throughput
- Information, technology and logistics to support outbound materials to worldwide customer networks
- Application support and education for end user implementation (Technology Transfer)

Global Research Center



1. State of Logistics in the Region



Slide 5

E1

There are no Containers arriving to Port of Guaymas.

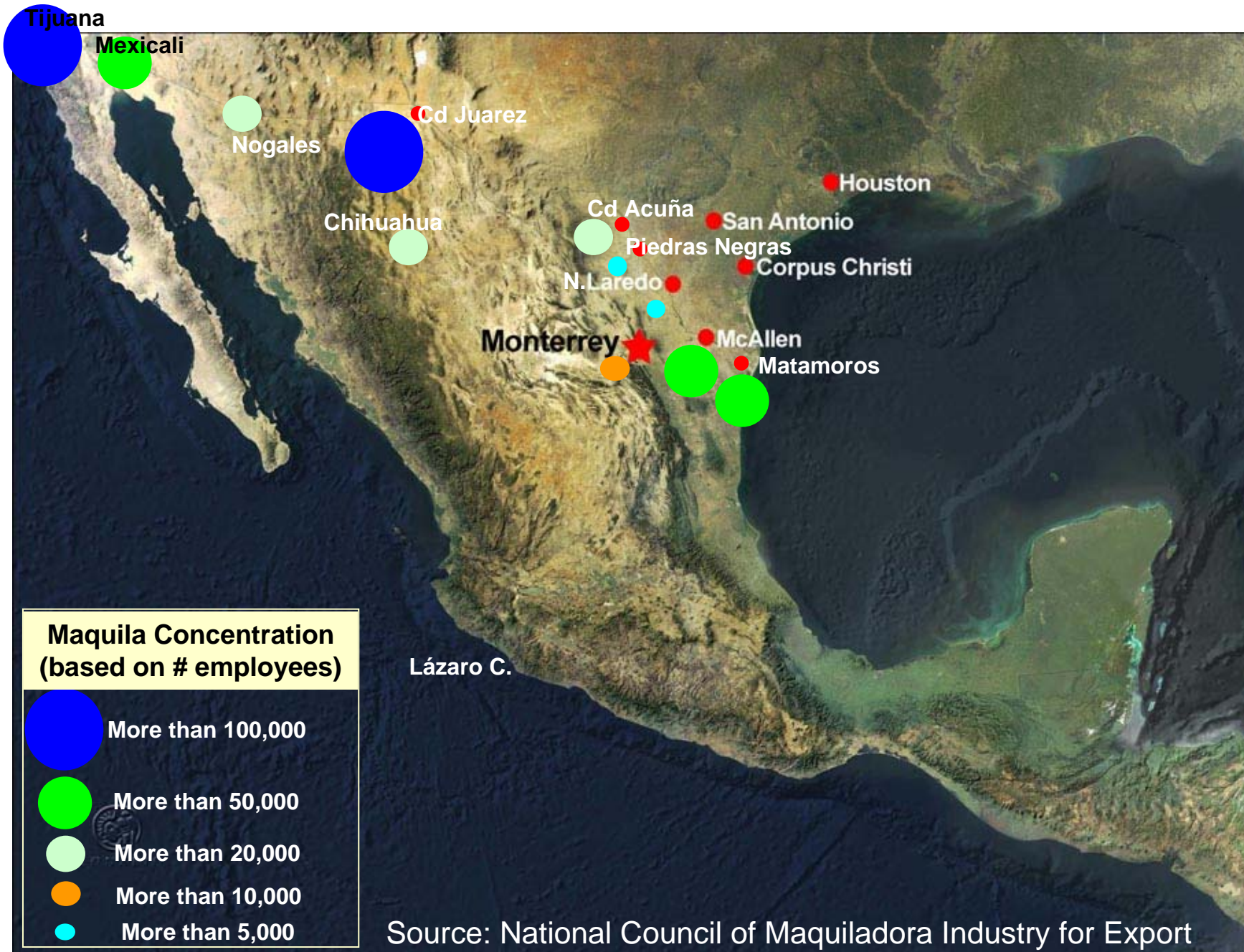
11.1M TEUs went accross Panama Channel that may or may have stop at Panama's Containers Terminal. The reported that most of those ships were in transit to USA to avoid bottleneck in LA and Long Beach.

Ernesto, 11/30/2007



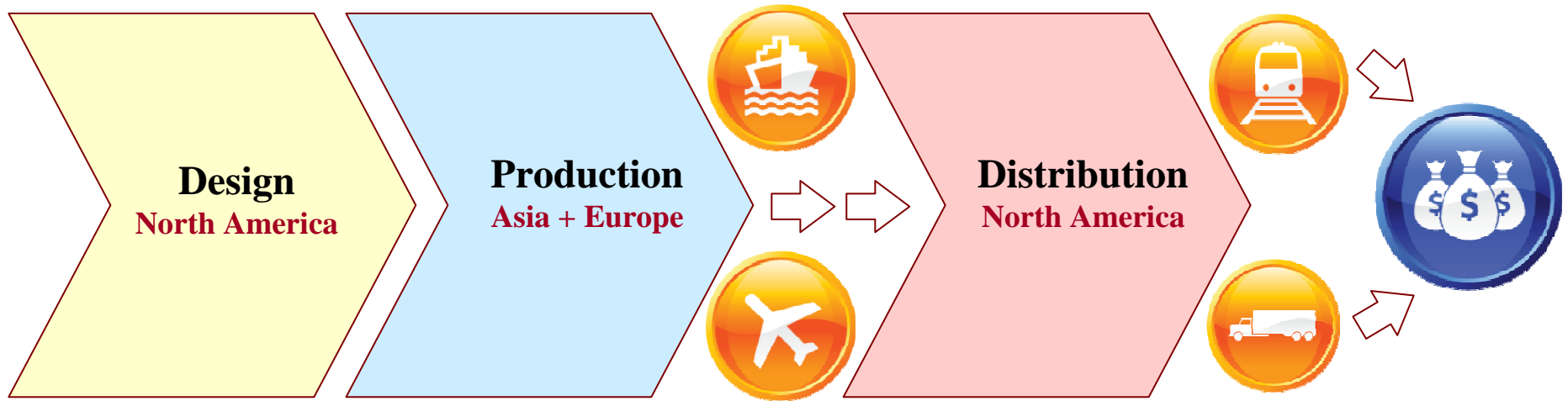
Sources: Panama Channel Annual Report API in Mexico

Texas A&M Research Center at Monterrey



2. What Does the Customer Want?

Traditional Global Supply Chain



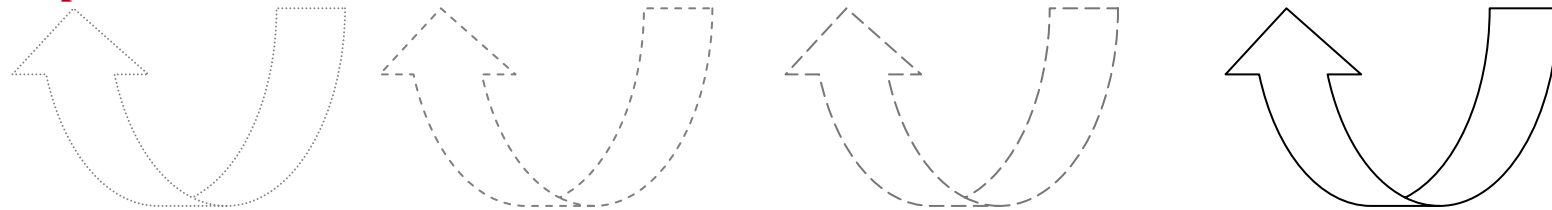
Product Development

Manufacturing

Transportation

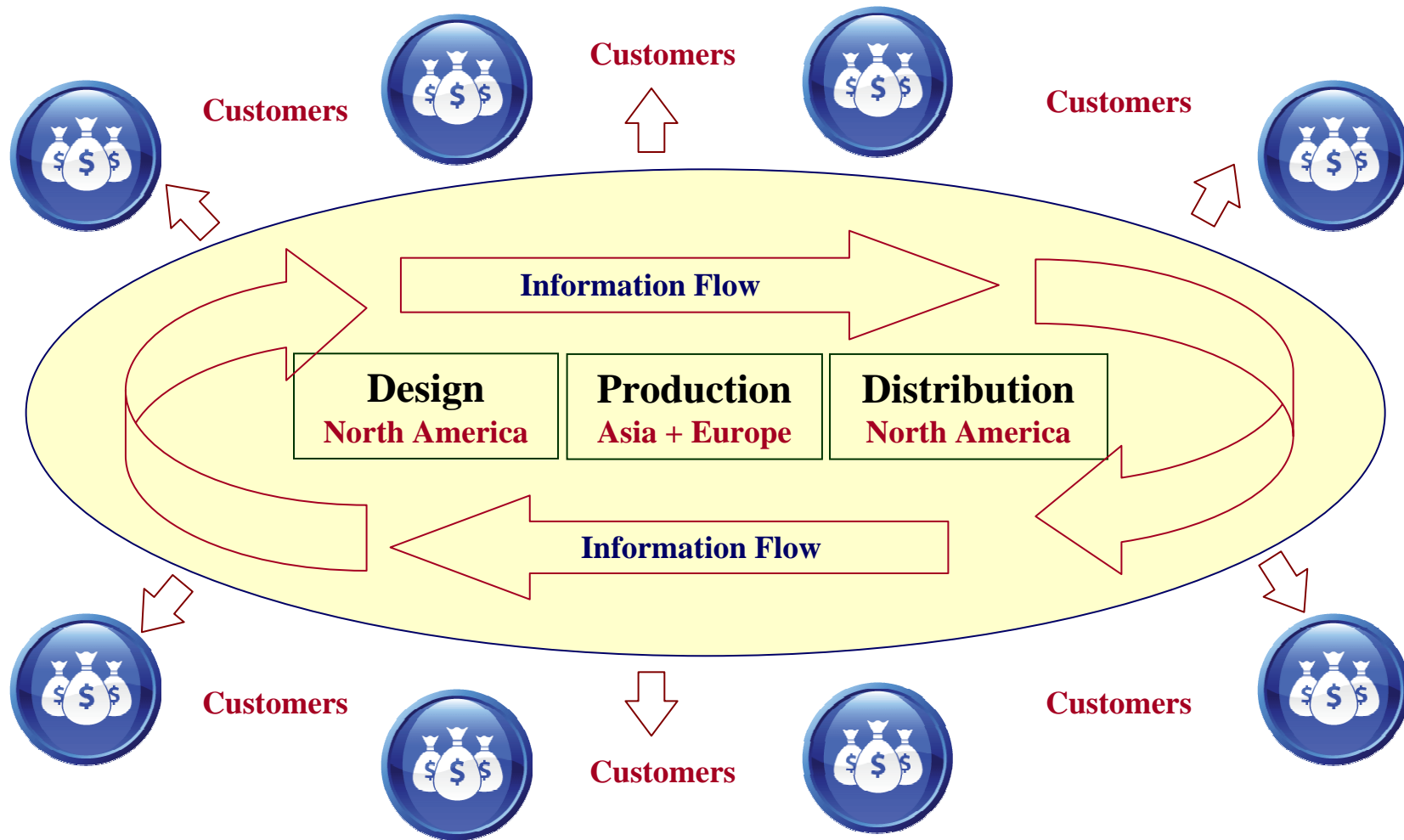
Distribution

Customer



Information Flow – Loss / Delay in Information

Global Supply Chain Throughput



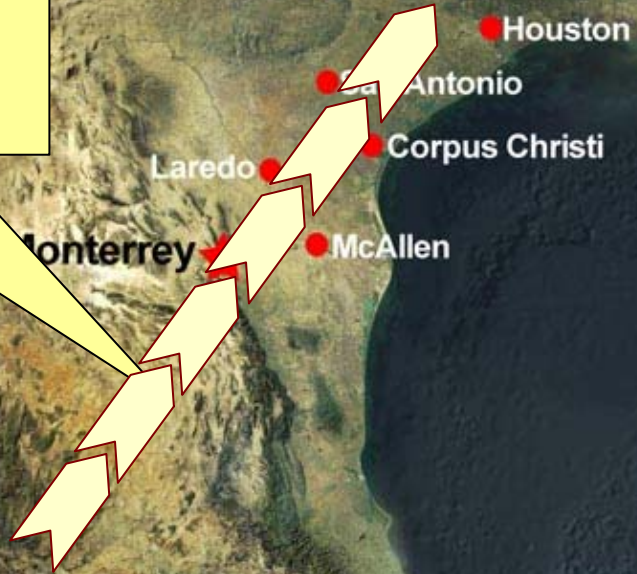
Global Supply Chain Throughput



Global Supply Chain Throughput

- Throughput Measures
 - Volume
 - Speed
- Throughput Drivers
 - Raw Material Production (Asia?) – Availability of Commodities
 - Transportation Capability – Availability of Capacity and Customs Issues
 - Subassembly Processes (Mexico?) – Availability of Capacity and Throughput Speed (technology)
 - Transportation Capability (US Inland and Mexican Ports?) – Availability of Capacity and Customs Issues
 - Final Assembly Processes (US?) – Availability of Capacity and Inventory Issues (Supply Chain Management)

A Natural Logistics Crossroads?

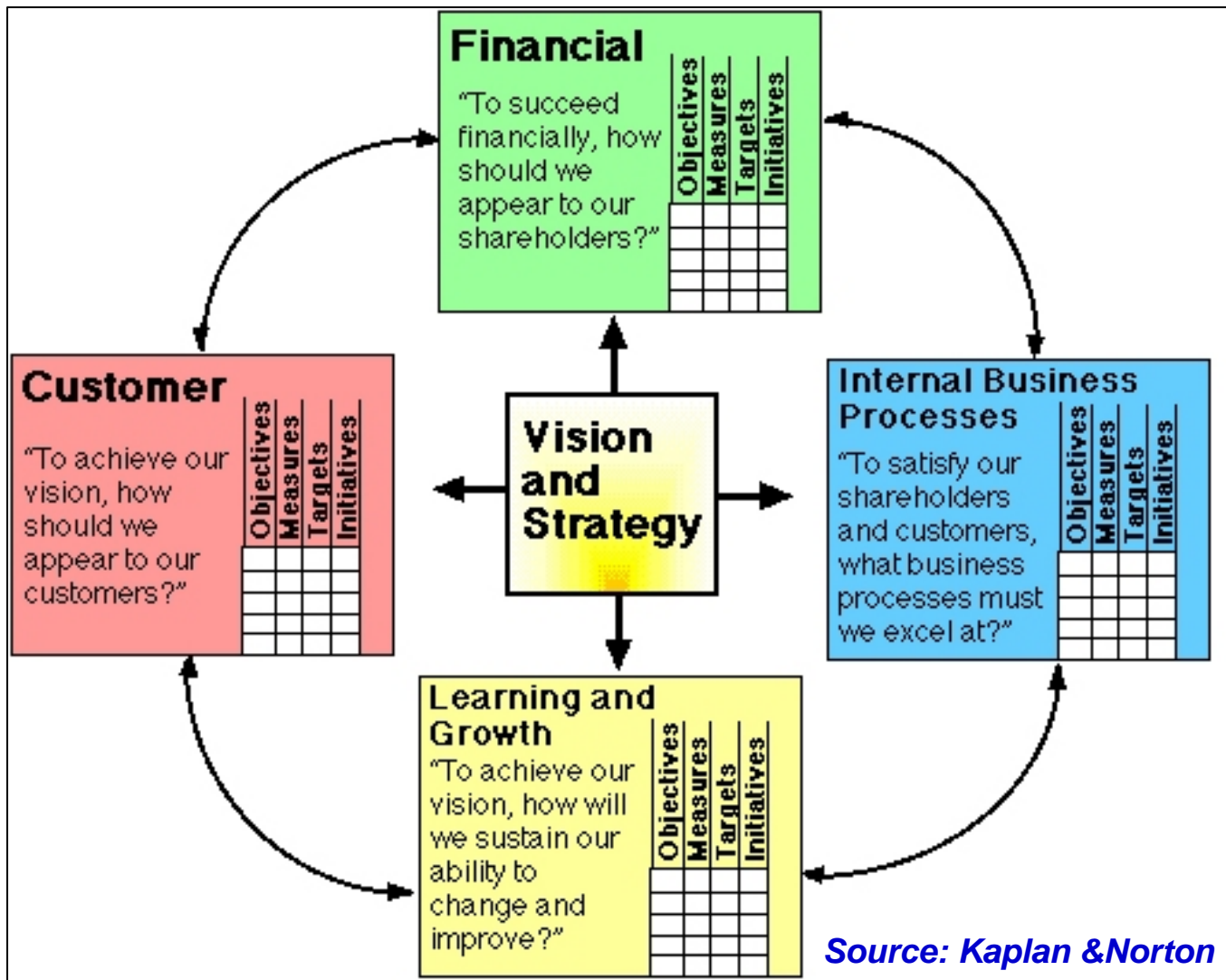


MEX-TEX Logistics Cross Roads

- Are We Reaching Some Natural State?
- Does NAFTA support this state, will it continue? Should it?
- Critical Success Factors
 - Capacity
 - Low Cost
 - Employment Base
 - Ease-of-Doing Business
- Metrics
 - Throughput
 - Cost

If So, Then What?

- Asian Product comes through Mexican Ports into the Region
- The Region must:
 - Increase throughput volume – for capacity constrained environments.
 - Increase throughput speed – for capacity overloads.
- Issues
 - Other potential ports outside of Texas and Northeast Mexico.
 - Resistance to NAFTA.
 - Logistical bottlenecks in Texas and Mexico.
 - Lack of a supplier base (also an opportunity).
 - Panama Canal upgrade.
 - Lack of a vision and marketing plan.



New Rules

- Customer
 - Who?
 - Anyone shipping product through this region (HEB).
 - Anyone dependent on product shipped through this region (Toyota).
 - Anyone manufacturing product in this region (York).
 - Anyone whose manufacturing presence depends on shipments going through this region (Metalsa).
 - Anyone providing services to shippers (UP, KCS).
 - Anyone who wants to work/live in this region (taxpayers).
 - What?
 - Faster - Fewer delays due to lack of capacity, hours of operation, customs procedures, legal issues, etc.
 - Less expensive – In terms of inventory, money invested, facilities, transportation, labor, etc.

Laredo and South Texas

- Unprecedented Opportunity
 - Logistics Crossroads
- Must Respond to Supply Chain Throughput
 - No Bottlenecks
 - Higher Technology on Both Sides of the Border
 - Greater Logistics Agility
 - Reduced Assets

5. Texas A&M: Planned Research

Texas A&M Consortium

- Form a Consortium to study the comprehensive challenge and opportunities.
- Find Practical solutions to continue and enhance this region's domination as a logistics corridor.
- Consortium members include government entities, customers [companies], and logistical providers.
- This Consortium will be further supported by a federal grant to study the region's throughput.



Questions & comments

Thank You!