

High performance. Delivered.

Solutions for Supply Chain Visibility Joe Dunlap March 2006

#### **Overview of Accenture**

Accenture is a global management consulting, technology services and outsourcing company. We use our industry and business process knowledge, our service offering expertise and our insight into existing and emerging technologies to identify new business and technology trends. We help clients:

- •Identify and enter new markets
- •Increase revenues in existing markets
- Improve operational performance
- •Deliver their products and services more effectively and efficiently
- FY05 revenues of over \$15 billion, with an average annual growth rate of 16% over the past 15 years
- Over 126,000 professionals in 48 countries and 110 offices
- We serve 84 of the *Fortune* Global 100, two-thirds of the *Fortune* Global 500 and government agencies in 26 countries.
- Of our top 100 clients in fiscal 2005, 96 have been clients for at least five years and 83 have been clients for at least 10 years.

#### Organizational Structure Accenture

Accenture's capability groups create market-leading insights, innovations and capabilities to help our operating groups provide high-performance services and solutions to clients



#### **Business Consulting**

- Customer Relationship Management
- Finance & Performance Management
- Human Performance
- Strategy
- Supply Chain Management

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#### Technology

- Information Management Services
- Enterprise Solutions
- Integration
- Infrastructure Consulting Services
- IT Strategy & Transformation
- Microsoft Solutions
- Mobile Solutions
- Research & Development

#### Outsourcing

- Business Process Outsourcing (including Accenture Procurement Solutions)
- Application Outsourcing
- Infrastructure Outsourcing

### **Our Supply Chain Capability**

From strategists to operators, our Supply Chain community is the largest independent practice in the world with a broad set of industry-specific capabilities and offerings

- Over 7,500 professionals within global supply chain community
- More than 48 countries
- Proven extended supply chain expertise
- Industry-leading CPGspecific expertise & experience
- Hands-on operational approach
- Consulting, technology, and outsourcing skills



- Supply Chain
  Transformation
- Global operations
- Manufacturing
- Planning & Execution
- Sourcing and Procurement
- Fulfillment and Product Flows
- Transportation
- Pricing and Promotion Optimization

#### Prior to 1980

#### In 1980, there was very little integration of supply chain activities



#### **Key Concepts**

- Inventory Buffers
- Economy of Scale
- Vertical Integration
- No outsourcing

### Leading Up to the 1990's

Prior to the 1990's, the idea of logistics outsourcing was more widely accepted



#### During the 1990's

#### During the 1990's logistics activities have become more closely connected



#### **Key Concepts**

- Transportation Excellence
- Third Party Logistics
- Multinational Logistics
- Decision Support Tools
- Y2K & IT investment

#### **The Information Explosion**

The integration of logistics activities has been greatly added by the dramatic increases in computing power. Costs for computing and data transmission are trending to zero

These rapid increases in power and reduction of costs meant:

- Pervasive Data .....
- Transmitted free
- In any volume
- At any time

Hence the rise of e-Integrated Supply Chain





#### **Cross-Enterprise Integration**

Growth in supply chain technology has forced customers, suppliers and thirdparty logistics providers to become more closely integrated in their supply chain activities



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\* Source: John Gattorna (ed.), "Strategic Supply Chain Alignment," 1998.

#### **Synchronization & Collaboration**

### Since the turn of the century the focus has been on synchronization and collaboration across the entire Supply Chain



#### **Visibility Drivers**

Compliance with federal programs has driven greater visibility needs throughout the supply chain

- Bioterrorism Preparedness and Response Act of 2003
- <u>Proposed</u> Reducing Fraudulent and Imitation Drugs Act of 2006



FDA Counterfeit Drug Cases

"Adoption and common use of reliable track and trace technology...would help secure the integrity of the drug supply chain by providing an accurate drug pedigree"

Source: "Combating Counterfeit Drugs", FDA, Feb 2004

### **Visibility Definitions**

- Capturing and analyzing supply chain data that informs decision-making, mitigates risk, and improves processes<sup>1</sup>
- Supply Chain Visibility is the ability to view and manage the flow of goods, documents, services and funds through all Supply Chain nodes and links from order to cash, supported and facilitated by the appropriate decision support technology

Source: <sup>1</sup>"Supply Chain Visibility Defined," April 24, 2003, Forrester Research

### **Generic Enterprise Technology Stack**



#### **RFID Technology Stack**



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### Supply Chain Visibility addresses three core benefits

- Real time information
- Information presented based on user need
- Ability to re-plan, re-direct product flow



- Forecast events
- Real-time information on actual events
- Proactive notification of failures
- Information goes to the people that need it

- Quantitative performance data
- Performance accountability
- Continuous performance improvement opportunities

### **Product Flow Visibility Benefit Characteristics**



#### **Event Management Benefit Characteristics**



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### **Performance Management Benefit Characteristics**



Performance

**Accountability** 



Visibility of each element provides exact statistical event detail (i.e. Average timein-transit per supplier) Based on performance data, metrics for productivity, quality and other categories can be generated

With continuous examination of all visible elements comes the ability to improve those elements

**Continuous Improvement** 

**Opportunities** 

#### **Value Creation Framework**

The end mission of Supply Chain Visibility is to drive creation of value



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#### **Issues and Challenges**





#### Technology

Cross-enterprise cooperation and collaboration

#### Information Overload

#### **Technology Challenges**

Information technology and formats may not prove compatible across multiple vendor lines



• Service providers such as courier services may not be able to provide shipment visibility in compatible formats for integration into your infrastructure. This is especially true in inter-modal formats.

### **Cooperation & Collaboration Challenges**

- Trust issues may exist that bar information sharing between department and company lines. Entities may not want to provide visibility to all processes in the event that deficiencies might become more apparent
- Concern over potential privacy issues may also bar open information sharing

<u>Increasing Supply Chain Partners –</u> Globalization, mergers/acquisitions, ebusiness and outsourcing have impacted enterprises by expanding their supply chain channels through a greater number of external supply chain partners and relationships. If information is not shared freely among an enterprise's extended supply chain community, undetected business process events and exceptions result in inefficiencies.

#### **Integration Challenges**

To continue to add value through logistics, companies will need to look wider than their own business boundaries to integration with other companies in their supply chain.



#### **Information Overload Challenges**

- Wholesale visibility can quickly create massive amounts of data to analyze
- Users may become overwhelmed and unable to effectively manage the data steam
- System architecture must take into account user level needs and direct visibility to information based on that need

### Future: Maturity of SCEM Technology

- Automatic event management technology will continue to evolve and mature
- Eventually fully automated responses will occur for a large number of out of tolerance events such as inventory min/max alerts, management alert of shipments exceeding stay durations, and customer alerts of potential delays in order receipts

#### Future: RFID Cost & Capability

- With further maturity of the RFID market, system capabilities will increase and relative cost will decrease
- Real time data capture will become easier and more ubiquitous





- Concern over protection of materials will grow from both government and private industry bodies
- Increased RFID use will provide another layer of visibility to product location and status, allowing for greater security of the product



#### **Future: Deeper Collaboration**

- Increased collaboration efforts will push for greater use of standardized data formats between companies and vendors
- Companies will have greater input into the supply chain practices of their vendors

# accenture EPC Brazil Case Study

The EPC Brazil Pilot was developed at the participants' facilities in the vicinities of the City of São Paulo



Legend

### accenture E

#### **EPC Brazil Timeline**

CBD, Gillette, P&G and CHEP developed a joint effort for the utilization of the RFID/EPC solution in Brazil, with the support of Accenture

Initiatives developed	2003	2004	2005	2006
Evaluation of Opportunities for the Utilization of the RFID/EPC solution in Supply Chain in Brazil				
EPC Brazil Pilot Supply Chain of the Future				

# accenture EPC Brazil Project Approach

- Targeted focus was on the Receiving and Dispatching processes
- 1000 tagged pallets circulated among the various DCs jointly with the other pallets during a two month period, according to the existing commercial and logistic processes
- Tagged pallets were circulated and monitored in a collaborative process between clients
- The movement of pallets was monitored by the communication network implemented and documented in a specific database utilized during the Pilot
- RFID Portals were installed in the various Distribution Centers and all the required applications and the whole communications network, based on the Global EPC standards, were developed
- The implementation of the infrastructure demanded the interaction of the various suppliers and specific adjustments to each site

# accenture EPC Brazil Results

- The installed infrastructure worked in the most adequate manner according to the initial expectation
- The reading rate obtained was of 97%, which can be considered within the average of results obtained in other pilots already developed
- The operational teams did not have any difficulties in the understanding and utilization of the solution
- The processes established and the communication network implemented allowed a higher visibility and accuracy in the Supply Chain

# accenture EPC Brazil Results (cont'd)

- Increased sales and margin
  - Reduction of 10% in the damages at the distribution centers of the retailer and the manufacturer
- Reduced costs
  - Increase of 3% to 12% in workforce productivity
  - Reduction of 18% to 26% in inventory losses
  - Reduction of 10% in the cost of maintaining inventories
  - Reduction of 2% to 5% in returns
- Reduced stock levels
  - Reduction of 10% in inventory levels
  - Reduction of 10% in low turnover items

### EPC Brazil Results (cont'd)



Benefits vary according to each participant

Returns

4%

5%b

4%

### **Challenges for Wholesale RFID use in Brazil**

- Availability of qualified personnel to implement and operate the system
- Absence of associated metrics
- The need for establishing collaborative relationships with partners and boosting external information exchange
- Costs of capital for initial investment

#### **EPC Brazil Conclusion**

- In Brazil, large suppliers of consumer goods have already begun internal testing programs with EPC and exporters have been getting demands for tagging products they sell to their foreign customers
- Use of this solution should concentrate on identifying opportunities and developing a collaborative atmosphere within their extended supply chain
- With the benefits possible, it would seem this is a technology that will radically improve visibility within the supply chain