IBM Global Movement Management Overview

January 25, 2006

Overview

- IBM framework for the security of the global economic system, "Global Movement Management" (GMM)

- Specific IBM cargo security solution within GMM: SecureTrade Lane

- Role of current and next-generation PNT systems in the GMM framework

Global Movement Management defined

- **Definition:** Comprehensive and achievable framework for securing the key flows – people, goods, conveyances, money, and information – in the global economy against disruptive threats and building resiliency into the system.

- Aligned with commercial imperatives of the system and the protection of core societal values

- Scope of GMM includes numerous existing activities around the world:
  - **People:** border checkpoint systems, passport, visa & ID issuance systems, passenger screening systems
  - **Goods:** cargo certification, screening, and tracking systems
  - **Conveyances:** vessel and vehicle tracking systems
  - **Money:** terrorism finance and money laundering disruption activities
  - **Information:** intelligence and surveillance activities

Why does Global Movement Management matter?

- Provides a framework that:
  - Strengthens **linkages** within the global system
  - Enhances **system awareness** by integrating security activities across multiple flows
  - Maps out a **system-of-systems architecture** as a tool to facilitate strategic decision-making
  - Addresses the **governance** of the global system in a realistic and feasible way.

- GMM does these things while still:
  - Preserving the efficiency and performance of the system
  - Protecting privacy and civil liberties
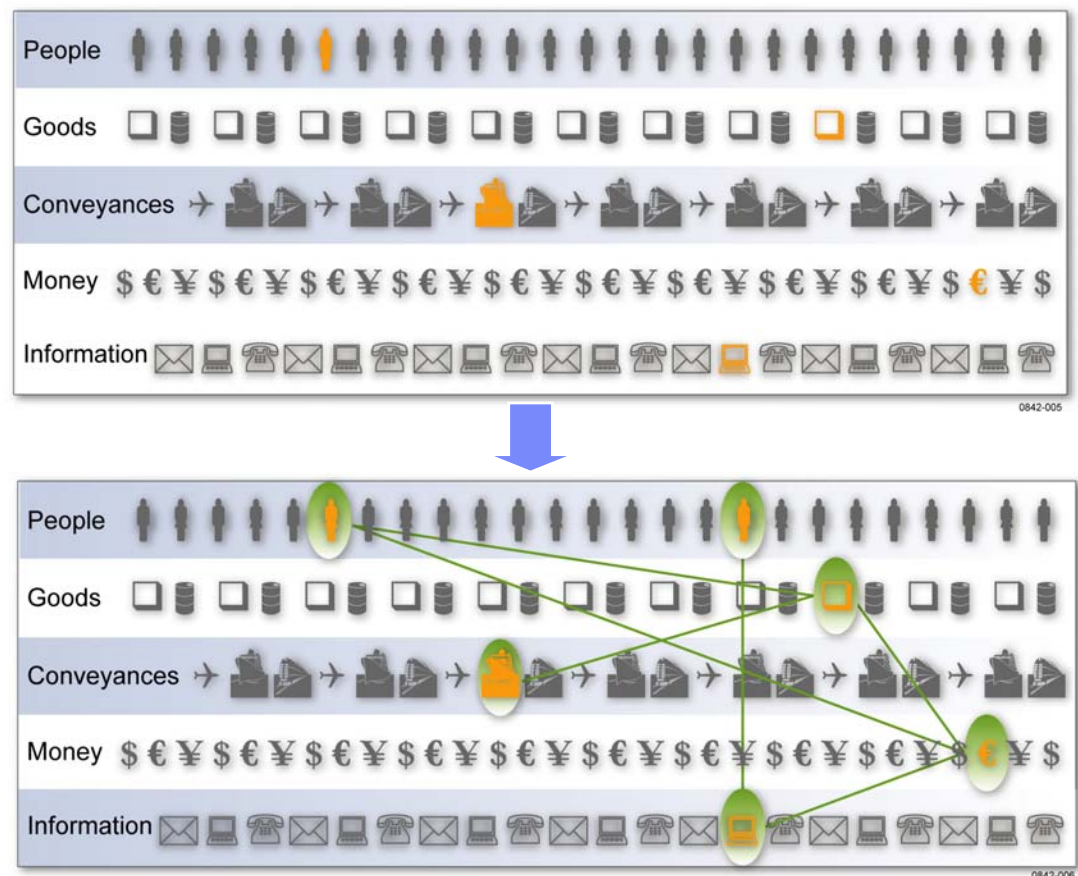
GMM Value Proposition: Linkages

- Global Movement Management looks at the global system in new ways, finding interdependencies and linkages among the system's core functions
- Four key categories of linkages: **business functions**, control points, data sources, and stakeholder relationships.
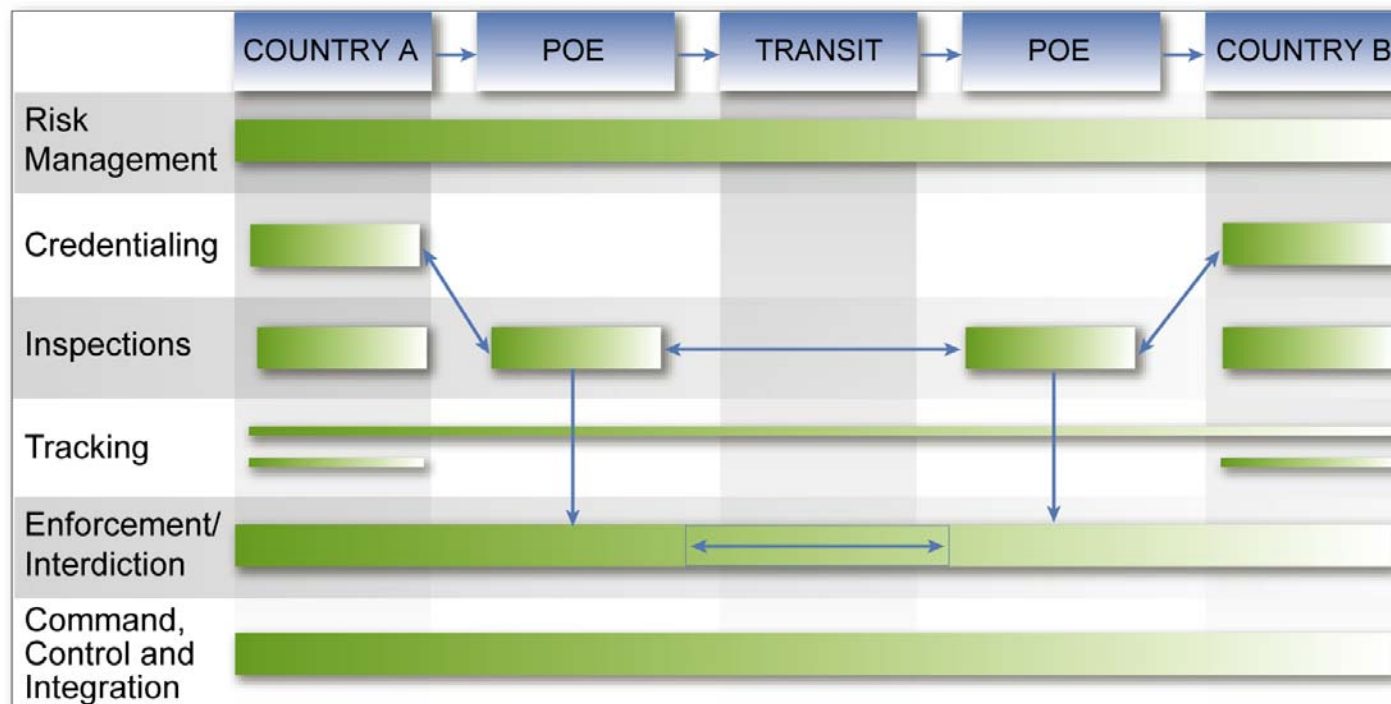
GMM Value Proposition: System Awareness

- Facilitates the risk assessment of activities across the key flows of the global economy – people, goods, conveyances, money and information – not stovepiped within each.

GMM Value Proposition: Integrated Architecture

- Puts forward a system-of-systems architecture that integrates key security and resilience activities into the broader architecture of the global economy.
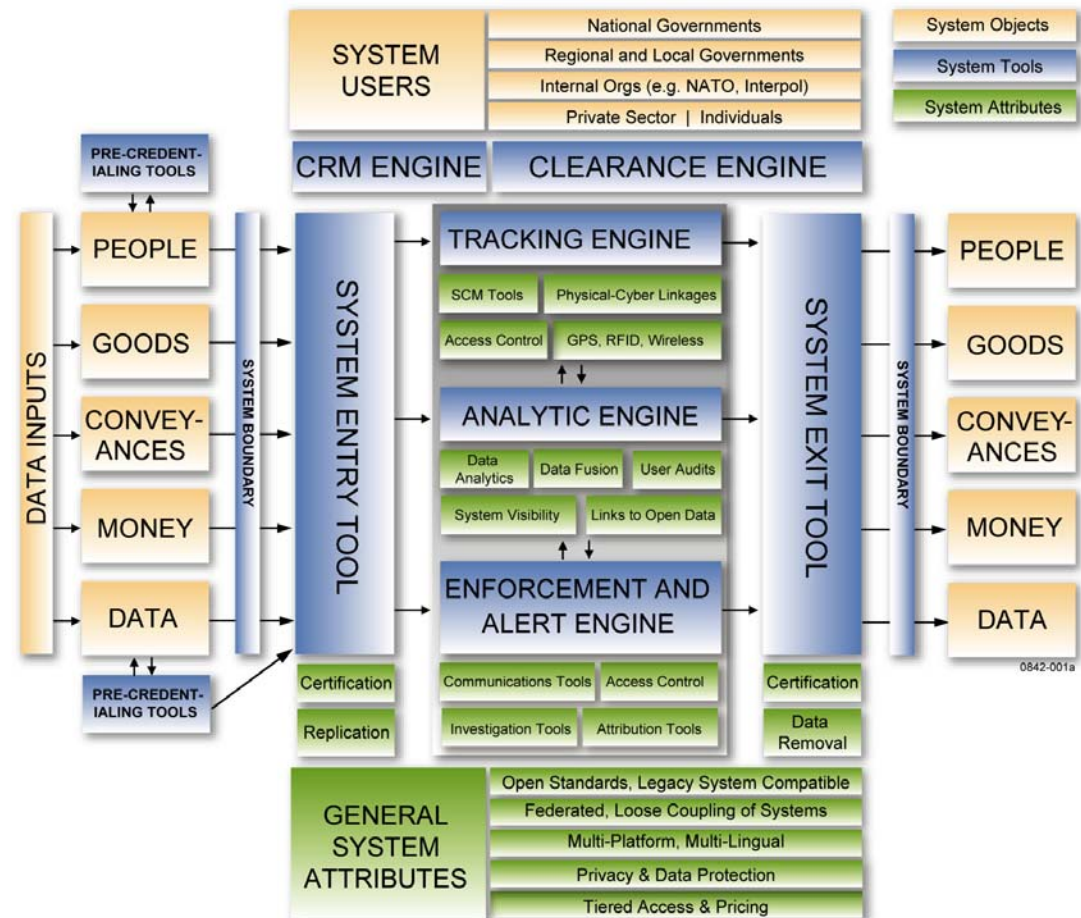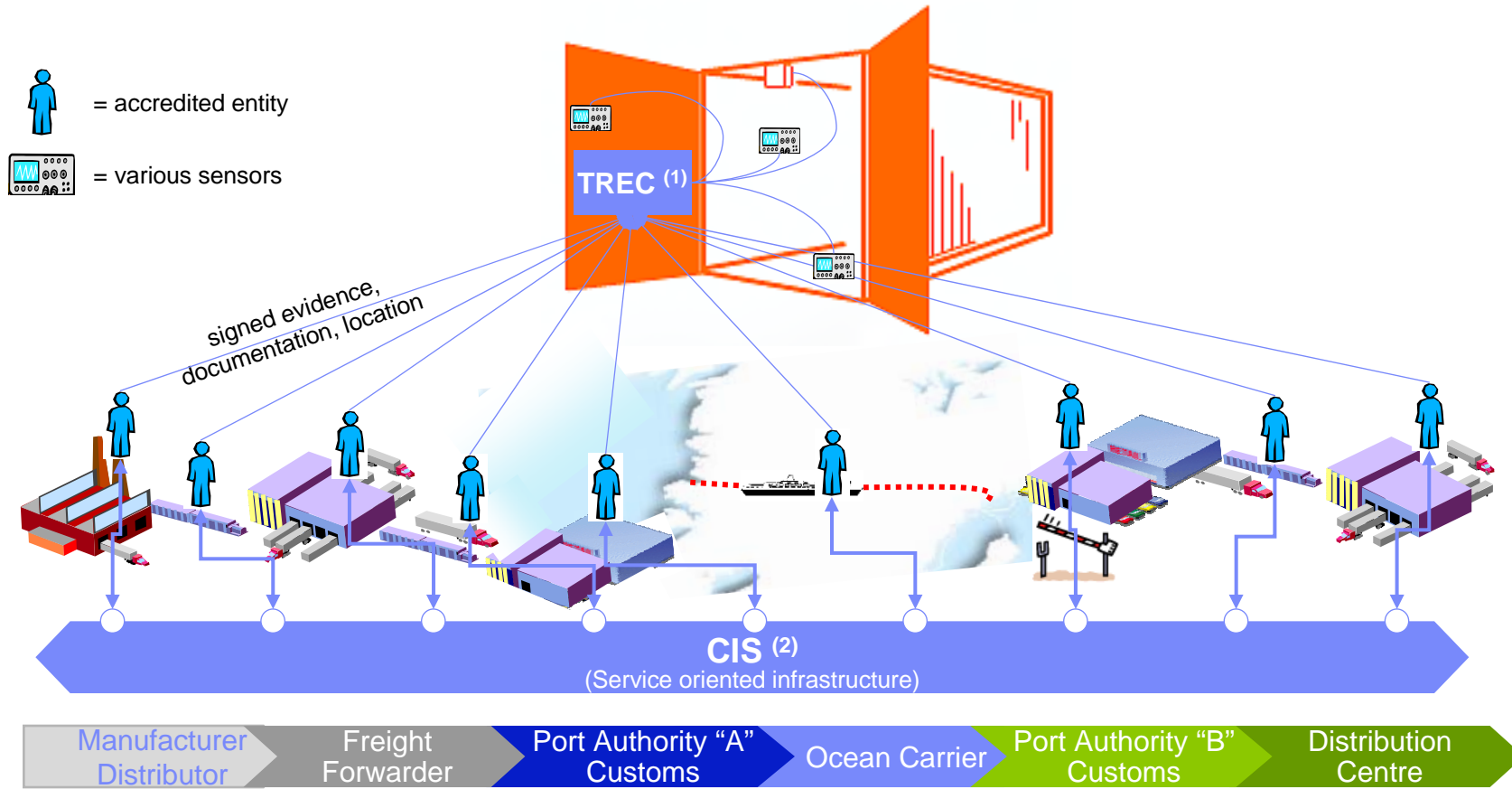
GMM Value Proposition: Governance

- Creates a realistic and feasible governance process to support these capacity-building activities, based on the following principles:

  - Open-source in its design and development (similar to Linux development)

  - Iterative based on public and private input

  - Standards-driven to ensure international compatibility

  - Allows different governance structures within the broader system, based upon the realities of each domain
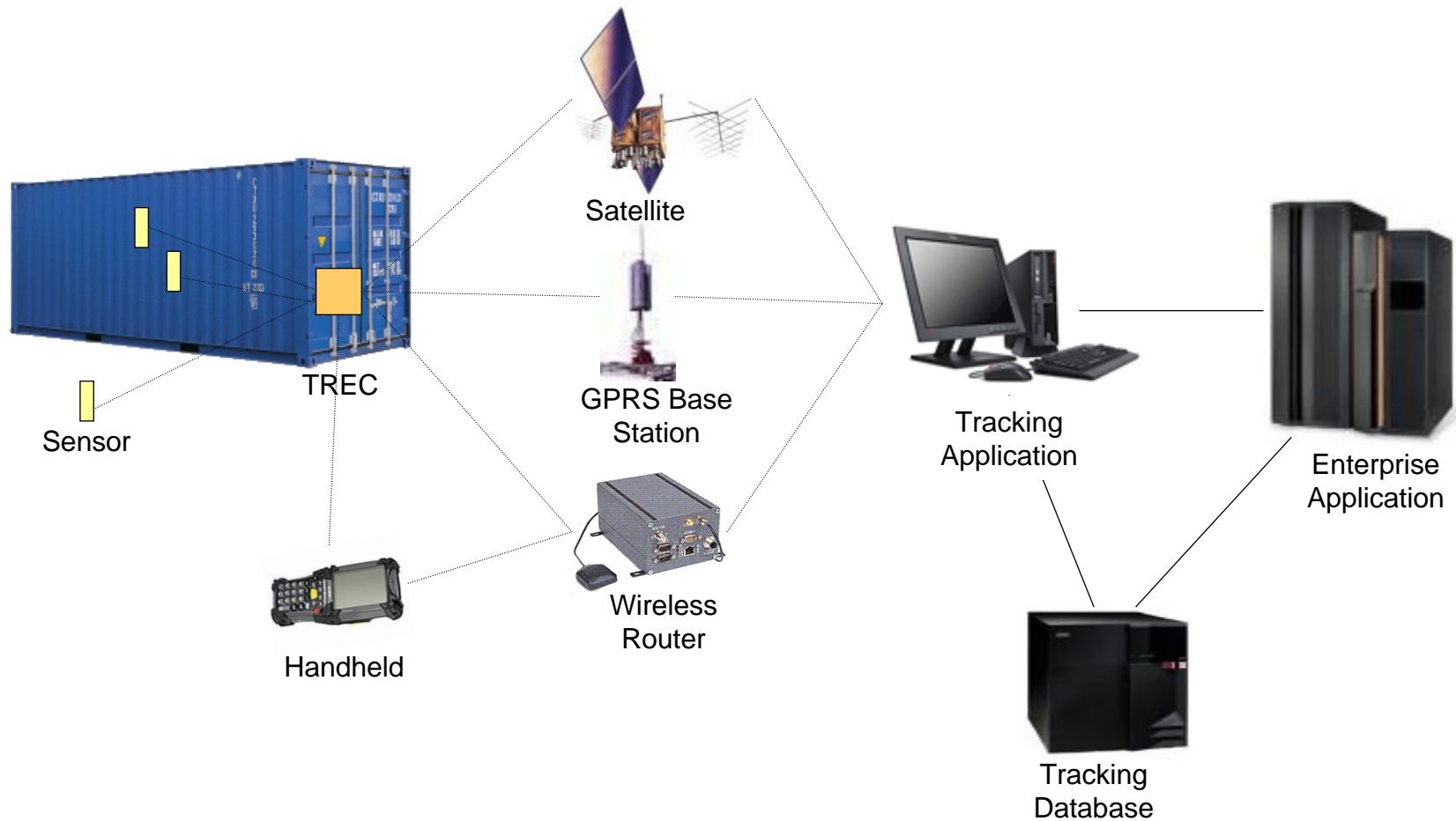
GMM Solution: Secure Trade Lane

= accredited entity

= various sensors

TREC (1)

signed evidence, documentation, location

CIS (2)
(Service oriented infrastructure)

Manufacturer Distributor	Freight Forwarder	Port Authority "A" Customs	Ocean Carrier	Port Authority "B" Customs	Distribution Centre

(1) TREC= Tamper-Resistant Embedded Controller
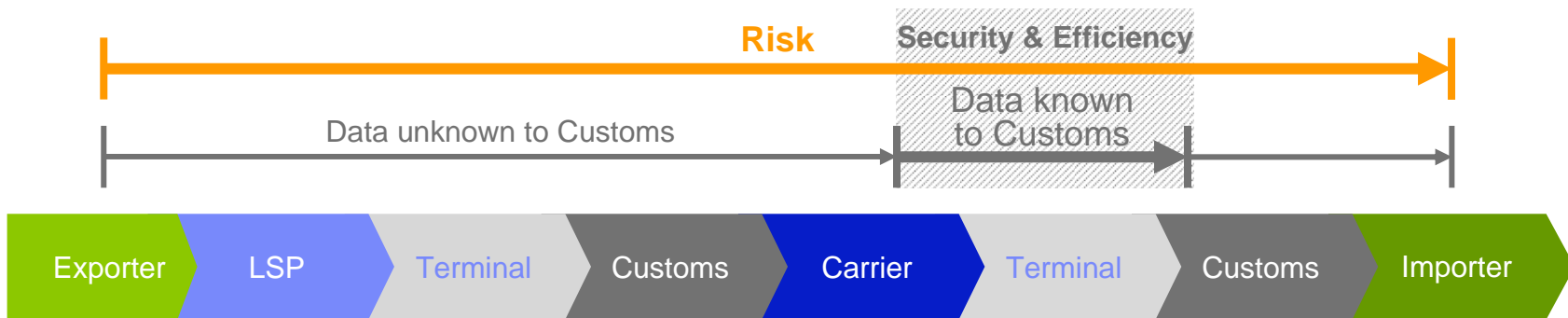(2) CIS = Container Information System

Technology is the enabler for a Secure Trade Lane; the highest possible security and efficiency can only be given through an end-to-end approach

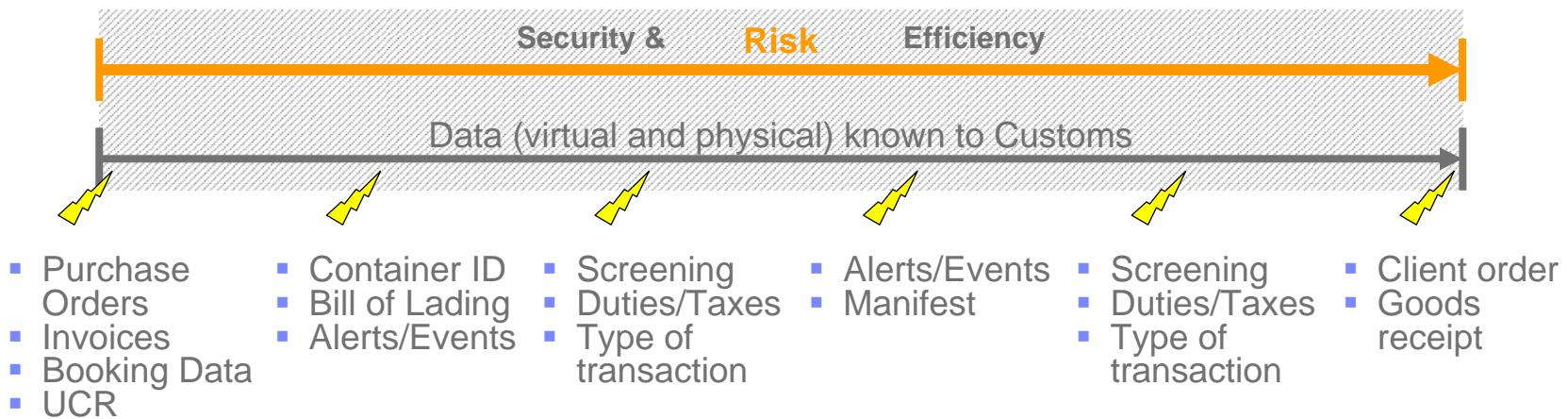28-Apr-06

Secure Trade Lane: End-to-End Solution

Satellite

TREC

Sensor

GPRS Base
Station

Tracking
Application

Enterprise
Application

Handheld

Wireless
Router

Tracking
Database

Relevance to PNT systems

- Key elements of the system-of-systems for global economic security require PNT systems:
  - Cargo and asset tracking
  - Maritime domain awareness
  - Air traffic control
  - Geofencing for critical infrastructure protection
- Enhanced PNT systems will improve each of these activities if they enhance:
  - Ubiquity, precision, resilience, security
- Long-term security architecture needs to promote interoperability among key enabling systems and technologies:
  - GPS, RFID, Bluetooth, wireless communications, and satellite communications.

For More Information:

- **IBM White Paper on Global Movement Management:**
  - http://www.businessofgovernment.org/pdfs/GMM.pdf

- **Overview of Secure Trade Lane solution:**
  - http://www.ibm.com/news/ch/de/2005/09/21_backgrounder.html

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