

WHITE PAPER.

The visibility imperative.

As a number of leading retail, consumer goods and apparel organizations have made clear, supply chain visibility and agility can drive significant cost and performance gains.

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THE VISIBILITY IMPERATIVE.

A Unisys white paper.

Abstract.

At innovative retailers, consumer products firms and apparel companies, tomorrow's highly visible, highly agile supply chains are becoming a reality today. Track-and-trace technologies, including radio frequency identification (RFID), are playing an important role. While the potential business benefits are significant—real-time decision making, better asset management and increased compliance—harvesting them requires more than simple technology implementations. Before committing resources to RFID and other technologies, companies must clearly identify how visibility will help them realize financial objectives, ensure compliance and improve supply chain performance. The balance of this white paper will address the specifics of achieving visible global commerce, and how to leverage emerging best practices.

The business case for visibility.

The economic case for increasing supply chain visibility, compliance and agility could not be clearer or more compelling for retail, consumer products and apparel companies today:

- ▶ Recent studies indicate retailers lose about 4% of sales to out-of-stocks, with today's savvy and demanding customers increasingly ready to take their business elsewhere.
- ▶ Rising inventory, stock, logistics and carrying costs are chewing up an ever-larger percentage of revenue—more than 10% in some cases.
- ▶ Strategic sourcing initiatives can produce savings of up to 35%, but these savings are not falling to the bottom-line.
- ▶ Theft and diversions affect 1-3% of goods in the supply chain.
- ▶ Product counterfeiting now accounts for 5-10% of all global trade.

Faced with these harsh realities, it's no wonder Wal-Mart, Target, the Metro Group and other leading retailers, along with the U.S. Food and Drug Administration (FDA) and Transportation Security Authority (TSA), are requiring or strongly recommending the adoption of advanced technologies to increase supply chain security and performance.

To meet these mandates and take advantage of associated business opportunities, companies must develop or enhance core supply chain capabilities in:

- ▶ **Dynamic Deployment:** How can the financial implications of supply chain disruptions be minimized?
- ▶ **Supply Continuity & Available to Promise:** How can inventory in-motion be used to dynamically redirect goods to maximize sales, minimize costs and keep promises?
- ▶ **Compliance Management:** How can the chain of custody be managed to meet customer commitments and ensure no intrusions have occurred?
- ▶ **Total Landed Cost Management:** How can total landed costs be managed and root causes of cost excursions rapidly identified?
- ▶ **Strategic Sourcing:** How can the lowest cost sourcing options be evaluated continuously and consistently?

The ABCs of RFID.

Consisting of chips and antennas, RFID tags can communicate electronic product codes (EPCs) or other information over varied distances to compatible readers. They can be applied to containers, pallets, cartons or individual product units, as well as people. Similar to bar codes, EPCs are used to provide mass serialization and unique electronic pedigrees for individual products. These pedigrees are used to precisely track and trace the physical movement of items across the supply chain, the modes of transportation that have been used, and any changes in the condition of products. Unlike bar codes, EPCs and RFID tags can be read automatically at greater distances and without a line of sight.

RFID tags and readers come in several varieties, including passive and active, each with unique capabilities. Passive tags are assigned a unique EPC and can only transmit data to associated readers. Active tags contain memory for state management and or chip-based intelligence, and can both transmit and receive data. Other technologies, including satellite, cellular and barcodes, can complement RFID in visible supply chains. Today, basic tags sell for between \$0.25 and \$0.50 each, with readers in the \$300-\$500 range, though prices vary depending on functionality and are changing rapidly. The good news is that the cost of these technologies is falling faster than Moore's Law, which dictates that the price is either falling by 50 percent every two years or users receive twice the capability for the same price.

Apparel, consumer goods and retail organizations will employ RFID in a number of ways.

- ▶ To track deliveries and prevent tampering of containers in-route;
- ▶ In smart shelving to notify store personnel when items are depleted or out of stock;
- ▶ On high-value or frequently stolen items to combat shoplifting;
- ▶ To enable faster, more efficient self-checkout procedures;
- ▶ To streamline warranty and returns management.

Savings from RFID could reach three to five percent of total supply chain costs.

—AMR Research

Beyond RFID: creating the agile supply chain.

While the first step for many companies is the adoption of RFID, it's not the whole story. Generating sustainable business value from large-scale investments in RFID and other track-and-trace technologies also requires clear strategies and process optimization. The return on those investments will come in the form of hitting the season "just right" to maximize revenues, decreased out-of-stocks and markdowns, and lower supply chain costs. But to harvest these benefits, blind spots and bottlenecks must be identified and eliminated and end-to-end processes optimized before new technology is deployed. Existing systems must be stabilized and integrated to handle—and harness—massive amounts of RFID data.

"We are standing at the very beginning of the technological modernization of retailing."

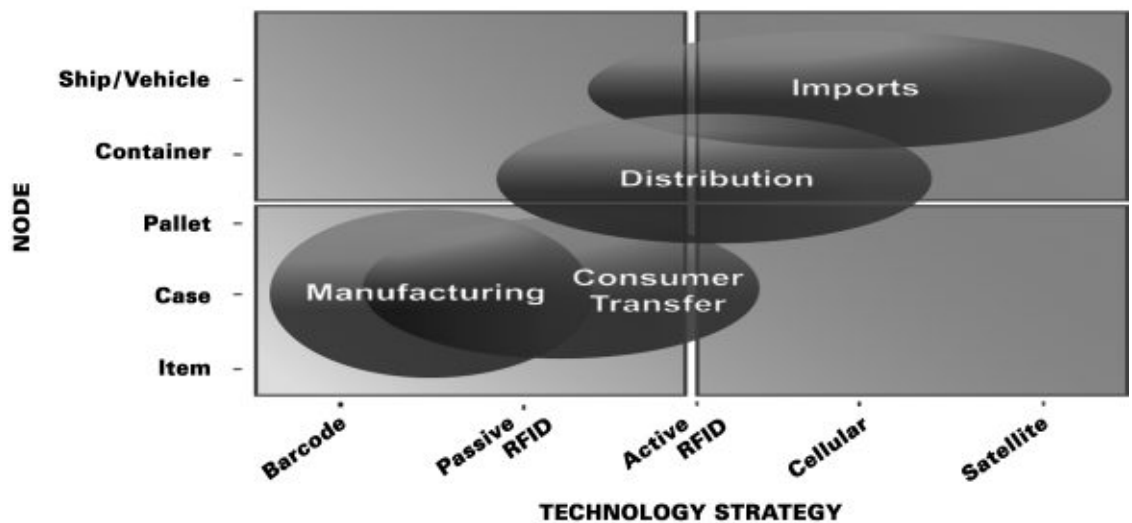
*—Hans-Joachim Korber,
Chairman and CEO,
The Metro Group*

Plans for data management and synchronization are key to success. Analytics tools and automated workflows must give supply chain executives the ability to quickly recognize strategic patterns, avert emerging problems and take advantage of sudden market shifts. Existing partnerships with suppliers and distributors must be reviewed to ensure they're functioning effectively.

The bottom line? To create a truly agile supply chain ready for tomorrow's markets, consumer products retail and apparel companies must go beyond RFID and address the strategic, process and organizational dimensions of their supply chains. Following this approach will allow companies to know exactly what's where when, and then use that knowledge to ensure maximum quantities of goods are available to the maximum number of customers.

2004 Supply Chain Visibility Landscape.

Companies will use a variety of tracking technologies depending on the supply chain area and node, but we are moving rapidly to an era when every container, pallet, carton and individual product unit will be tracked along every step of the supply chain. In general, the greater the need for security and efficiency, the greater the use of active RFID, satellite and cellular.



Supply chain visibility: lessons from the field.

While RFID has received lots of recent attention, it's been delivering high levels of visibility and security for more than 10 years. In partnership with Unisys, the U.S. Department of Defense created the world's largest RFID network. Deployed worldwide, with more than 750 nodes, including airports, seaports and rail terminals, every day the network tracks 350,000 conveyances and 25,000 containers of food, fuel, medical supplies, ordnance and other goods, from the point of departure to mobile field units and individual soldiers.

Additionally, initial pilots Unisys has conducted with many retail, consumer goods and apparel organizations and the Transportation Security Administration have led to the establishment of clear best practices.



Transportation
Security
Administration



What have we learned to date?

- ▶ RFID works as a track-and-trace technology, but is only one of the available tools to create visibility.
- ▶ Process improvement is as important as technology in maximizing ROI.
- ▶ As the cost of tags and readers continues to fall, the value creation opportunities increase.
- ▶ RFID data can support many business goals—from asset management and inventory control to “zero-gap” security—but the flood of data must be managed to allow for analytics, automated workflows and real-time decision making.
- ▶ “Blue-collar” tasks (infrastructure management, network maintenance, security, disaster recovery and help desk support) become mission critical when RFID data feeds core processes.
- ▶ To ensure that visibility results in action, rapid, two-way communication channels must be in place for managers.

Moving to visibility now.

For many retailers and consumer products and apparel companies, there is pressure to act now—to meet urgent regulatory and market mandates. But what are the right first steps to ensure long-term success and maximum ROI?

"The Unisys Safe Commerce solution will allow us to meet emerging government standards and regulations for security, while also providing business benefits such as lower inventory, reduced wait times, higher service levels and improved risk management."

—Gary Stopka,

Vice President,

Sara Lee Coffee & Tea Foodservice

- ▶ **Think Big:** look past the pilot and build comprehensive business cases that clearly define how supply chain visibility and the potential boom in data can further core business goals. Investments in RFID and other tools should link directly to quantifiable operational metrics, like reduced out-of-stocks and increased supply chain velocity. Lastly, it's important to understand how visibility can lead to competitive advantage and also how collaboration with peers, partners and competitors may reduce costs and risks.
- ▶ **Watch, Prepare & Adapt:** research the best practices from existing pilots and emerging technology and process standards. Assess existing infrastructure—including supply chain, CRM and ERP systems—to ensure it's ready to handle new sources of data. Early adopters are already establishing benchmarks for effective implementations, including strategy (ensuring senior executive support), operations (pallet and case handling techniques to ensure 100% reading rates) and technology (ideal integration points for enterprise systems and RFID data).
- ▶ **Start Smart:** in initiating pilots, focus on capabilities that balance business value, risk mitigation and cultural acceptance. Where possible, build on proven components and stable elements—both technologies and processes—in the existing supply chain and extend pilots to include essential partners.
- ▶ **Deliver Efficiently:** deploy simplified “mini-solutions” with quantifiable metrics, which will help build momentum, demonstrate value and define templates for effective rollouts on a global scale.

Why Unisys?

"The Unisys Safe Commerce team and Motorola's own Secure Intelligent Asset Solutions, will make it possible for us to evaluate activities across our supply chain in real time, from source manufacturer to final destination."

—Janiece Webb,
Senior Vice President,
Motorola Inc.

Why should retail, consumer goods and apparel organizations turn to Unisys?

- ▶ Unisys is the market leader in delivering in-transit visibility for clients in regulated industries like airlines, public sector and defense.
- ▶ Since 1994, we have served as the prime integrator and provider of managed services for the world's largest RFID-enabled network, operated by the U.S. Department of Defense, securing more than 25,000 containers of food, blood, medications and ordnance per day in more than 50 countries.
- ▶ We manage the air cargo supply chain for major airlines and are the IT security service provider for 249 airports.
- ▶ We are leading four projects designed to create "zero-gap" container security and traffic efficiency at U.S. ports, as part of the U.S. Transport Security Administration's Operation Safe Commerce program.
- ▶ Further, we have led more than a dozen visible commerce pilots for a variety of retail, consumer products and apparel companies.
- ▶ Our products expertise includes apparel, food and beverage, personal care and household, alcohol and tobacco and consumer electronics.
- ▶ As a founding member of EPCglobal, we are well versed in the business case analysis and value targeting across all elements of the supply chain, CRM and enterprise asset management.

The bottom line? Our real-world experience gives us a head start on the strategic planning, network design and implementation issues—as well as the value creation opportunities—just now being encountered by other firms. Our solutions minimize risk and maximize time-to-benefit.

From strategy to ongoing operations, our comprehensive Visible Global Commerce Solutions drive improved performance and profitability through enhanced security, insight and agility across the supply chain. Our dedicated teams of experienced retail, apparel, consumer goods and supply chain specialists are the architects of the 3D Visible Enterprise, and use our proven 3D Blueprinting process, which provides industry-transforming results. Our Global Infrastructure Services unit works closely with an array of partners, enabling fast, efficient, secure and robust deployment of the latest technologies. Our component-driven architecture provides for optimal flexibility in integrating emerging technologies with legacy and enterprise applications. Today's Unisys is known for its global reach, its collaborative approach, its portfolio of end-to-end services and a clear, consistent focus on cost and operational improvements.

For further information, visit www.safecommerce@unisys.com or contact Unisys Commercial Industry at 1.800.874.8647 x. 424.

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