

Saturday April 25, 2009 Session 8 ~ 10:30AM

Government and Regional Policies on Entrepreneurship and Innovation II

# Towards an Integrated Southeastern European Trade Facilitation Cluster

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## The 21st Century "Silk Road"



- Historical: disintegration of empires
- Geo-political: smaller states with individual borders
- Technical: Trade documents in multiple languages and formats
- SEE Competitiveness: today's Trade Corridors need Theory, Policy and Business Processes reengineering!

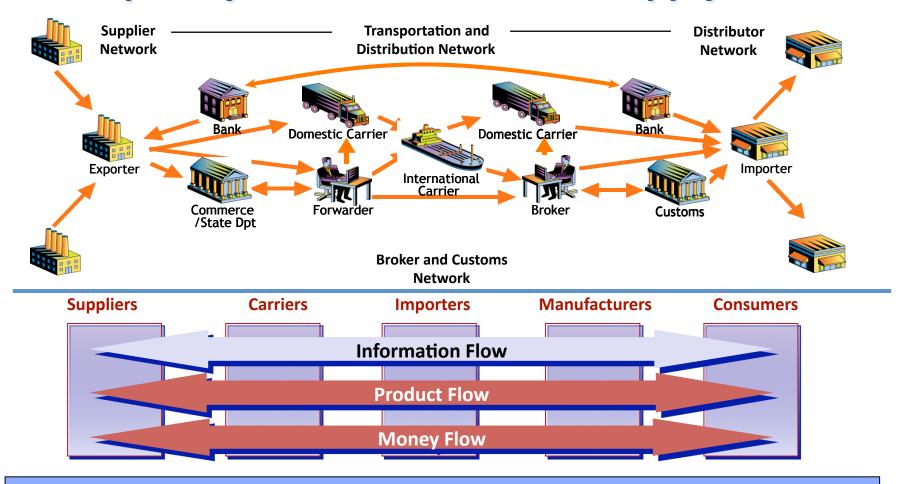
## Overview/Objectives

- 1. Describe the economic transition and technological capability that make the development of a SEE trade facilitation cluster feasible
- 2. Discuss the complexities of a global trade system consisting of diverse networks of economic clusters defined by collaborative synergies, continual innovation, and global connectivity
- 3. Present the economic realities of global trade, impacts that web-based technology have on redefining the cost structure of trade in a global economy, and the economic growth potential for progressive regions
- 4. Detail the critical importance of knowledge centers that foster multi-disciplinary innovation and collaboration in the sustainable growth of a trans-boundary, trade based cluster in SEE.

## Introduction - A Shifting Economic Landscape

"What is undeniable is that the global economy is reshaping the competitiveness landscape in ways that few would have predicted even a decade ago. The global economy is transforming rapidly, driven by new competitors, revolutionary technologies, new industries, and growing numbers of sophisticated consumers."

## **Complexity of the International Supply Chain**



It is estimated that the average customs transaction involves 30 different parties, 40 documents, 200 data elements (30 of which are repeated at least 30 times) and the re-keying of 60% to 70% of the data at least once.

— United Nations Council on Trade and Development

Source: Bearing Point

## Introduction - A Shifting Economic Landscape

The current financial crisis underscores these realities...

~ Robust growth potential will be realized by those who aggressively build innovative capacity to revolutionize traditional market space ~

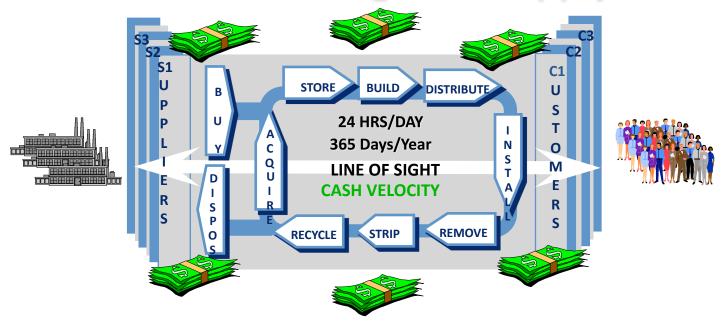
Innovation is the force behind the evolution of the Network Economy, where value is derived from production and diffusion of knowledge and information

## **Innovation & the Network Economy**

Complex System of Systems (SoS) that flourishes through a web of information and multi-disciplinary collaborations...

- Value is derived from increasing connectivity between nodes
- The connection between productivity and innovation
- The exogenous effect of innovation
- Spillover effects
- Uncertainty in the current analysis of knowledge based systems

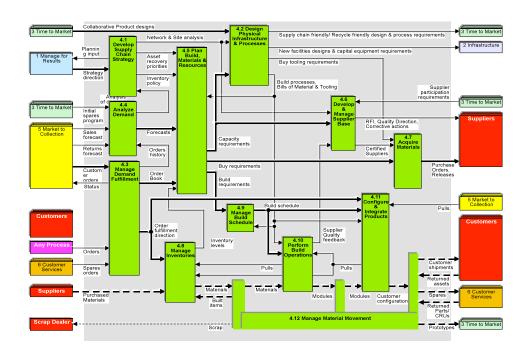
## **MANAGING The Integrated Supply Chain**



The complexity and capabilities of eBusiness has created opportunities to enhance productivity. Those enterprises that optimize their integrated supply chain will be rewarded significantly.



## The 12 Integrated Supply Chain Processes



- 4.1 Develop Supply Chain Strategy
- 4.2 Design Physical Infrastructure & Processes
- 4.3 Manage Demand Fulfillment
- 4.4 Analyze Demand
- 4.5 Plan Build Materials and Resources
- 4.6 Develop and Manage Supplier Base

- 4.7 Acquire Materials
- 4.8 Manage Inventories
- 4.9 Manage Build Schedule
- 4.10 Perform Build Operations
- **4.11 Configure and Integrate Products**
- **4.12 Manage Material Movement**

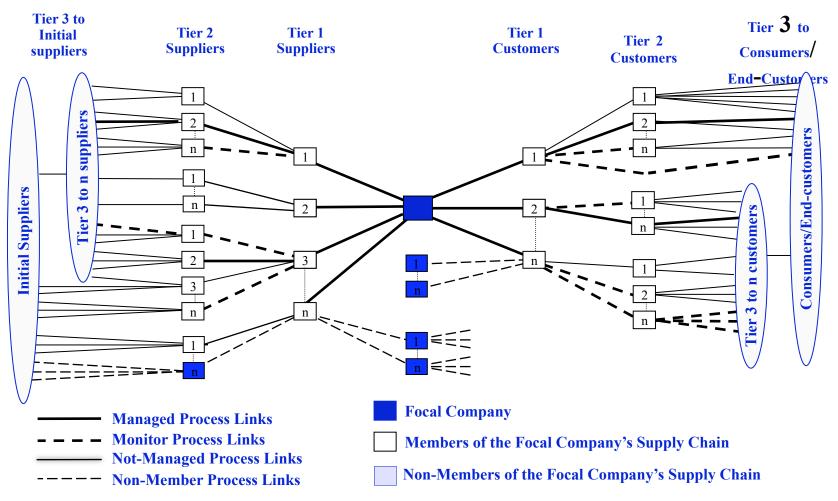
## The Integrated Supply Chain... As a "System"

## The Economics of Global Trade

#### The Costs of Global Trade

- In the trillions of dollars
- Annual costs between Asia and Europe alone -\$200 billion
- Transaction costs lack of connectivity
  - Border crossing procedures, trade facilitation costs, lack of standardization of data and documents.
  - A day of delay reduces trade value by at least 1 percent
  - Paper based trade documentation, approximately 7% of total trade value

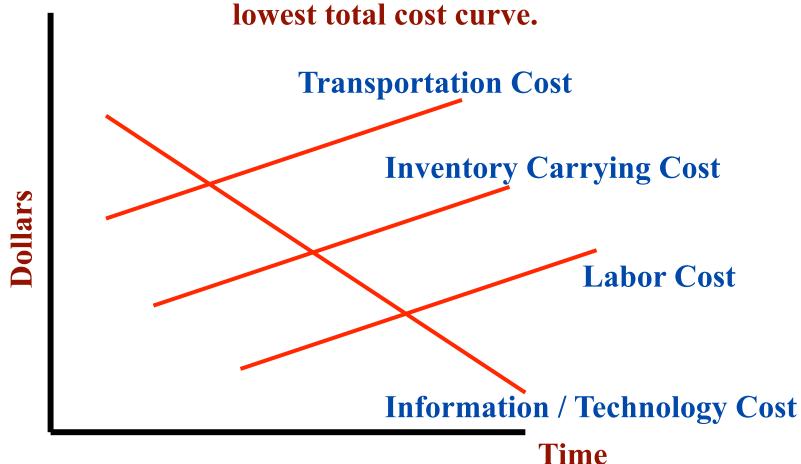
## **Types of Inter-company Business Process Links**



Source: Douglas M. Lambert, Martha C. Cooper, and Janus D. Pagh, "Supply Chain Management: Implementation Issues and Research Opportunities," *The International Journal of Logistics Management*, Vol. 9, No. 2, 1998, p. 7, www.ijlm.org.

## Shifts in Trade Costs resulting from Web-based Technologies – Economic Impacts

We want to substitute information / technology costs for transportation, inventory and/or labor costs to operate on the lowest total cost curve

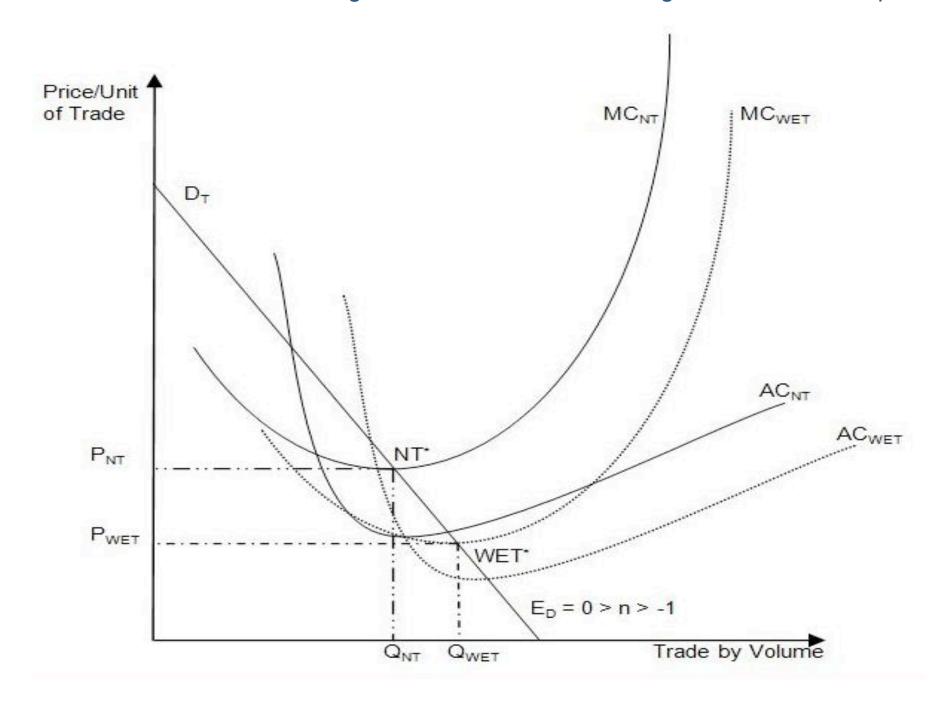


Source:Bernard La Londe, The Ohio State University circa May 1999..

## Shifts in Trade Costs resulting from Web-based Technologies – Economic Impacts

- Average and marginal costs of trade are reduced
  - decreased carrying costs and improved asset management
  - improved trade metrics that increase efficiency and social benefit
  - improved measurement of cost trajectories for production, time to market, and taxation
  - government agencies are better able to track and forecast tax revenues generation
- See Graph

#### Shifts in Trade Costs resulting from Web-based Technologies – Economic Impacts



## **Towards a Web-based Trade Infrastructure**

- Regulatory Framework
- UN/ECE/CEFACT
  - Recommendation 33 Single Window
  - Recommendation 34 Data Harmonization
  - Recommendation 35 Legal Framework for SW
- World Customs Organization (WCO)
  - Authorized Economic Operator (AEO)
  - WCO SAFE Framework of Standards (SAFE)

## **Towards a Web-based Trade Infrastructure**

- The "Single Window" data entry system -
  - An integrated environment for web-based data and document exchange
  - B2B, B2G, and G2G (intra/inter) connectivity
  - Core, common and unique
  - Multiple languages, technical formats and structures
- Integrated AIDC, GPS, and RFID for in-transit visibility

## **Electronic Trade Documents**

Trade documentation must precede and accompany shipments to the Ports.

**Commercial Invoice** Order **Ouotation Export Customs Declarations Shipping Instructions** Non-negotiable Sea Waybill **Forwarding Instructions Acknowledgement of Order Certificate of Shipment Commission Note Consignment Status Credit Note Dangerous Goods Note Debit Note Export Cargo Shipping Instructions House Bill of Lading Purchase Order Proforma Invoice** Quotation **Standard Shipping Note** 

#### Pre-Shipment SHIP En Route • Certificate of Origin SHIP • Bills of Lading • Insurance Certificate • Customs Forms • Inspection Certificate Delivery LOI • Invoice • Final Invoice • Letter of Credit • Transmittal Letter Packing list Vessel Manifest • Shipper's LOI

## **Access to Trade Data Requirements**

This documentation contains core information which governs the shipment of goods.

#### **Party Information**

- Source
- Agent
- Inland carrier (origin)
- Value of goods

#### Route information

- Method of shipment/mode to forwarder
- Inland route (origin)

#### **Party Information**

Inland carrier

#### **Route information**

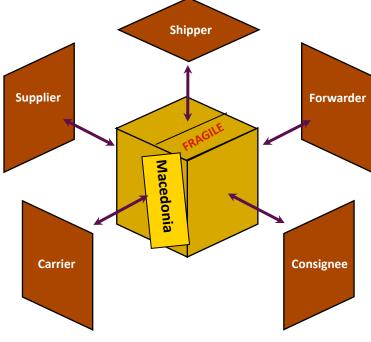
- Pier
- Transshipment ports
- Inland route

#### **Party Information**

- Carrier
- Financial institutions
- Ultimate consignee

#### **Route information**

- Country/point of origin
- Destination



#### Party Information

Ocean carrier

#### Route information

- Port shipped
- Port unloaded
- Port of US destination
- Ocean route
- Voyage number
- Vessel

#### **Party Information**

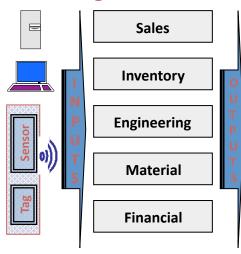
- Customs broker
- Delivery carrier

#### **Route information**

Delivery route

### Parties Involved with the Movement of Goods

#### **Data Sharing Process**



#### **Business Partners**

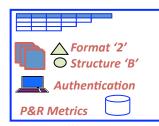
- **SME** (Importer Exporter)
- **Prime** (Importer Exporter)
- Freight Forwarder
- Shipping Agent
- Customs Broker
- SME Transporter
- SME Carrier
- Banks
- Customers
- Government
  - ~ Licensing
  - ~ Certifications
  - ~ Crisis Management

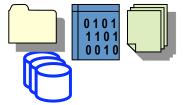
## Various Country I.B.M. Integrated Border Management

- Customs
- ~ Customs Warehouse
- ~ Inland Customs
- ~ HQ Customs
- Border Police
- Veterinary
- Phyto-Sanitary
- Agriculture
- Weights & Measures
- Crisis Management

#### **Data Sharing**

#### **Process**





#### **CORE**

- International Stds
- IATA SITA
- WCO
- UN/CEFACT, UNECE, UNCTAD
- ISO, IMO, ICAO, ICC
  - ~ Data Standards
  - ~ Messages
  - ~ Unique Consignment Reference
  - ~ TIR
- **Signature** Financial & Banking
  - ~ Exchange Rates
  - ~ Tariffs

#### **COMMON**

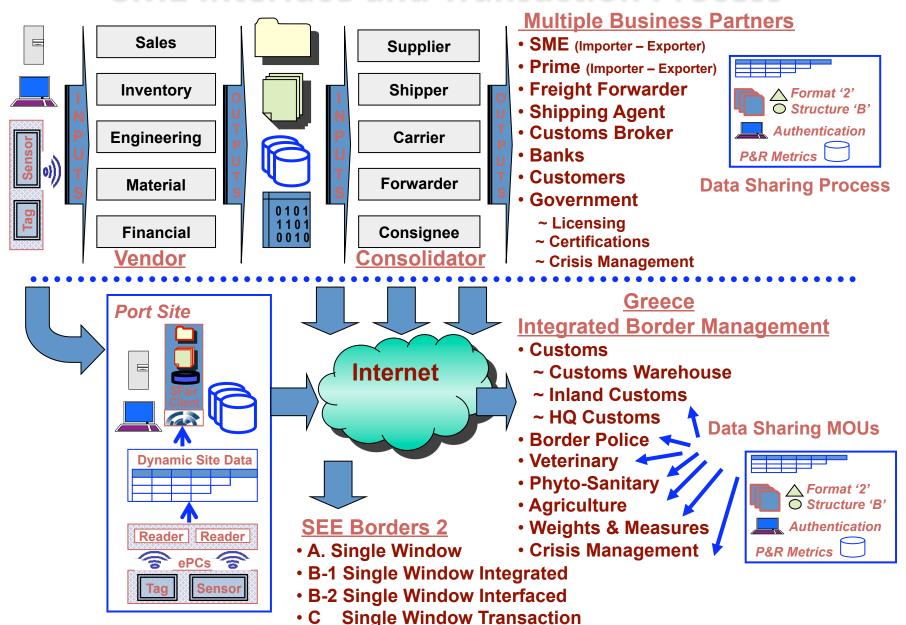
- Trade Coalitions
- NAFTA
- ITP US & UK
- European Union
- ITMS
- TARIC
- TQS
- EBTI
- SMS
- ISPP
- NCTS
- VIES

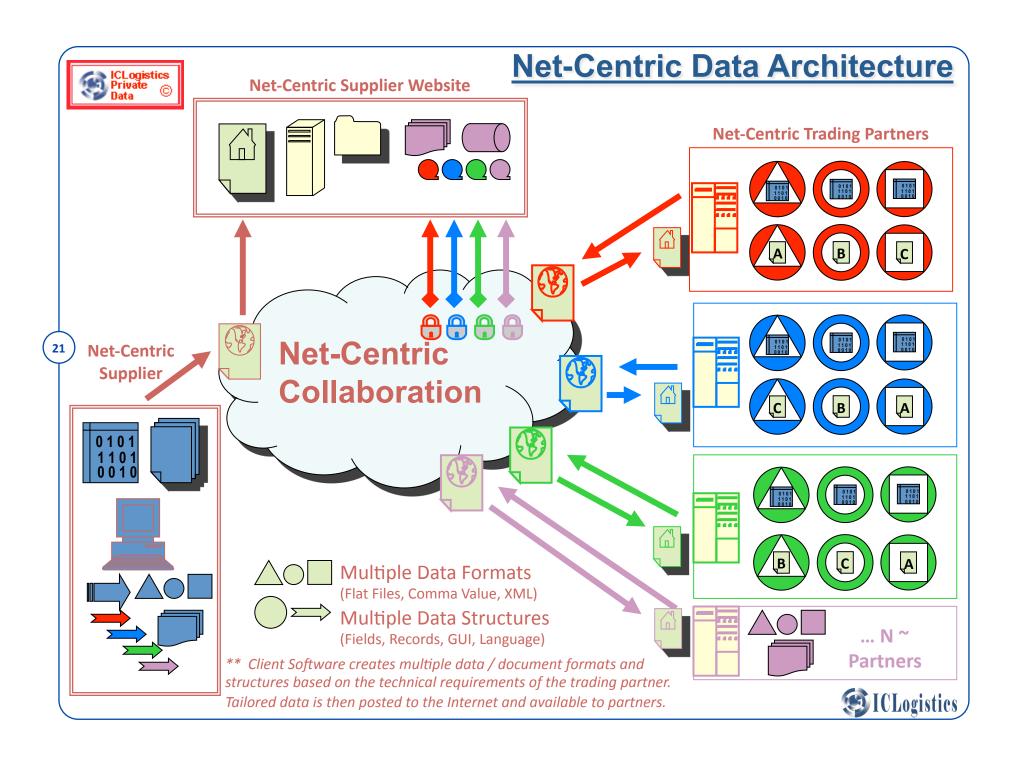
#### **UNIQUE**

- Duty Drawback
- Temporary Import
- Customs Warehouse
- U.S. ~ ITDS, FACET, ACE
- Mauritius ~ MACSS

  Trade Net Crimson Logic
- Sweden ~ VCO Virtual Customs Office
- Netherlands ~ Cargonaut

## **SME Interface and Transaction Process**





## **Towards a Web-based Trade Infrastructure**

- Web Service Reporting The Network Effect
  - Customized reports, not software platform dependent
  - Unlimited data flow and combinations across (n) networks
  - Increased participation in the global trade network and
  - Increases benefits by decreasing risk
  - Produces competitive advantage by providing incentives for incumbents to interconnect with new entrants

# The Southeastern Europe Trade Facilitation Cluster

### Core attributes:

- Geographical, historical importance The Silk Road
- o"Ten-T" corridors Corridors IV, V VII, VIII, and X
- geopolitical climate, mutual economic interests, and strategic allegiances for the movement of labor and capital

## 21st Century "Silk Road"



## **SEE Trade Corridors**



# The Southeastern Europe Trade Facilitation Cluster

- Hub for manufacturing, value added, and shipping visibility
- Consistent growth in regional export/import that outperforms the current EU average
- Magnet to cluster industries and their supporting business activities
  - o anchoring trade facilitation hub
  - o current economic clusters textiles, agriculture
  - leading to the development of intersecting networks

# The Southeastern Europe Trade Facilitation Cluster

## Strategic Development Needs

- Integrated network approach crossing borders
  - Collectively exhaustive, mutually exclusive
  - Governments, businesses, and academic institutions
    - eliminate or relax rigid financial rules
    - focus on innovation based projects
    - development of spatially unrestrictive innovation networks through technology and incubation centers [34]



# Centers of Excellence: A Constructive Approach to SEE Cluster Development

- Knowledge Centers and Trans-boundary Cluster Development
  - Synergy, continual education and training, and collaboration
  - Cutting-edge technologies
  - "Constructed advantage" receive, absorb, and transmit innovative strategies, technological advancement and knowledge over long distances



# Centers of Excellence: A Constructive Approach to SEE Cluster Development

- Knowledge Centers and Trans-boundary Cluster Development
  - Universities and institutions
  - innovative capacity, repositories of knowledge, network effects
  - knowledge transfer producing innovation, promoting knowledge sharing, knowledge transfer through education and training



# Centers of Excellence: Approach

- Address specific challenges of SEE transboundary trade facilitation cluster development
- Cross-border partnering programs collaboration
  - governments, universities, service agencies, corporations, SMEs
  - benchmark performance, debate "Trade Facilitation" issues, embrace comprehensive program, case studies
     successful web-based supply chain management and logistics strategies



## Centers of Excellence:

## **Strategic / Long-term Benefits**

- Network building capability
- EU initiatives in the creation of knowledge networks to satisfy short term, mid-term, long term, and strategic objectives.
  - o short term confidence
  - mid-term objectives improved production capacity, decreased transportation times, increased competition, and speedier rates of adoption of innovative technologies.
  - Long term advance regional cohesion, spread spillover effects

## **Conclusions**

- The importance of innovation
  - Grave consequences for those who fall behind
  - Adoption favors the incumbent consumer preference leads to variable value structures.
  - Trade follows the path of least resistance, migrating to the trade corridors that are ICT enabled and offer lower costs, improved shipment visibility, and lower risk

## **Conclusions**

- 21<sup>st</sup> Century competitiveness
  - Challenging frontiers in science and technology
  - Achieving a comparative advantage with a creative and talented workforce transforming risk into reward
  - Engaging in networks for the adaptive capability to adopt innovative technologies
  - Holistic approach technical, institutional, and cultural innovation

## SEE ~ The Developmental Challenge

- Develop unique technology improvements to help Facilitate Regional Competitiveness.
- Offer regional SME's more value and opportunities that will enable growth and prosperity.
- Provide the Tools that will enable the SME to compete in the 21<sup>st</sup> Century.
  - Be Ready for business change & Global competition
    - Creating an adaptive and agile management and organizational culture
  - Become Technically & Tactically proficient
    - Internet and information systems integration and deployment
  - Benchmark for quality effectiveness
    - Adopting quality and benchmarking techniques as a competitive strategy
  - Balance Costs, Inventory, & Customer Service
    - Creating value by striking the right balance
- Enable the SME to gain potential Market access to respective Industry Supply Chains.
- Enable purchase organizations/Primes to have minimal risk visibility down to new prospective sme/suppliers.
- Provide a "single-thread" e-Commerce solution for the entire supply chain process

Academic – Theory Government – Policy Business - Processes

## Final Thoughts...



## **Murphy's Law**

- Nothing is as easy as it looks,
- Everything takes longer than you think,
- If anything can go wrong, It will.

"We are what we repeatedly do. Excellence then, is not an act, but a habit."

- Aristotle



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