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2015 UPS Aerospace & Defense Summit
Executive Summaries of Selected Sessions

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## UPS Biographies

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Key Themes from the 2015 UPS Aerospace & Defense Summit

Overview
Great optimism currently exists in the aerospace and defense industry. Worldwide demand for new aircraft is high, as is the need to maintain and repair existing fleet. This bodes well for original equipment manufacturers (OEMs), as well as for tier 1 and tier 2 suppliers and MROs (maintenance, repair, and overhaul facilities). Low fuel prices and strong demand are resulting in historic profits for operators. In general, times are good and expected to remain so for the foreseeable future.

But capitalizing on current and future opportunities requires fast, flexible, dynamic, global supply chains. The status quo for supply chains is no longer acceptable and rapid change is a necessity. Supply chain managers need to develop new strategies to reduce complexity and improve capability; managers need to deploy technologies, such as predictive analytics, to increase supply chain visibility and improve the speed and quality of decision making; and organizations need to choose the right supply chain partners with the expertise, capabilities, technology, and commitment to enable growth, ensure compliance, and optimize performance.

Context
The 2015 UPS Aerospace & Defense Summit, held in Atlanta, Georgia, on May 12-14, brought together supply chain leaders from the aerospace and defense industry, along with industry thought leaders and UPS executives. Speakers and participants focused on the state of the industry, supply chain trends, best practices, and challenges and opportunities in the United States and emerging markets.

Key Themes
Across the globe, significant opportunities in aerospace and defense exist.
Industry experts predict that around 37,000 new aircraft will enter the global market in the next 20 years and existing fleets will need maintenance and repair. Speaker Jonathan Berger said we will look back on the current period of time as “the good old days.” Growth will come from across the globe. Speakers and panelists see strong growth for the sector in the U.S. market as well as in multiple international markets including China, Mexico, and Poland. Panelists described making decisions to enter and invest in certain markets based on proximity to customers, the labor force, and the infrastructure, as well as factors such as total landed costs and IP protection.

In general, a consistent theme of this Summit was the optimism about growth and opportunities across the globe.

To support these opportunities and overcome the challenges, supply chains must change.
As speakers and panelists discussed aerospace and defense supply chains, they repeatedly emphasized concepts of “disruption” and “radical change.” One speaker said the status quo will no longer be acceptable. Supply chains today are seen as extremely complex, linear, and at times slow to adapt. Future supply chains need to become simpler, faster, more global, more flexible and dynamic, and more distributed. As companies develop a more global customer base, they may need to create a more global in-market supplier base as well. Companies also need to deal with a host of increasingly complex compliance issues and with growing cybersecurity threats.

Strategies and best practices discussed included:

- **Simplification.** Dr. Ed Frazelle described demystifying the complexity of supply chains by identifying all of the types of complexity in a supply chain (including analytical, dimensional, granular, and geographic complexity), and assessing and measuring the complexity. Similar assessments can take place to identify an organization’s supply chain capability. When complexity and capability are understood and measured, organizations can develop supply chain strategies to close gaps and improve performance. Among the strategies mentioned were simplification by standardizing more processes and reducing the number of SKUs.

- **Use of technology.** Technology can increase visibility throughout the supply chain, and the use of analytics, including predictive analytics, can enable organizations to make faster, more accurate, near real-time, data-informed decisions. Several
tools and technologies were mentioned that organizations can use, including tools from UPS, to improve the visibility, effectiveness, and efficiency of the supply chain. An emerging technology that could further disrupt the supply chain is additive manufacturing/3D printing. Longer term this could result in a more distributed supply chain with real-time manufacturing of spare parts at any location whenever needed.

• Partnering. Companies are forming partnerships to help achieve their supply chain goals. Partners may have expertise in reengineering the supply chain, optimizing the supply chain, supporting exports and imports in a new market, and much more. Speakers emphasized the importance of selecting partners carefully and working with partners to build collaborative, trusted relationships. In this era of enhanced scrutiny on compliance, partners that understand the nuances of compliance are extremely important as lack of compliance can slow a supply chain, and companies can be held accountable for the lack of compliance of suppliers and agents.

UPS is highly committed to the aerospace and defense industry. As one of the world’s largest airlines with 237 planes flying 1,900 segments each day, UPS knows the aerospace industry well. In addition, in assessing various vertical industries based on future growth opportunities and fit with what UPS does well, UPS has identified aerospace and defense as a key strategic industry. UPS is committed to aerospace and defense and plans to invest to build future capabilities, driven by the input of customers.

UPS has tools and technologies to support aerospace and defense organizations and is committed to working in partnership with companies to understand problems and develop solutions. UPS’s Phil Thomison emphasized that everyone at UPS is focused on serving in the role of a trusted advisor, providing commercial insight and value in a long-term relationship.
Thriving in the Golden Age of Aerospace

Jim Barber, President, UPS International

Overview

The opportunities for growth in the global aerospace sector are significant, with tens of thousands of new aircraft being built in the coming decades, and existing fleets having significant needs for maintenance and repair. At the same time, the global supply chains taking shape to support the building and maintenance of these aircraft are increasingly complex.

Having focused on the aerospace industry for more than a decade and having operated its own airline since 1985, UPS understands the complexity of the aerospace industry. UPS is deeply committed to this industry, plans to make further investments to support customers, and is forging partnerships to help aerospace companies have more efficient, optimized global supply chains.

Context

Jim Barber, President of UPS International, discussed opportunities and challenges UPS sees in the aerospace and defense vertical. He explained how UPS is forming partnerships and investing to support companies in solving their major supply chain challenges and driving growth.

Key Takeaways

Across the globe, significant opportunities exist in aerospace. Internationally, aerospace is an exciting industry with much growth anticipated that will be driven by:

- **International economic growth.** Having lived outside of the United States in multiple countries for the past 13 years and having travelled to 30 countries just last year, Jim has seen firsthand that the world’s future growth will come from outside of America. This is only natural, as 95% of the world’s consumers are outside of the United States.

- **Growth of the aerospace sector.** Industry experts predict that around 37,000 new aircraft will enter the global market in the next 20 years. At the same time, existing fleets will be aging and will need maintenance and repair, driving growth in this area as well.

Taken together, significant forecasts for international economic growth along with growth of the aviation sector make this a golden age for aerospace.

Increasingly global supply chains present both opportunities and challenges.

The challenges faced by global aerospace companies will only grow more complex as supply chains become more global and more complicated. Across industries, including aerospace, supply chains are becoming what was envisioned when the concept of a “supply chain” was first articulated some 20 or 30 years ago. Instead of just making a product in one country and then shipping it, increasingly companies are sourcing components in various locations, shipping them to another location to add value, and then distributing them to customers. (Research shows that excluding commodities, more than 50% of all global shipments are not finished goods, but parts.) An efficient, optimized supply chain can drive significant costs out of the system, can better connect companies and customers, and can strengthen a company’s brand. However, a global supply chain also brings risks and compliance challenges.

UPS is committed to aerospace, is well positioned to serve this industry, and plans to invest to solve customers’ problems and drive growth.

UPS knows the aerospace industry well. UPS established its own airline in 1985 and currently has 237 aircraft that fly 1,900 segments each day. Over the past decade, UPS has identified specific vertical industries on which to focus and in which to invest—and aerospace is one of those key strategic verticals. UPS is drawn to the aerospace vertical because of its size and projected future growth opportunities, and because UPS’s capabilities fit well in helping aerospace companies solve their most critical supply chain challenges.

“The more that we as an organization understand verticals, the better we can bring solutions.... Aerospace and defense is one of those verticals.”
—Jim Barber
Among the aerospace and defense companies represented at the Summit, about half are already UPS customers, and many are already using UPS Express Critical service, which provides a range of urgent transportation options for last-minute requests. Many are also using UPS Worldwide Express Freight, which provides fast, guaranteed service for palletized shipments. In addition, UPS is one of the world’s largest customs brokers, which can help companies with global supply chains navigate complex and frequently changing regulations and keep shipments moving through customs and across borders, particularly key borders.

While UPS already has capabilities, technology, and people focused on solving the key supply chain challenges of those in the aerospace industry—emphasized by UPS’s new United Problem Solvers tagline—because of the importance of this sector, UPS is extremely interested in increasing its level of investment in supporting aerospace. A question Jim posed to Summit attendees was, “Tell us where we can invest in your business to help you be more successful.”

UPS’s work with Pratt & Whitney illustrates the types of relationships UPS is committed to building with aerospace companies.

Just the day before the 2015 UPS Aerospace & Defense Summit, Jim had been in Hartford, Connecticut, meeting with executives from major aerospace and defense firm Pratt & Whitney, a company UPS has worked with for over a decade. UPS sees opportunities in supporting Pratt & Whitney in better integrating the company’s supply chain and distribution. UPS sees bringing technology and people to help Pratt & Whitney better optimize its supply chain, and these two companies will be collaborating to open the Northeast Logistics Center, one of the largest buildings in New Hampshire. This example illustrates the senior-level commitment at UPS to the aerospace and defense industry, the interest in partnering, and the willingness to make significant investments to drive efficiency and growth.

“Challenge us to invest in your business to help make you more successful.”
— Jim Barber
State of the Industry: Globalization 2.0: Is Cheap Energy the New Cheap Labor?
Jonathan Berger, Vice President, Aerospace & MRO, ICF International

Overview
The aerospace supply chain will continue to evolve, dramatically impacted by lower-cost U.S.-based energy. Prior to globalization, most organizations had self-sufficient supply chains. In Globalization 1.0, driven by labor cost arbitrage and new communications technologies, companies outsourced to lower costs. Globalization 2.0, which is just beginning, is driven by lower-cost energy. With the convergence of global labor rates and with the declining labor content in manufacturing (partly due to additive manufacturing/3D printing), companies are making decisions on where to locate based on energy costs. Over the next decade this will benefit the United States as supply chain “rightshoring” takes place, which is already under way.

Context
Jonathan Berger described the transition he sees from Globalization 1.0 to Globalization 2.0, driven by energy cost arbitrage.

Key Takeaways
An energy revolution is under way, with enormous business and geopolitical implications.
Over just the past four years, an energy revolution has begun. This revolution, centered in the United States, is driven by horizontal drilling and hydraulic fracturing (“fracking”) technologies. As a result, U.S. oil production is up 69% and natural gas production has grown 50%. In 2014, the United States became the world’s number three oil-producing country and is predicted to be number one in 2015. The United States is already the number one country in natural gas production.

“The energy revolution taking place is as big as the industrial revolution and the IT revolution.”
— Jonathan Berger

Low energy prices impact the aerospace and defense sector, as most manufacturing processes are extremely energy intensive. The U.S. energy boom has provided a significant cost advantage to manufacture in the United States versus traditional manufacturing competitors Japan and Germany.

“Clearly the U.S. today has a huge competitive advantage in terms of energy costs.”
— Jonathan Berger

Geopolitically, as energy prices decline, countries such as Russia, Venezuela, and Iran which rely heavily on their energy industries will feel significant pressure.
Many businesses, especially aerospace, will likely look back on 2015 as “the good old days.”

The past several years—since the global financial crisis—have been a period of low interest rates and strong growth in emerging markets. Multiple players will look back at this period as “the good old days,” for many reasons.

- **Aircraft manufacturers have record backlogs.** The backlog among commercial original equipment manufacturers (OEMs) is over 14,000 aircraft, an all-time record. This also makes it a profitable time for tier 1 and tier 2 suppliers, whose greatest challenge is keeping up with demand.

- **Operators have record profits.** Key factors driving these profits are:
  - **Low fuel costs.** Aviation fuel costs, which represent 30% to 40% of an airline’s variable costs, have dropped 40% in the past nine months.
  - **Capacity discipline.** During the past five years, airlines have shown discipline in constraining capacity growth.
  - **Industry consolidation.** Both in the United States and Europe, tremendous consolidation has occurred, which has further reduced capacity.

As a result of low fuel costs, capacity discipline, and industry consolidation, airlines are experiencing their highest profits in decades—maybe ever. Recent forecasts showing high industry profits estimated oil at $85 per barrel, but with actual oil costs at only around $50 per barrel, industry profitability could approach $80 billion. Now, after years of losing money, airlines are faced with a new problem—having to develop tax strategies.

In addition, capacity discipline is unlikely to last long term. In addition to new market entrants, existing players are likely to add capacity, which will erode some of the industry’s success.

- **Air cargo has shown positive signs.** In the first quarter of 2015, demand for air cargo was up almost 12% while capacity was up slightly more than 7%, which bodes well for the industry.

The current period has been outstanding for OEMs, tier 1 and 2 suppliers, and operators. In addition, numerous transactions have made it a lucrative era for investment bankers, consultants, and lawyers involved in the industry. For these reasons, when looking back this moment will be fondly remembered as “the good old days.”

The transition that is under way will have a significant impact on global supply chains.

The energy revolution taking place will lead to an entirely new era for aerospace supply chains. Globalization 1.0 was preceded by an era of self-sufficiency. In that era, manufacturers built their own products and operators owned and maintained their own aircraft.

The 1990s was a period of globalization (Globalization 1.0). This era was enabled by new communications technologies, the Internet, free trade agreements like the North American Free Trade Agreement (NAFTA), and the rise of emerging markets. During this period, manufacturers engaged in labor cost arbitrage, outsourcing work to the location with the lowest labor costs.

The current period can be termed “Globalization 2.0.” Economic growth in emerging markets has caused a labor shortage and a convergence of global labor rates, making the business case for labor cost arbitrage less compelling. In addition, with the advancement of robotics, automation, and additive manufacturing, labor content represents a smaller portion of manufacturing cost of goods, down from more than 40% to under 20% in some instances. Unlike the previous era where labor cost arbitrage was what mattered, this era is characterized by energy cost arbitrage.

Research shows that in the early 2000s, investments were going to BRIC countries (Brazil, Russia, India, China) because of labor cost arbitrage and due to an abundance of skilled workers. But with Globalization 2.0 renewed investments in the United States are taking place, particularly in the Southeast. Boeing, Airbus, Embraer, and several air freight maintenance, repair, and overhaul (MRO) companies have all made investments in the past few years in the Southeastern United States. Companies are “rightshoring” back to the United States and to nearby locations such as Mexico and Central America.

“Globalization 2.0 is that the supply chain will continue to ‘rightshore.’ I believe cheap energy is the new cheap labor.”

— Jonathan Berger

In Addition

- **Government incentives.** Another factor influencing the flow of investment into the Southeastern U.S. states is the significant economic incentives from state and local governments.
Panel: Latest Trends in Supply Chain Management

Charlie Covert, Vice President, Customer Solutions, UPS
Mitch Free, CEO, CloudDDM
Rob Grossman, General Manager, Global Distribution & Logistics, Pratt & Whitney
John Norton, Vice President Supply Chain, Raytheon
Vince Sims, Anchor, CBS46, Atlanta (Moderator)

Overview

With strong demand for aerospace products, the aerospace supply chain is undergoing a period of significant change. Supply chains are becoming increasingly global and more complex, and businesses are demanding that their supply chains be faster and more flexible. In the aerospace sector, many companies are securing contracts with international governments which are demanding that products be built in the country, often requiring an entirely new network of suppliers and partners.

New digital technologies are improving supply chain collaboration and visibility, and analytics, particularly predictive analytics, are helping companies make more accurate, real-time decisions. New manufacturing technologies, especially additive manufacturing/3D printing, have the potential to make manufacturing networks and supply chains more distributed, with real-time, on-demand production.

Keys to success include openness to change; an emphasis on speed; adoption and integration of new technologies; use of data and analytics; and collaboration with partners to create more nimble, flexible supply chains.

Context

The panelists discussed trends they are seeing in global aerospace supply chains.

Key Takeaways

Just as the aerospace industry is going through significant changes, so too are supply chains.

Panelists emphasized that significant disruption is taking place in the aerospace supply chain and the status quo is no longer acceptable. One panelist characterized the current situation as “a rapid change environment.” Drivers of change include:

• The need to create a new international supply base. Conflicts across the globe represent opportunities for traditionally U.S.-focused aerospace and defense firms. As companies produce defense products for various countries, these countries often require the products be built in the country. This requires creating an entirely new supply base, which may include sourcing on a global basis to build in-country.

• The need for speed. Everything today is about velocity and speed. Innovation cycles and design processes must be faster and more iterative. At the same time that supply chains are more complex than ever, they also need to be more responsive to rapid changes.

UPS’s Charlie Covert said the ability to navigate the complexity of supply chains is what distinguishes best-in-class versus average performers. In the aerospace sector, companies with best-in-class supply chain execution have costs that are 7.8% lower than average performers.

New technologies are playing a major role in supply chains.

Supply chains are transforming due to new digital and manufacturing technologies.

Digital technologies enable new ways of global collaboration. A company can have engineers in one location, manufacturing in another, and program management elsewhere. This is made possible by new collaborative systems that didn’t exist five or ten years ago.

One panelist believes digital technologies will cause supply chains to reorganize; they will go from linear to highly distributed. These distributed supply chains will appear chaotic, but technology will be a tool in structuring this chaos.

Supply chains are also changing due to the ability to aggregate and analyze big data to make far better decisions. When the supply chain is integrated with IT systems, near real-time data visibility exists and decisions can be made virtually immediately. Taking the power of analytics further is “predictive analytics,” which involves making decisions based on predicting the probability of an event.

Technology also provides new ways to visualize data, using tools such as Tableau to view data in different ways and drill down to a granular level to answer questions.
Innovative manufacturing technologies that will impact the supply chain include automation, analytics and predictive analytics (as described above), and additive manufacturing. The near-term supply chain impact of additive manufacturing is uncertain, but longer term additive manufacturing enables making spare parts on demand, eliminating physical inventory with virtual inventory, and creating a more distributed supply chain.

In the aerospace supply chain, quality and reliability are everything.

The large players in the aerospace supply chain will become integrators, which makes the quality and reliability of suppliers and of the entire supply chain critical. One defective part or one error in the supply chain could stop an entire system. Therefore, it becomes essential to validate the capabilities of each supplier, each component, and each process. This reinforces why data and visibility are so important in ensuring quality and reliability, and why any issues must be identified immediately.

Because reliability is so important, supply chain leaders must anticipate and plan for supply chain disruptions. Keys are data and visibility, accurate forecasts, response plans developed in conjunction with supply chain participants, and when necessary, adequate inventory to ensure supply. Companies are also using predictive analytics to help anticipate possible supply chain disruptions, and some minimize risk by multi-sourcing.

In complex global supply chains, cyber security is an increasing risk.

While companies may feel confident about the security of their own IT systems, for companies with a global supply chain and thousands of international suppliers, the risk of a supplier being breached and data being stolen is significant. Solutions include technology, education, and vigilance throughout the supplier base. One participant, whose company deals with hundreds of cyber attacks per day, said this is an enormous problem that shouldn’t be underestimated.

Another significant issue: trade compliance.

As supply chains become more global, the issue of trade compliance is increasingly significant. One Summit participant observed that historically the topic of trade compliance is often overlooked in managing supply chains.
Panel: Risk Mitigation & Compliance

Peter Chapman, Vice President & Chief Commercial Officer, AAR CORP.
Larry Fink, Assistant General Counsel & Vice President, Leidos, Inc.
Don Woods, Director, Customs & Trade Compliance, UPS
Vince Sims, Anchor, CBS46, Atlanta (Moderator)

Overview

For aerospace companies with international customers and global supply chains, complying with sensitive government regulations—many of which have significant penalties for non-compliance—is essential. Compliance requires having an organizational commitment (which starts at the top), fully understanding the multitude of regulations, knowing customers’ situations and compliance risks, and embedding compliance into all business activities.

UPS has its own compliance programs and also has tools and capabilities to assist aerospace customers in complying with various regulations.

Context

This panel discussed the importance of complying with various trade regulations and shared insights into steps that aerospace companies need to take to comply.

Key Takeaways

American aerospace firms must comply with numerous rules and regulations; the question is how.

The panelists emphasized the necessity of complying with multiple regulations pertaining to international trade. The types of regulations that companies and individuals must comply with include the Foreign Corrupt Practices Act (FCPA), International Traffic in Arms Regulations (ITAR), and Export Administration Regulations (EAR). The penalties for non-compliance can be significant, including jail.

The panelists shared the following thoughts on how best to comply:

- Integrate compliance into the organization’s business operations. Engage the compliance function early in all key activities and decisions.
- Create standardized processes, as this makes compliance far easier.
- Business functions need to partner with, communicate frequently with, and listen to those in compliance.

Compliance starts with a company’s top leadership and permeates throughout the entire organization.

Sound compliance processes start with a commitment to compliance at the very top of a company with a firm’s senior leaders making compliance a priority. When done right, top executives state clearly that the company will be compliant and will not tolerate lack of compliance at the company or among representatives, agents, or suppliers (see more below). Leaders must communicate about compliance repeatedly and must be willing to invest to support compliance activities.

Furthermore, in industries such as aerospace and defense where compliance is so critically important, leaders must create a culture of compliance throughout an organization and embed compliance broadly so that it is everyone’s responsibility.

Compliance must extend to representatives and agents.

Compliance is not just for a company’s employees but can extend to all representatives and agents. This can include sales representatives and consultants working on behalf of a company in various business development activities, as well as agents such as freight forwarders.

Because of the importance of representatives and agents, companies must conduct thorough due diligence when selecting their representatives and agents. It is important to conduct training on compliance (especially on regulations such as the FCPA), set clear expectations on what behavior is acceptable and not acceptable, communicate frequently, and build trust.

Aerospace companies need to know all applicable regulations that apply to their customers.

For every customer in every country, it is important to know all regulations that apply throughout the customer’s entire supply chain, including sanctions and embargoes, export restrictions, and various prohibitions related to the sale of military components.
Building positive government relationships can have significant benefits.

Positive relationships with parts of the government, such as the Department of State and the Department of Commerce, can be extremely important when companies are competing with firms in other countries for international business. The U.S. government can provide valuable assistance in helping U.S. firms win major contracts.

Also important in building relationships is the flexibility that can be afforded when companies invariably experience some type of compliance violation. If the company has a relationship with the proper part of the government, self-reports a violation, has an active compliance program in place, and describes plans to fix the compliance issue, the government can at times show flexibility. Relationships are the key.

UPS supports its aerospace customers in being fully compliant.

UPS has a strong, viable internal compliance program to support all of the company’s activities. But in addition, as a supply chain provider, UPS is focused on building tools and capabilities to support customers in their compliance efforts. For example, UPS has created tools that provide exporters with the information that is needed to file for the United States’ automated export system. These tools create a platform that allows customers to furnish UPS with information to ensure compliance and expedite the export process.

In Addition

- **Production classification.** The responsibility for product classification falls on the exporter. This is an area where companies need customs expertise to manage this part of the business. Product classification should be part of any compliance program, with written procedures and formal training.

- **Human trafficking.** A new U.S. regulation has come out this year focused on combatting human trafficking. It requires companies to conduct due diligence on supply chain participants to ensure they are not violating basic principles of human trafficking, with potentially significant fines. This imposes a new level of due diligence of which companies need to be aware.
Best Practices in Operational Excellence

Dr. Ed Frazelle, President and CEO, Logistics Resources International

Overview

Most supply chain managers at most companies believe their supply chain is complex and their supply chain’s performance is good. However, few companies define what supply chain complexity means or what performance is. But it is possible to define and assess the various elements of complexity, understand an organization’s capabilities and performance, identify gaps, and develop a supply chain strategy to close those gaps and improve performance.

Developing and implementing a supply chain strategy requires making hard decisions which involve tradeoffs. These decisions start with defining the supply chain mission and key metrics, and include decisions about the customer service policy, the level of inventory, who to buy from, how to design and operate transportation and warehouses, and much more. Multiple tools and best practices exist to help companies on the hard journey of improving supply chain performance.

Context

Dr. Frazelle dissected exactly what supply chain complexity means and offered specific ways and tools for organizations to decrease their supply chain complexity and improve performance.

Key Takeaways

Companies often create non-value-added supply chain complexity.

Virtually every company in every industry says, “Our supply chain is complex.” Since complexity is a vague term, distinguishing between value-added and non-value-added complexity is important.

- **Value-added complexity.** This is the baseline of inherent complexity in a given industry.
- **Non-value-added complexity.** This is complexity that fails to add value. Companies tend to bring this additional complexity upon themselves through their culture (for example, actually being proud of their supply chain complexity), as well as through strategic choices such as which customers to serve in which geographies, what level of service to provide to various customers, what their inventory strategy is, and more. Through a company’s own decisions and behavior, companies introduce complexity into their supply chain.

Supply chain complexity can be managed with organizational capability.

In most organizations, supply chains grow increasingly complex over time. Organizations take action to address supply chain challenges through capability. However, as shown below, capability tends to stay level, while complexity grows. When complexity overtakes capabilities, chaos, disorder, stress, and dysfunction result.

Two actions that can be taken to align complexity and capability are to:

- **Reduce complexity through simplification.** This can be done by reducing non-value-added complexity, such as decreasing number of SKUs or distribution centers.

- **Increase capability through development.** This involves developing the organization to be able to better deal with complexity and changing the culture to decrease non-value-added complexity.
Ideally, companies will simultaneously engage in both simplification and development to manage supply chain complexity.

**Improving the supply chain requires demystifying complexity, capability, and performance.**

Dr. Frazelle sees the key to improving a supply chain as demystifying key elements of the supply chain—complexity, capabilities, and performance.

**Demystifying Complexity**

Complexity can mean an array of different things, and multiple forms of complexity exist including:

- **Analytical complexity.** How analytically difficult a problem is.
- **Dimensional complexity.** Complexity along multiple dimensions. For example, an airline pilot must look at gauges showing a plane’s altitude, speed, direction, the wind speed, and more. A supply chain has multiple dimensions such as cost, fill rate, and response time. Good decisions involve looking at data on all key dimensions simultaneously.
- **Presentation complexity.** How information is presented affects a person’s ability to make conclusions quickly and accurately.
- **Granular complexity.** The complexity due to the specific number of elements in a supply chain. For example, a supply chain with 600 SKUs will be exponentially more complex than a supply chain with 60 SKUs. Far more forecasts will have to be run, and more orders, shipments, deliveries, vendors, and safety stock will be involved. The inventory investment and the number of out-of-stocks will almost certainly increase, usually significantly.
- **Geographical complexity.** Expansion from local to regional to domestic to international and global adds complexity and decreases performance exponentially. Global expansion introduces new languages and different sets of customs and regulations. Performance declines and transport, warehousing, and management costs increase. Costs rise more for novices and those with basic supply chains than for those with advanced supply chains.

Dr. Frazelle recommends thinking about supply chain complexity by decoupling it as follows:

- **Activity complexity.** Components include product, service, and transaction complexity.
- **Physical complexity.** Key elements are network, infrastructure, and disruption complexity.
- **Administrative complexity.** Important factors involve compliance, cultural, and fiscal complexity.

Organizations can use tools to perform an assessment of each of these different types of complexity in their organization. By analyzing and dissecting it, complexity can be translated from a vague term into specific problem areas that can be spotted and acted upon.

**Demystifying Capability**

The way to combat complexity is through capabilities. The three buckets for capabilities (show below) are organization, analytics, and infrastructure.

- **Organization.** This involves having the right people and culture, training them, and ensuring the organization has enough bandwidth. Of interest, only 12% of those in supply chain management have had any formal education in the field.
- **Analytics.** This entails having the data and measurements to make good decisions. Areas such as simplification and optimization are also analytical areas. Changes can be simulated and planned.
- **Infrastructure.** This capability involves an organization’s hardware, software, and providers.

“Complexity and capability don’t have to remain mysteries. They can be decoupled and demystified.”

— Ed Frazelle

As with complexity, tools exist that organizations can use to assess their level of capability to determine where improvement is needed.
Demystifying Performance

Performance is another frequently used word that is often vaguely defined. Dr. Frazelle defines supply chain performance as:

\[
\text{Performance} = \frac{\text{Total Supply Chain Cost}}{\text{Number of Orders}}
\]

This definition has both financial performance (cost) and service performance (perfect order) integrated into one metric.

A supply chain strategy can be created by answering 10 questions.

One way to break through complexity is to frame things in questions. Through his experience working with supply chain organizations, Dr. Frazelle has developed 10 questions to be answered in developing a supply chain strategy. They are:

Mission
1. What is our \textit{supply chain mission}; and what \textit{metrics and targets} reflect it?
2. What should our \textit{customer service policy} be?

A supply chain strategy starts with the mission and metrics. If an organization doesn’t know its mission and metrics, nothing else matters. A great deal of dysfunctional complexity occurs if a mission is unstated or unclear, or a metric doesn’t line up. Ideally, a supply chain will have just three to seven key metrics. (Dr. Frazelle is currently working with a client that has 900 supply chain metrics.)

“People behave based on the way they are measured. If you get the metric right, almost everything else falls in line.”
— Ed Frazelle

Clients, and many people in an organization, often say the customer service policy should be 100% availability on 100% of SKUs for 100% of the time. But such a policy is not reasonable or profitable. A more realistic policy might be 99.99% availability for 8 items for 8 “A” customers, with 24-hour deliveries. For “C” customers, the policy may be 50% availability and delivery in 3 days. Companies need to make decisions and choices.

Inventory
3. How much \textit{inventory} should we carry and where?
4. Who should we \textit{buy} from and in what quantity?

Organizations have to decide how much inventory to carry and where, which should fit with the customer service policy and with the organization’s unique conditions. Related to inventory is deciding who to buy from, in what quantity.

Logistics
5. How should our \textit{transportation} network be designed and operated?
6. How should our \textit{warehouses} be designed and operated?

Support
7. What supply chain activities should we \textit{outsource and to whom}?
8. What \textit{supply chain information systems} are required to support my supply chain and who should manage them?

Administration
9. How do we \textit{secure} our supply chain and insure \textit{compliance}?
10. How should we \textit{align} and \textit{develop} our supply chain \textit{organization}?

“Just answer these 10 questions and you have a supply chain strategy.”
— Ed Frazelle

Tools exist to help organizations develop and execute their supply chain strategy.

Dr. Frazelle has developed a set of tools that many organizations use to assess their supply chain’s complexity, capability, and performance. Other tools help organizations answer the key 10 questions to develop their supply chain strategy. These tools include assessments, playbooks, and scorecards. They include emphasis on metrics, understanding tradeoffs, and making decisions.

Organizations should understand that making major supply chain changes to improve performance is hard work. It probably takes six months to identify the gaps and figure out the value in closing them. It then takes six months to three years to implement changes, and two to five years to change the culture associated with the supply chain.
Overview

Emerging markets represent a significant opportunity for aerospace and defense companies. In deciding which markets to prioritize, key considerations include proximity to customers, the labor force and infrastructure, total landed costs, and legal considerations such as IP protections.

Panelists are optimistic about the United States (though not usually considered an emerging market), as well as Mexico and eventually China. In entering new markets and when importing/exporting, companies can benefit by having trusted, knowledgeable partners who know a market well.

Context

The panelists shared their perspectives on the opportunities and challenges of emerging markets.

Key Takeaways

Multiple factors affect an aerospace company’s assessment of a particular market.

The panelists discussed factors their companies consider when assessing emerging markets.

- **Proximity to customers.** Aerospace companies often decide to enter and invest in a market in order to be close to customers.

- **Labor force.** The ability to hire skilled talent is an essential requirement. The labor pool differs by geography, but companies are partnering with educational institutions in local markets to groom the talent they need.

  In Mexico the aerospace industry has partnered with the Autonomous University of Queretaro. The university is training engineers to support the needs of the 41 aerospace companies in and around Queretaro. As a result, finding qualified talent is not an issue in Mexico.

  In the United States, companies are partnering with community colleges to train people with needed skills. Those who have served in the military are also an excellent source of labor.

- **Infrastructure.** Companies look at infrastructure in terms of predictability and resiliency. All countries will experience some type of disruptions; the question is how quickly the infrastructure supports bouncing back.

  In Mexico the infrastructure is a mixed story. A great deal of investment has been made in Mexico’s infrastructure, such as investment in a new airport in Mexico City with hopes to make Mexico a regional hub analogous to Singapore. Still, traffic congestion in Mexico is an issue and many of the import/export processes remain manual, which makes them inefficient and subject to corruption. However, efforts are under way to digitize some systems, which will decrease corruption, improve visibility, and expedite customs clearance.

- **Total landed costs.** One panelist explained that when his company is considering a market they don’t look at the manufacturing price or the cost of a component. They look at the total landed cost. The decision of where to locate elements of the supply chain is about far more than just production costs.

- **Intellectual property protection.** IP is a major issue that affects companies’ decisions on where to locate. For example, companies have moved their manufacturing from China to Mexico primarily based on IP protection.

Several emerging markets are on the radar of these companies. The panelists commented on opportunities in several countries:

- **China.** While China still has issues with IP, as an aviation and aerospace market China is relatively untapped. Once the lower air space becomes regulated, which it has not been, there will be opportunities for business jets and other types of commercial aircraft. It will be a huge market.
• **Mexico.** Mexico has a trained workforce and the country’s university system is generating 100,000 engineers per year. The country has a history in manufacturing automotive and high tech products, which provide a good pathway for the aerospace industry.

UPS has been operating in Mexico for about 25 years and has a full portfolio of service offerings, including transportation, contract logistics, and broker services, with multiple customers on both sides of the U.S./Mexico border.

Mexico also has the advantage of proximity to the United States, with 80% of the country’s aerospace exports going there. While Mexico doesn’t have the most complicated brokerage regulations, they are still complex. To assist customers, UPS has introduced UPS CrossBorder Connect®, which helps reduce the time and expense of cross-border shipments.

• **United States.** International-based companies can view the United States as an emerging market. Such companies are attracted to the United States for the proximity to customers, low energy costs, a talented workforce, and the interest among states and governors hungry to attract foreign companies.

• **Other markets.** The panelists also see Poland as an attractive emerging market, but don’t yet see significant opportunity in Cuba, where much still needs to happen. India and Brazil were mentioned as markets where it is difficult for aerospace companies to do business.

When entering a new market or seeking to import or export, partnerships with experts can be critical.

Typically when a U.S.-based company wants to enter a new market it attempts to replicate what is working in the United States or another developed market. But companies have found in-market expertise to be essential. Some organizations try to partner with companies (such as UPS) that are already in the market, have an understanding of the market, and have in-country expertise. Partners who already have relationships with parties such as customs brokers and even with customers are valued.
Guest Biographies

Jonathan Berger
Vice President – Aerospace & MRO, ICF International

Jonathan Berger leads ICF’s global aviation maintenance advisory practice and brings over 24 years of aviation industry experience to his client engagements.

Prior to joining ICF in 2005, Berger spent 14 years working in Delta Air Lines’ Engineering & Maintenance Division having held various leadership positions in Operations, Engineering, Strategic Planning, and Quality. During his last assignment, Berger was based in Paris, France as the General Manager - Europe, Africa & Middle East where he was responsible for developing and executing an MRO sales & marketing strategy.

Berger is a graduate of the Georgia Institute of Technology.

Lawrence Fink
Assistant General Counsel and Vice President, Leidos, Inc.

Lawrence Fink is Assistant General Counsel and Vice President at Leidos, Inc., formerly SAIC. As the Director of International Trade Compliance, he is responsible for ensuring corporate-wide compliance with U.S. import and export regulations.

Fink serves as an industry representative on the Defense Trade Advisory Group or DTAG.

Prior to his work in international trade compliance, Fink served as an arms control and national security analyst, providing implementation and compliance support to the Department of Defense for strategic arms control treaties and agreements, including START II, the Cooperative Threat Reduction Program, Nuclear Safeguards, and the Chemical Weapons Convention.

Fink is a graduate of Johns Hopkins University and holds a Masters Degree from Georgetown University in Russian studies. He received his law degree from George Mason University School of Law and is a member of the Virginia Bar.

Peter Chapman
Vice President and Chief Commercial Officer, AAR CORP.

Peter Chapman currently serves as Vice President and Chief Commercial Officer of AAR CORP. Since joining the Company in 1997, Chapman has leveraged his in-depth industry experience and extensive network of relationships to help grow AAR’s business and lead the Company’s expansion into strategic high-growth markets. He serves as an integral member of AAR’s senior leadership team, responsible for advancing the business and maintaining excellent relationships with customers.

Prior to joining AAR, Chapman held various leadership positions with United Technologies Corporation, including President and CEO of United Technologies International and Executive Vice President, Pratt & Whitney Commercial Engines. He subsequently served as President and CEO of Dalfort Aviation, a third-party airframe maintenance company and as President of Asia Pacific Operations for McDonal Douglas.

In 2009, Chapman received the Médaille de l’Aéronautique from the council chaired by the Minister of Defense. It rewards the accomplishments of civilian and military personnel who have contributed to the development of aviation.

Chapman earned a BS in Aeronautics from Parks College, St. Louis University and earned an MBA in Economics and Finance from Syracuse University. Chapman is also a retired U.S. Naval Flight Officer.

Edward Frazelle
President and CEO, Logistics Resources International

Dr. Edward Frazelle is one of the world’s foremost authorities on supply chain strategy. He is President and CEO of Logistics Resources International, a global supply chain consulting firm with teams in Atlanta, Georgia; Tokyo, Japan; San Jose, Costa Rica; Lima, Peru; and Sydney, Australia. He is the Executive Director of RightChain™ Institute and the inventor of RightChain™, a supply chain strategy development model that is successfully guiding the supply chains of some of the world’s largest and most successful organizations. He was also founding director of The Logistics Institute at Georgia Tech.

Dr. Frazelle has trained more than 50,000 supply chain professionals; assisted more than 100 companies and government agencies in the implementation of RightChain™ principles; authored, co-authored, and contributed to more than seven books on supply chain logistics; and lectured at leading universities worldwide. His best-selling books, Supply Chain Strategy, World-Class Warehousing, and Inventory Strategy have been translated into six languages.
Dr. Frazelle has been recognized by the Council of Supply Chain Management Professionals, the Warehousing Education and Research Council, Material Handling Institute, the Institute of Industrial Engineer’s Armstrong Award, Kodak’s Educational Grant, and the General Motor’s Scholar Award. He was recently named Georgia Tech’s Outstanding Professional Educator. He is the former president of the International Material Management Society and a member of the board of directors of the Warehousing Education and Research Council.

Dr. Frazelle holds his Ph.D. from Georgia Tech and masters and bachelors degrees from North Carolina State University.

Mitch Free
CEO, CloudDDM

Mitch Free is a serial entrepreneur, manufacturing industry maverick, and global trade expert. He currently serves as the founder, chairman, and CEO of two digital manufacturing companies; CloudDDM (www.cloudddm.com) and ZYCI CNC Machining (www.zyci.com). Free also founded MFG.com in 2000 and served as CEO and Chairman until 2013.

Free began his career as an apprentice machinist and developed a passion for applying advanced manufacturing technologies. Northwest Airlines recruited him to develop methods to reverse engineer and produce aircraft parts. Holder of multiple patents, his track record of innovation and leadership quickly led to senior management positions where he oversaw aircraft acquisition and commissioning projects worldwide. The vision for MFG.com propelled Mitch into the world of digital manufacturing where his pioneering work quickly established him as an industry leader.

A dynamic and sought-after presenter, Free has spoken at Northwestern University, Harvard Business School, Wharton, Fudan University in China, the Society of Manufacturing Engineers, and appears regularly on various NBC and Fox outlets including CNBC and Fox Business. Because of his involvement in American manufacturing and global trade, Free was selected by the Clinton Global Initiative to help develop strategies to revive American manufacturing.

Free is a previous winner of the prestigious Ernst & Young Entrepreneur of the Year award and has recently been featured in Start Up Playbook and Makers, the New Industrial Revolution.

Rob Grossman
GM, Global Distribution & Logistics, Pratt & Whitney

Rob Grossman is General Manager Global Distribution & Logistics Pratt & Whitney. Grossman was appointed general manager, Global Distribution & Logistics (GD&L) in June 2013. He leads the Global Distribution & Logistics (GD&L) team of 350-plus employees and 3PL dedicated staff in developing and implementing Pratt & Whitney’s logistics strategy in support of both legacy and the next generation product family of engines. He is responsible for several key strategic initiatives in preparation for Pratt & Whitney’s unprecedented volume ramp, including a state-of-the-art, 600,000-square-foot logistics center in New Hampshire, which will serve as P&W’s global kitting and distribution hub. Grossman oversees Pratt & Whitney’s global transportation network and key warehousing and distribution centers in North America, Europe and Asia for Production, Development (experimental), Spares and Tool warehousing.

In Grossman’s previous role as the general manager of Operations Materials & Logistics (OM&L), he led the establishment of a European Logistics Center in support of the V2500 program and future growth in the European network, as well as developing warehousing and logistics strategies for the new F135 and PurePower® engines. During his leadership of OM&L, Grossman led the team to achieve a 50 percent kitting turnaround time reduction and a 60 percent Dock-to-Stock time reduction. Grossman’s other roles within P&W include positions as a business unit manager, procurement manager and cell leader as a P&W Leadership Development Program associate.

Prior to joining P&W in 2008, Rob was a corporate pilot flying for the President of the World Bank and was the Assistant Chief Flight Instructor at Montgomery Aviation, LTD.

Grossman holds a Bachelor of Science degree in Aeronautical Science from Embry-Riddle Aeronautical University and a Masters in Business Administration from the University of Maryland.
Peter Lengyel  
President & CEO, Safran USA

As President and CEO, Safran USA, Peter Lengyel is responsible for execution of Safran’s strategic vision among the 30 companies and joint ventures operating in the United States. He was previously the Vice President for Business Development for Safran USA, and in this role coordinated Group approaches across Safran’s aerospace, defense and security markets in the U.S.

Prior to joining Safran, Lengyel was a career naval officer, and last served as the naval attaché for defense security cooperation at the American Embassy in Paris, France. As the Director of Naval Affairs, he served as a liaison between government, defense, and private sector leaders to increase interoperability of U.S. and French defense and national security systems. A 1984 graduate of the US Naval Academy, Lengyel qualified as a tactical coordinator, mission commander, and instructor in the P-3C aircraft and attained over 3,500 flight hours. He also served as an exchange officer with the Royal Netherlands Navy, Tactical Action Officer on board the USS America (CV-66), and commanding officer of Navy Recruiting District, Michigan. During NATO combat operations in Bosnia and Kosovo, he was the Director of the Tactical Support Center and NATO Maritime Patrol Air (MPA) Task Group Commander, based in Sigonella, Sicily. In his career, he participated in Cold War antisubmarine operations throughout the Atlantic Ocean, Arctic, North and Mediterranean Seas, as well as naval operations in Bosnia, Kosovo, Iraq, Somalia, and Haiti. His personal awards include the Legion of Merit, Meritorious Service Medal (two awards), the Air Medal, Joint Service Commendation Medal, Navy Commendation Medal (three awards), Navy Achievement Medal, and various unit and campaign awards.

Lengyel is a graduate of the Naval War College, where he earned a Masters degree in national security and strategic studies, the Defense Language Institute (French and Dutch studies), and Ecole Militaire’s Centre des Hautes Études de l’Armement (Center for Advanced Armament Studies). Lengyel also serves on several Safran company boards and the U.S. Naval Academy’s Board of Trustees.

John Norton  
Vice President Supply Chain, Raytheon

John Norton is vice president of Supply Chain Operations for Raytheon Company. Raytheon Company, with 2014 sales of $23 billion and 61,000 employees worldwide, is a technology and innovation leader specializing in defense, security and civil markets throughout the world. Raytheon is headquartered in Waltham, Mass. Norton has been with Raytheon for over 40 years. Over that time, he has worked in several of the businesses as vice president of Supply Chain and at the corporate office as vice president of Enterprise Subcontract Process Excellence (ESPX). To date, the ESPX Process has contributed to significant cost reductions to Raytheon’s major proposal efforts. He has made significant contributions to the Patriot Manufacturing Program, Strategic Alliances and Construction Management.

Norton attended Merrimack College, studying finance and economics. He received his Master’s degree and J.D. from Suffolk University with a concentration in contracts. He is a member of the Massachusetts Bar Association.

Vince Sims  
Anchor, CBS46

Vince Sims is an EMMY Award winning journalist who joined CBS46 in June 2014. Sims has worked as a reporter and anchor in Louisiana and Oklahoma. He last worked in Pittsburgh, PA, before joining the CBS46 team as a reporter. Vince likes covering stories that help change people’s lives.

“When I report a story that impacts someone’s life, or helps them in some positive way, I get a sense of pride and accomplishment,” said Sims. “It’s a good feeling.”

Sims is happy to be in Atlanta and back to his southern roots. Sims is originally from Arkansas and graduated from the University of Central Arkansas. He received his degree in Mass Communications with a minor in Journalism.

Sims loves volunteering his time to serve as emcee for many nonprofit organizations. He also speaks regularly to different groups and organizations about his job and the challenges that come with it.
Sims also takes time to visit many schools, speaking to children about the importance of an education. He stresses to young people that their surroundings don’t define their future. He grew up on an agriculture and cattle farm in rural Arkansas, where he never imagined he’d one day be on television keeping people informed about what’s happening in their community.

David Velasquez
Global Logistics Manager, Aircraft Group, Moog

As Global Logistics Manager, David Velasquez leads strategic logistics efforts for Moog’s Aircraft Group. Moog is a $2.6B US based company which builds mission critical high performance parts and components for the Aerospace Industry. Moog has a supply chain which is spread across the globe that combines direct sourcing, partnerships and direct production to meet the changing needs of its customers. Velasquez looks to share his experience in building teams and fostering partnerships to bring a best-in-class logistics design to Moog as they continue to grow.

Velasquez, an International Logistics professional with over 25 years of experience, started his career in Operations Management in the 3PL industry with Exel Logistics in the early 90’s. As Exel was rapidly growing he gained experience in many business sectors including, Automotive, Consumer Goods, Petrochemical and Electronics.

David’s passion for driving operational improvement has led to focusing on supply chain integrations. He continued to work in the 3PL environment until he started a new challenge with New Era Cap in 2004.

New Era was a largely US based headwear manufacturer that was undergoing a shift into the global marketplace from a selling and sourcing perspective. While Velasquez was at New Era, he led the effort to build a best-in-class logistics group that supported the expansion into new markets in APAC, EMEA, LA and continued double digit growth in the US.

Velasquez graduated in 1990 from Texas A&M University with a BS in Economics.
Jim Barber  
**President, UPS International**

As president of UPS International, Jim Barber is responsible for the company's business operations in more than 220 countries and territories outside the U.S. Barber is also a member of the UPS Management Committee, which is responsible for the day-to-day management of the company.

Prior to his current position, assumed in May, 2013, Barber was President of UPS Europe and responsible for all UPS operations in more than 120 countries and territories in Europe, the Middle East and Africa.

Under Barber’s leadership, UPS executed a growth strategy framed around expanding capabilities and enhancing customer experience. To expand capabilities, Barber led key acquisitions including a pharmaceutical logistics company and independent parcel carrier. To address the growing impact of e-commerce and give consumers more choices for delivery, Barber led the acquisition of the Kiala collection point network in France, Belgium, Netherlands and Spain. It was expanded under the UPS Access Point™ brand into Germany and the UK during 2013.

Barber joined UPS as a delivery driver in Georgia in 1985. Between 1990 and 2000 he held a number of finance and accounting positions. In 2000, Barber joined the Mergers and Acquisitions Group as a Transaction Deal Manager in Atlanta, Georgia.

In 2004, Barber was appointed Vice President of Finance and Accounting in the Europe Region based in Brussels, Belgium. In 2006, he moved to the UK as Managing Director of UPS UK & Ireland.

Barber returned to Brussels in 2010 as Chief Operating Officer, UPS Europe, Middle East and Africa with responsibilities for business performance across the UPS EMEA Region as well as the region’s sophisticated air and ground transportation network.

Barber was instrumental in expanding the Cologne air hub where he led UPS efforts for a further $200m expansion plan, which officially opened in early 2014, creating capacity to support UPS customer growth in Europe deep into the future.

Barber holds a degree in Finance from Auburn University.

Charlie Covert  
**Vice President, Aerospace & MRO, UPS**

As Vice President, Customer Solutions, Charlie Covert is responsible for supply chain design, sustainability, and consulting for the aerospace, government, professional services, industrial manufacturing, and automotive sectors. Covert works with UPS customers to understand their supply chain strategy as it supports their business strategy. He then leads development of strategic and tactical alternatives, evaluation of business cases that drive customer value, and execution of the selected strategy.

Covert has been with UPS for sixteen years. Prior to joining UPS, he performed logistics engineering functions for Sedlak Management Consultants and McDonnell Douglas. He also served in the Ohio and California Air National Guard.

Covert currently serves on the Board of Trustees for the Georgia Conservancy. He holds a Bachelor of Science in Industrial and Systems Engineering from The Ohio State University and a Masters of Business Administration from Pepperdine University.
Agustín Picado  
**Vice President, Aerospace & MRO, UPS**

Mexico in January 2014 - tasked with expanding UPS’s presence in Mexico. Among his responsibilities are the design and execution of businesses strategies as well as ensuring that the company’s operations satisfy the distinguished level of service for which UPS is known.

From 2011 to 2014, Picado served as the Vice President of Marketing for the Americas Region where he supervised all aspects of marketing, including business planning, revenue management, product management/development and customer and employee communications.

Previously, at UPS headquarters, Picado held the role of Senior Director of Marketing Development. From 2004 to 2010, Picado led the UPS Marketing Strategy, focusing on the development of large scale projects pertaining to commercial and residential ground service, the domestic and international sales forces, and international air freight and ocean freight.

Picado, a 26-year UPS veteran, began his career with the company in 1985 as a part-time loader in the Metro Jersey District. After various rotations, he was promoted to Marketing Manager in 1994 and joined the Customer Strategy group in Corporate Marketing. In 1997, Picado moved to the Customer Information Management group where he served as the Project Manager for the first release of UPS WorldShip International, UPS’s global shipping software that supports high-volume shipping needs at an international scale. In 1999 he was promoted to Director and oversaw the development of numerous customer technology solutions.

Picado holds a Bachelor’s degree from Montclair State University in New Jersey and a Master of Business Administration from Farleigh Dickinson University in New Jersey. He also earned a Masters Certificate in Project Management from George Washington University.

Don Woods  
**Director, Customs and Trade Compliance, UPS**

Don Woods is currently the Director of Customs and Trade Compliance for UPS Supply Chain Solutions (UPS SCS). He has been with UPS for 29 years and a licensed customs broker since 1990. During his career with UPS, he has held numerous positions and has gained extensive knowledge and experience in customs and import and export trade compliance.

Woods has been in the international trade industry for 27 years and actively participates in several industry associations such as the National Customs Brokers and Forwarders Association of America, the International Compliance Professional Association, the American Association of Exporters and Importers, and the Express Association of America.

Woods has a bachelor’s degree in business administration from Indiana Wesleyan University.