



# Elements of Visibility

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*Dramatically improving supply chain performance through real-world research*



# Agenda



- Visibility Defined
- Elements of Visibility
- Why Now?
- Research Findings re: Visibility
  - Single Version of the Truth
  - Supply Chain Risk
  - E-Pedigree
- Challenges to Realizing Visibility
- Overcoming the Challenges: A Call to Action



# What is Visibility?



“See”



- Product Visibility
- Partner Visibility
- Operational Visibility
- Market Visibility

**Visibility**

“Plan/Decide”



- Analytics
- Decision-Making
- Optimization
- Prediction
- Planning

**Intelligence**

“Act”



- Buying
- Manufacturing
- Moving
- Storing
- Servicing

**Execution**

Source: ChainLink Research



## What is Visibility?

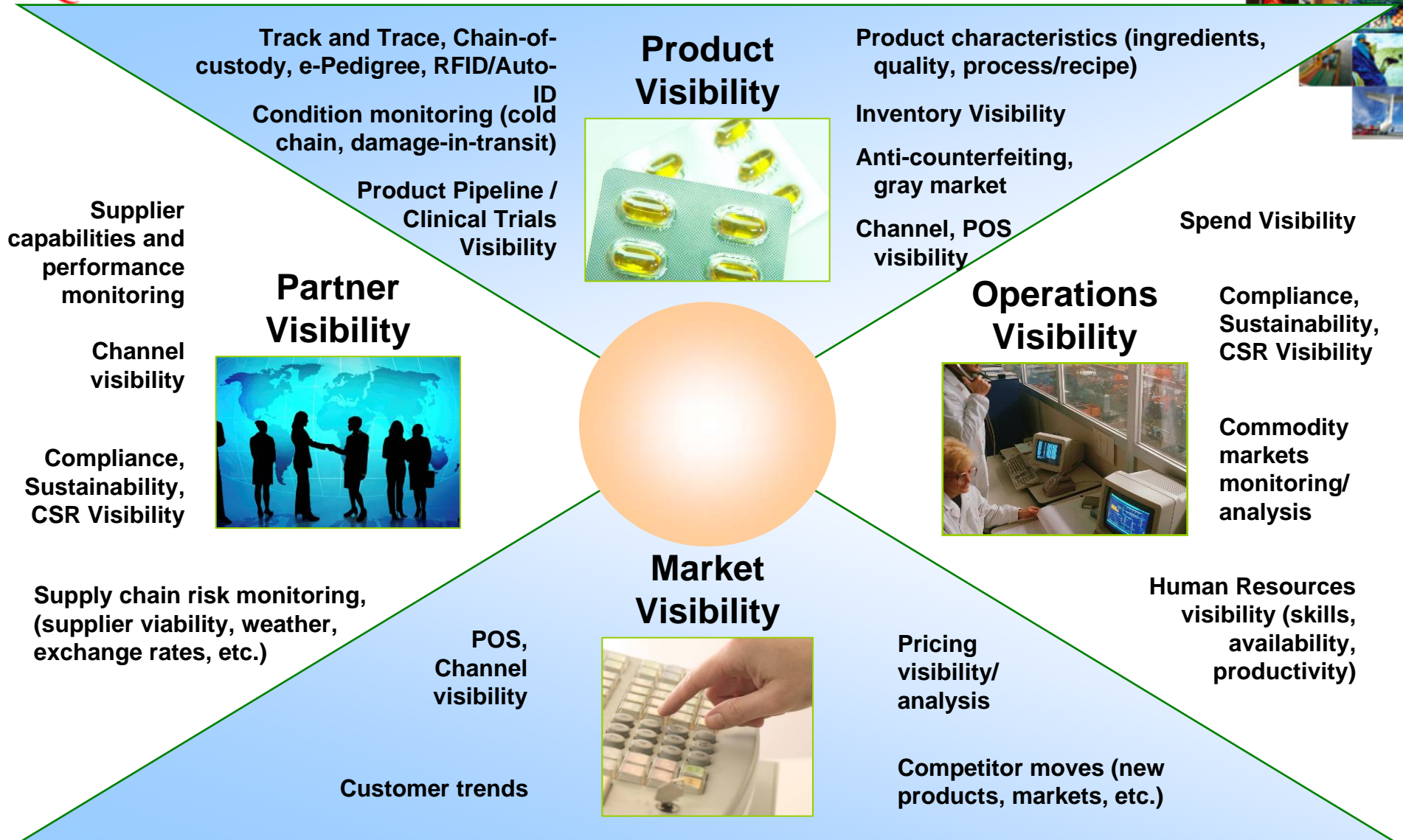


**Consistently having  
relevant, accurate, timely data  
about what's actually happening  
in reality on the ground  
to make good, sound decisions  
and do intelligent actions.**

Source: ChainLink Research



# Elements of Visibility



Source: ChainLink Research





# Why Now? Vertical to Virtual Enterprise



**Loss of Control and Visibility**



Virtual Enterprise  
2000 and beyond

Vertical Integration  
pre-1980's

Source: ChainLink Research



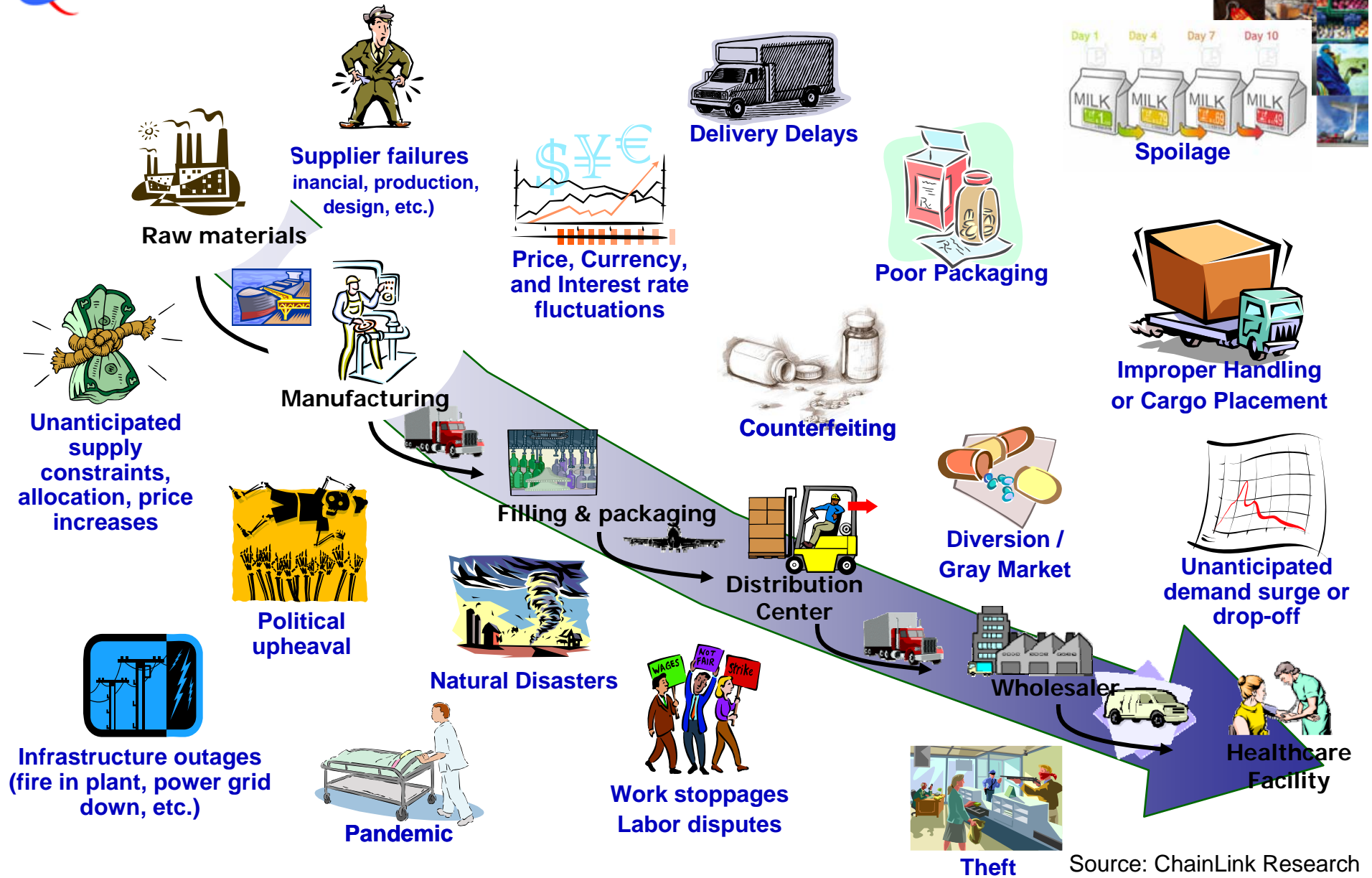
## Why Now?



- Changing Business Models
  - Vertical to Virtualization
- Globalization and increasing supply chain risk
  - Many tiers = loss of direct relationships
  - Time zone, language, cultural barriers
  - Increasingly sophisticated criminals
  - Increasing / more complex global regulations and compliance
  - Market pressure for Corporate Social Responsibility
- Effective supply chain management—required for competitiveness
  - Manage inventory and improve service levels
  - Guarantee condition of received products
  - More effective use of inventory, cash, labor
  - Better timed and targeted product introductions



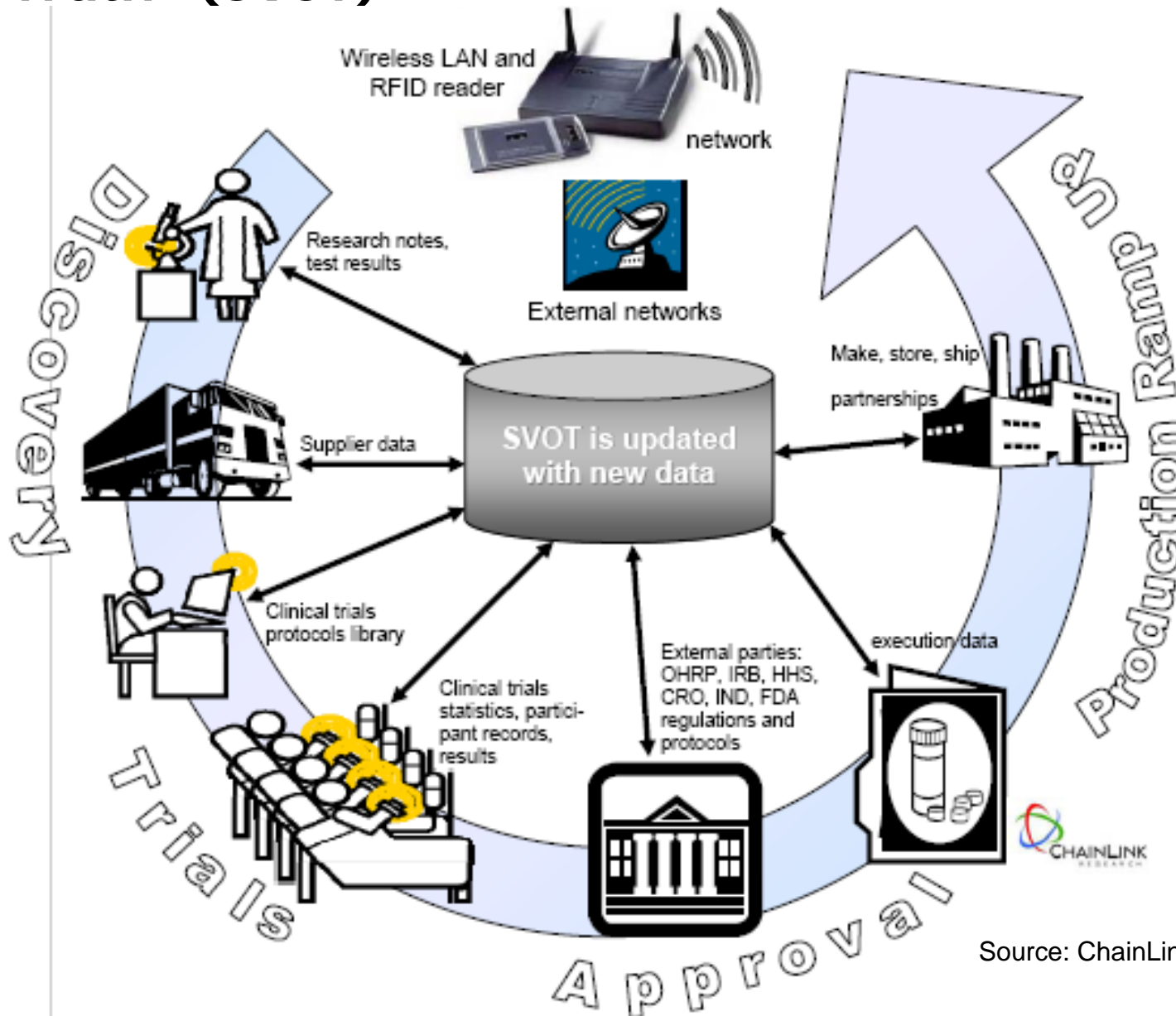
# Numerous Supply Chain Risks



Source: ChainLink Research



# Establishing a "Single Version of the Truth" (SVoT)



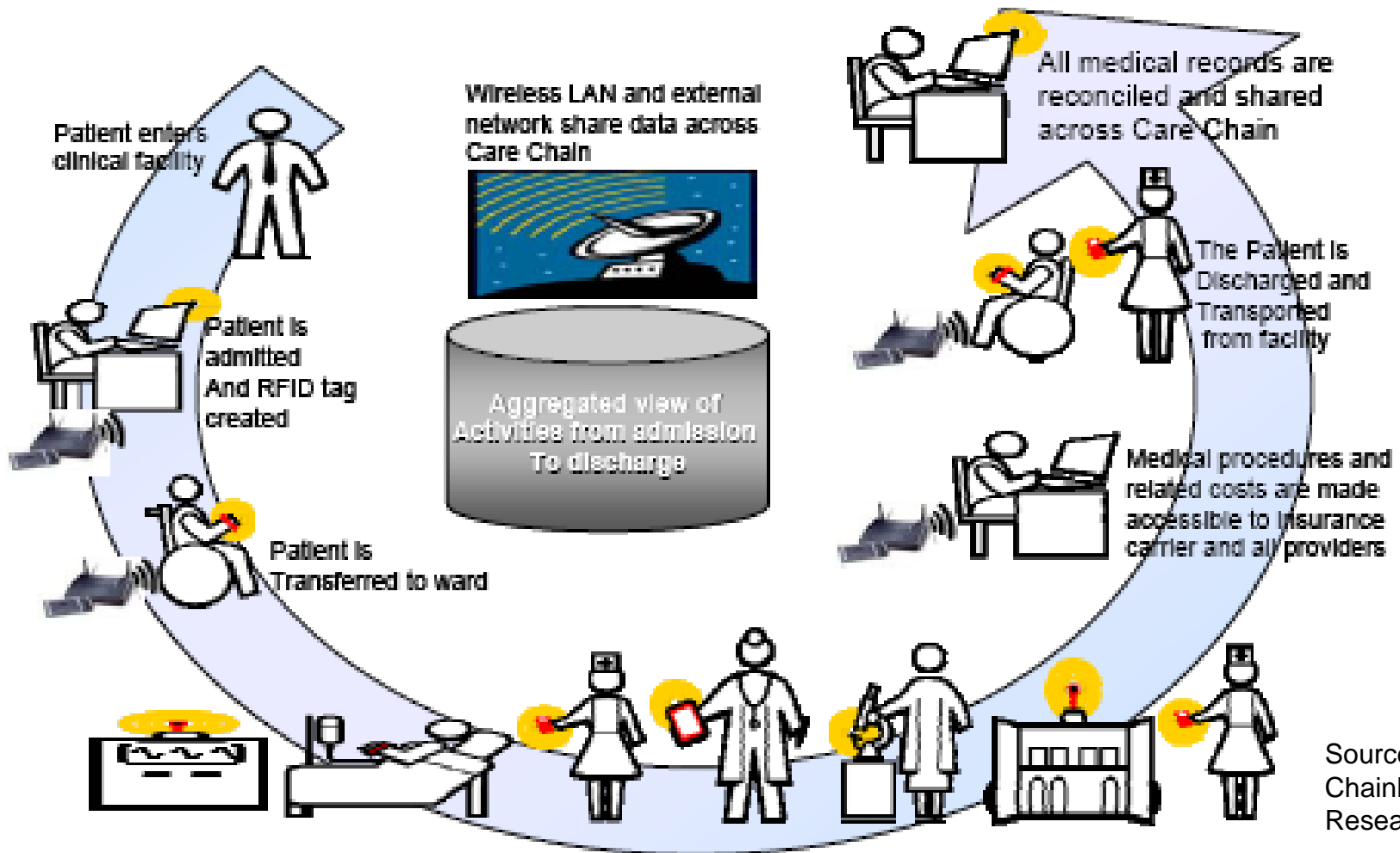
Source: ChainLink Research



# SVoT in Chain-of-Care



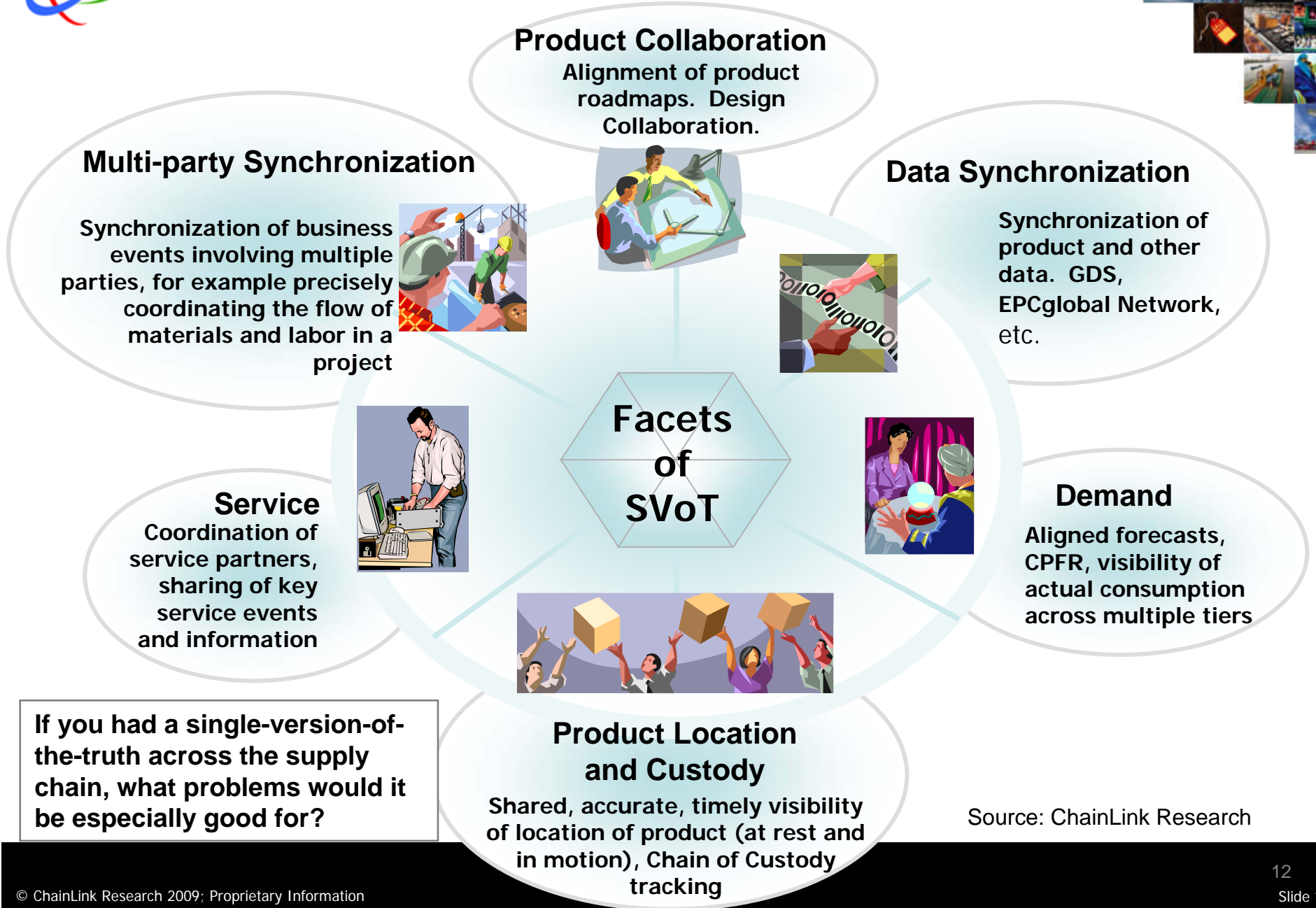
## Vision of Single Version of the Truth across the Care Chain



Source:  
ChainLink  
Research



# Multi-Tier Vision: Single Version of the Truth



If you had a single-version-of-the-truth across the supply chain, what problems would it be especially good for?

Source: ChainLink Research



# If you build it, will they come?

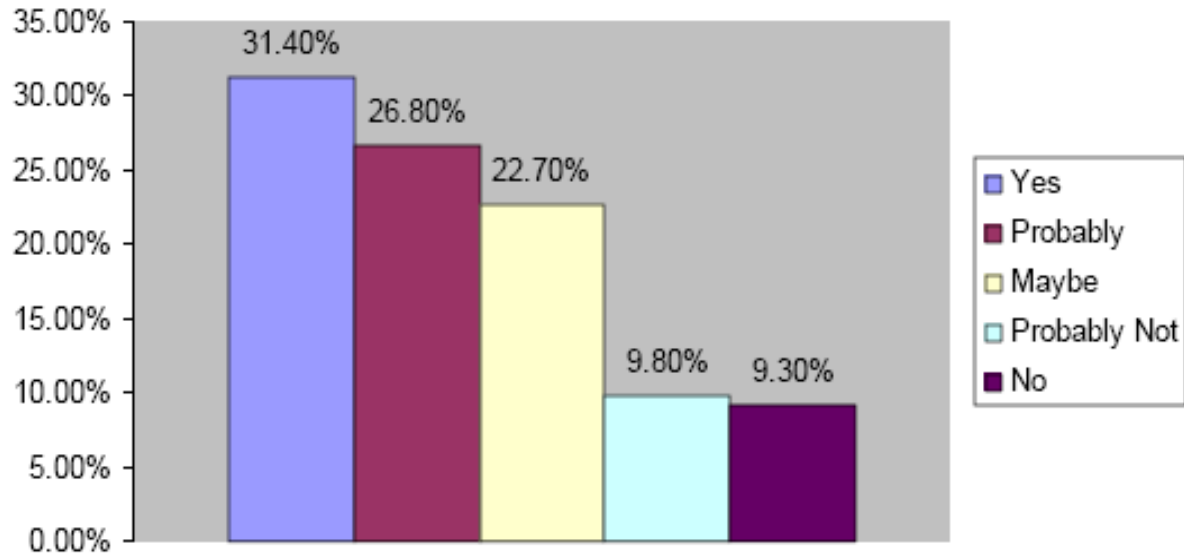


Figure 9 - Sharing RFID and Barcode Data with Trading Partners

Source: ChainLink Research



# Types of Data Being Shared

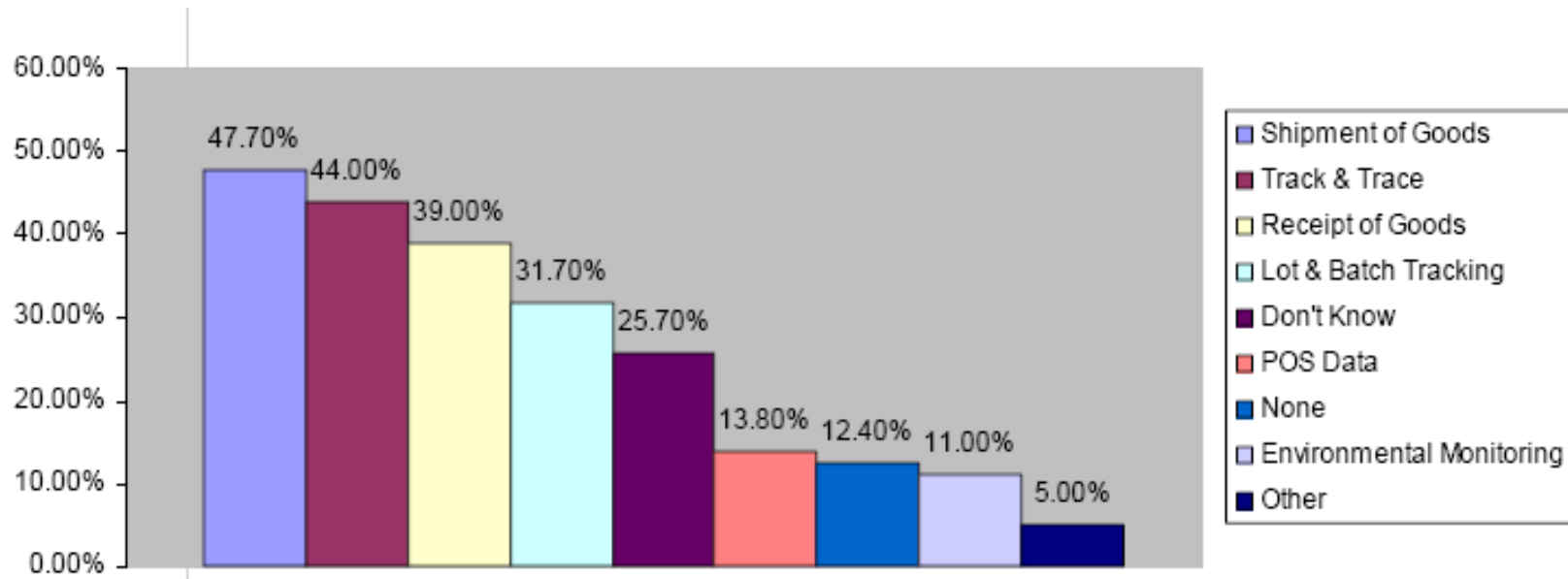


Figure 10 - Types of RFID and Bar-code Data Companies Plan to Share

Source: ChainLink Research



# Not transaction...need a data base!

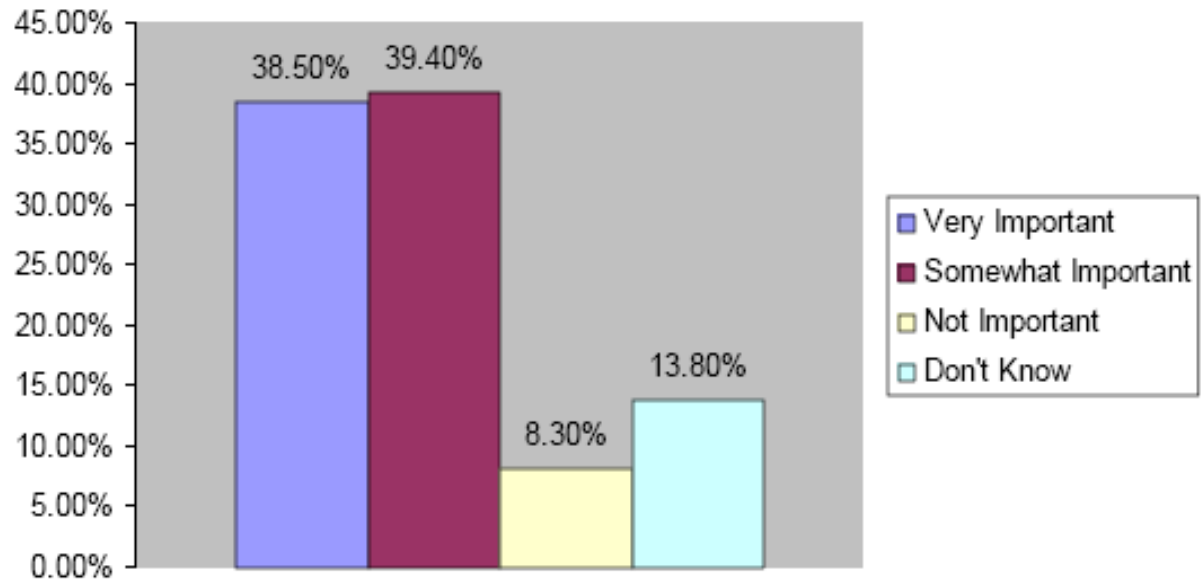


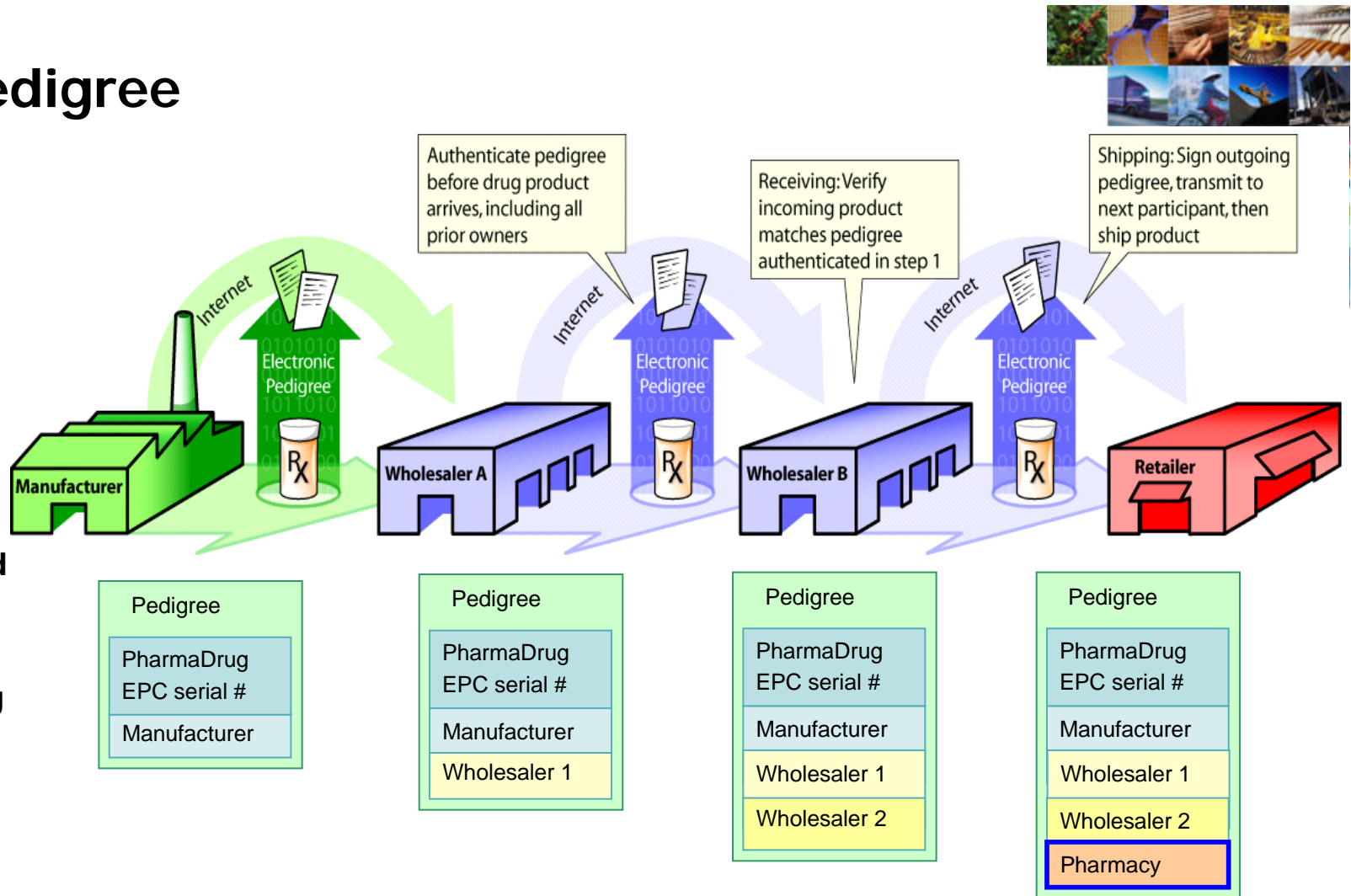
Figure 12 - Importance of Multi-Instance Distributed Database

Source: ChainLink Research



# ePedigree

- **Serialization**
- **Multi-parties required**
- **Regulatory mandates vs. ROI**
- **Standards and solutions**
- **Anti-counterfeiting**
- **Reduce diversion & theft**
- **Supply chain performance**



- Each pedigree is digitally signed
- RFID or Serialized Bar Codes
- ePedigree Standard Ratified by EPCglobal, Jan 2007

Source: SupplyScape



# Challenges: Why is Supply Chain Visibility Elusive?



- Technology / Systems
  - Data is un-normalized, dirty, incomplete, or paper-based
  - Stovepipes: systems not integrated, out-dated, requiring multiple translations needed
- Organizational
  - Lack of organizational owner
    - visibility is almost always cross-functional or cross-organizational
  - Strategic imperative not well articulated
- Partners
  - Immature / weakly structured partner relationships
  - Lack of relationship with raw material suppliers further down the chain
  - Unsophisticated partners
- Financial
  - Expense of implementation / auditing / monitoring
  - Lack of clarity on ROI
  - Competing priorities for capital expenditures



# A Call to Action



## Visibility is Prerequisite for High-performance and Competitiveness

- Recruit/Persuade a High Level Executive Champion
  - Measure whole ROI
  - Articulate the market implications, the competitive imperative
  - Commit to performance improvements
- Get Partners on Board
  - Education, persuasion, Their ROI
  - Incorporate visibility requirements into contractual agreements
  - If you're a small player, team with others and ...
  - Leverage Industry Groups / Standards / Big-player Initiatives / Regulations
- Take advantage of 3<sup>rd</sup> Party Solutions and Providers
- Strive for the SVoT Vision

**Visibility Impacts: Cost, Reputation, Customers**



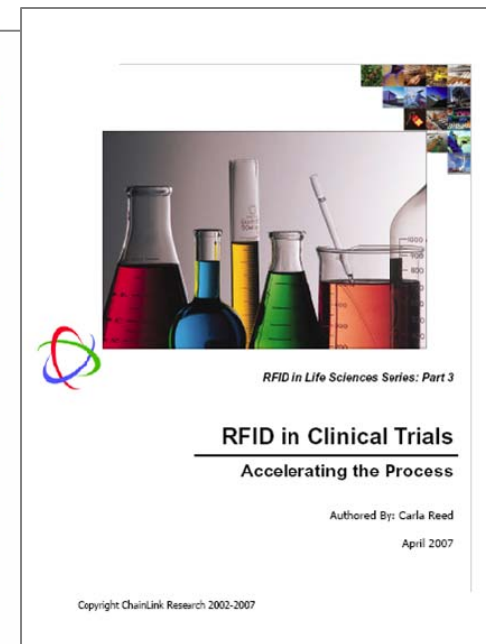
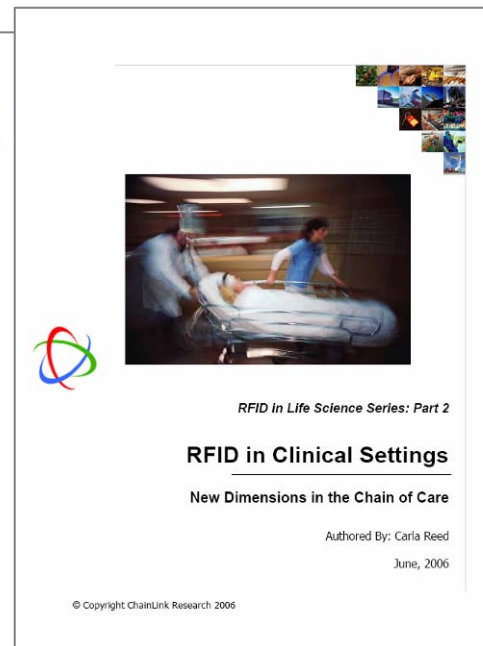
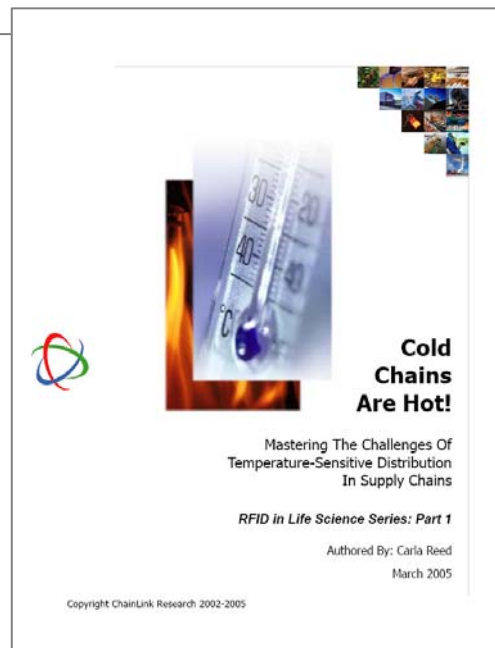
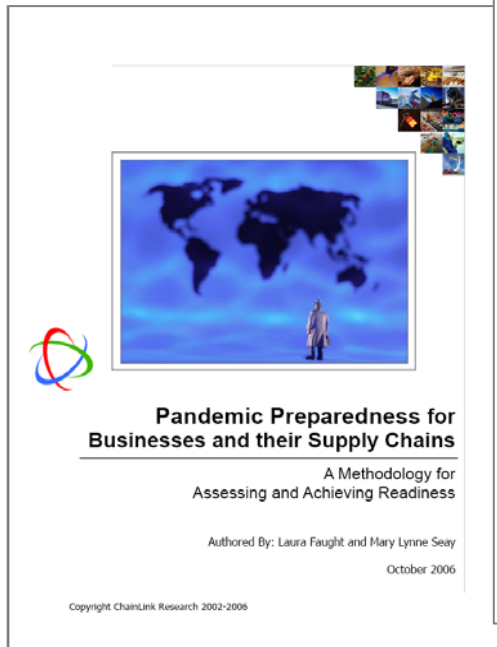


# Related Reports

- Pandemic Preparedness
- Cold Chain
- RFID for Clinical Settings
- RFID for Clinical Trials

— [www.pandemic-preparedness.com](http://www.pandemic-preparedness.com)

— [www.clresearch.com/rfidhealthcare.htm](http://www.clresearch.com/rfidhealthcare.htm)





# Questions?



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