Major trends that will influence our industry

what’s NEXT?

MAJOR TRENDS THAT WILL INFLUENCE OUR INDUSTRY
A brave new future

The ability to adapt to change is critical for success.

Last year, as our company studied global trends and recognized that markets were shifting, we saw the need to adapt. That’s why we announced the creation of our International and Service Solutions organization to better position Rockwell Collins for emerging opportunities.

Since then, we’ve taken major steps forward to position our company for larger roles in emerging markets in Asia and to expand our presence in developed markets in Europe. For instance, within the last two months, we’ve announced the openings of five new offices outside the United States that will help position Rockwell Collins better within these markets.

In this issue of Horizons, you’ll learn more about the global trends that will transform our industry over the next decade. As you read about macroeconomic shifts — such as the expanding global middle class and the growing influence of emerging countries — I hope you will recognize that to win tomorrow, we have to take a new direction today.

While many of these shifts will not happen overnight, we can’t ignore — nor should we fear — these upcoming challenges. Instead, we have to look at ways to turn these challenges into opportunities.

I believe we are on the threshold of a new world order, and the opportunities over the next decade will make the past 10 years seem like nothing more than a simple warm-up for the period we’re about to enter. I encourage you to learn about these trends and use them to inspire your own thinking about tomorrow.

Clay Jones
Chairman, President and CEO
Using Lean in engineering
Lean Engineering Accelerated Planning (LEAP) workshops are helping engineering teams plan more effectively.

Dispatching integration
Rockwell Collins used avionics system engineering experience to improve public safety vehicle solutions.

Managing customer relationships
Why strong relationships are important for our brand.

What does it take to win?
How the Rockwell Collins leadership model helps employees achieve success.

COVER STORY

10 trends in 10 years. What’s next?
The major trends that will influence our industry.

New acquisitions
How the acquisitions of Computing Technologies for Aviation and Blue Ridge Simulation expand our company’s capabilities.

Making a difference
The Rockwell Collins Engineer of the Year award recognizes technical creativity and innovation.

Service anniversaries

On the cover
While no one can predict the future with certainty, a look at macro-level trends often provides a glimpse of the changes coming in our industry. 10 trends in 10 years was developed to inspire employees to think about the future.

On the back cover
This ad — which was designed to emphasize the critical solutions we provide to airlines — recently appeared in Bloomberg Markets and Aviation Week.

www.rockwellcollins.com/horizons
Using Lean in engineering

Lean Engineering Accelerated Planning (LEAP) workshops are helping engineering teams plan and collaborate more efficiently and effectively during early stages of product design.

By the numbers

- Number of LEAP workshops held at our company in FY’10: 15
- Number of LEAP workshops held so far in FY’11: 13
- Number of facilities where LEAP workshops were held: 5
- Percent of participants who said LEAP defined the scope and objectives for their project: 96.7%

Lean perspectives

In the last two years, Technical Project Manager Jamie Porter from Carlsbad, Calif., has participated in nine LEAP workshops — five of which he facilitated.

Q What are LEAP workshops?
A The LEAP (Lean Engineering Accelerated Planning) workshop is a Lean planning tool that is used to generate detailed project plans in a very short amount of time. It is a cost-effective means for an entire team to create and buy into a plan for completing a project.

Q Why are the workshops beneficial to engineering project teams?
A The workshops allow for greater communication between all disciplines and foster collaboration early in the design process. Also, team members learn how their portion of the project affects others, and issues can be identified and resolved before the plan is finalized. This shortens the overall schedule and helps the team stay on budget.

Q How are the workshops different from other planning activities?
A Normally, plans are pieced together from several inputs that are developed independently. Yet, interdependencies aren’t always caught, risks aren’t always communicated, and the most efficient plan often is not established. By holding a LEAP workshop, everyone collaborates together — including stakeholders from program management, business development, engineering, operations, quality and finance. The output includes a schedule with dependencies, a list of tasks, and identified risks with mitigation activities. By involving all stakeholders, the result is a real plan that all can execute against.

Seeing results – Head Down Display Center Project Engineering

In 2009, a Head Down Display Center engineering team held a LEAP workshop in the early stages of a KC-135 Block 45 engine instrument display program. According to Technical Project Manager Andy Smith, the event helped the team make better decisions up front about schedule and cost.

“In general, the flow of the project has been stable and consistent,” said Smith, who is leading the 18-month program. “To me, the workshop made all the difference.”

The team is expected to complete the program in early May on time and on budget.

Learn more – More information about LEAP is available to employees via “L” in the Rockwell Collins Online Index. You also can email Deb Secor at dasecor@rockwellcollins.com or Kristen Brown at kmbrown@rockwellcollins.com.
Website enhances our brand online

Redesigned to be more relevant and intuitive to users, our external website now delivers what our customers expect online.

Feedback from users indicated that enhancing our company’s brand online required an updated website, said Penny Doubet, manager of Enterprise Web Strategy.

“If someone wants to know more about Rockwell Collins, our website is likely their first exposure to our company. Now that site provides more of the rich, compelling experience people expect on the web in 2011,” said Doubet. “It was designed from the user’s perspective.”

The new site offers a number of improvements, including an up-to-date design and architecture, enhanced search capabilities and navigation, and tailored content delivery. Product information is integrated into a single area, enabling users to find what they’re looking for more quickly.


Also, the refreshed product pages include multiple images, videos, specifications and links to related resources.

Rockwell Collins named to diversity Top 50 list

Our company was recently ranked on the DiversityInc Top 50 Companies for Diversity®. This was the first time Rockwell Collins made the list, coming in at No. 42.

Selection to the Top 50 list is based on corporate survey submissions that evaluate four critical areas of a company’s diversity management strategy: CEO commitment, human capital, corporate and organizational communications, and supplier diversity.

“Being recognized on the list of the Top 50 Companies validates we are focusing on the right strategies, and our leaders and employees are engaging in a way to enable substantial progress,” said Sue Nelson, director of Diversity and Inclusion, noting we were selected from 535 participating companies.

A hands-on experience

Eighth-grade student Vivica Maina (middle) and her mother, Evelyne Mambei, work alongside Senior Subcontracts Program Manager Margaret Horsfield as they craft earrings out of capacitors and resistors. The activity was part of an Engineers’ Week event for 60 middle school girls and their adult role models at Rockwell Collins in Cedar Rapids, Iowa. EWeek is an opportunity for Rockwell Collins facilities in the United States to celebrate our engineers and encourage students to explore engineering careers.
Like a fighter pilot maneuvering through enemy airspace during a tactical engagement, a police officer in pursuit of a suspect doesn’t have time for distractions.

Recognizing this parallel, Rockwell Collins employees applied their understanding of avionics system engineering when designing iForce™, an integrated public safety vehicle solution.

“Our experience with integrating flight decks allowed us to see the problem in a different way, and solve it,” explained Scott Uhlir, programs manager for iForce. “With iForce, Rockwell Collins has once again proven our understanding of how to integrate electronics and communications to help our customers execute their missions successfully.”

Harnessing avionics experience

Along with a multi-functional touchscreen display, Rockwell Collins included a hand control device and voice activation that minimize distractions and allow iForce users to keep their eyes on the road.

“Responders lose color perception in high-stress situations, so they depend on muscle memory to use their equipment intuitively,” said Debbie Braid, technical project manager. “That’s something we learned from our experience with pilots and applied to iForce.”

Rockwell Collins initially developed iForce for the California Highway Patrol (CHP). Within a year, the Royal Canadian Mounted Police’s (RCMP) K Division (Alberta Province) became the solution’s second customer, and iForce grew from a single program into a business area for Rockwell Collins.

“Other Canadian law enforcement agencies look to the RCMP for new technology and equipment,” explained Marie Darling, principal account manager for Rockwell Collins in Ottawa, Ontario, Canada. “Influential and satisfied customers like the RCMP help iForce gain credibility and recognition.”

Preventing the “blue screen of death”

Before pursuing the CHP contract, Rockwell Collins had participated in a U.S. Defense Advanced Research
Projects Agency (DARPA) Grand Challenge to build an autonomous vehicle. During this challenge, Rockwell Collins employees saw the need for reliable computing based on open systems architecture in military ground vehicles. As they started to look at opportunities, the team found ways to expand beyond military ground vehicles.

“We realized what the California Highway Patrol wanted was similar to what we were already building for the military from a hardware and reliability standpoint,” said Uhlir. “We pursued the contract to provide CHP a state-of-the-art solution and to gain a foothold in the public safety market.”

For iForce customers, an open systems approach allows the integration of future technologies without expensive hardware replacements. In addition, high reliability is achieved through the use of multi-processor computing modules — providing protection from the so-called “blue screen of death” that indicates computer failure.

“This differentiates iForce from legacy systems, making it more reliable and robust than an off-the-shelf laptop computer,” explained Scott Berry, manager of Public Safety business development. “We put mission-critical functions — lights, sirens and radios — on a dedicated Linux®-based computing module like we do in our military products and avionics. Then, we also provide a Windows®-based computing module in which officers can run applications they currently use on their laptops.”

Driving demand with innovation

Although iForce is a Government Systems solution, the program is set up more like a commercial pursuit than a military contract.

“We’ve tailored our product to meet specific agency needs,” said Braid. “Working with multiple customers, we’ve come up with a better solution.”

For example, while riding with police officers, Rockwell Collins employees better understood the need for expanded radio communication functionality. When officers are away from their vehicle, they need a system to integrate their handheld radios with more powerful mobile radios. Today, iForce solves this problem with a vehicle repeater system, and enhances communication among various law enforcement entities by cross-patching different radio frequencies.

The iForce design also tackled clutter in the cabin of the patrol car, which can be a distraction and a safety hazard for officers. Legacy systems often included multiple radios, control heads and a laptop computer mounted in the passenger compartment. In contrast, iForce stows the equipment in the trunk and integrates control through the touchscreen display, hand controller and voice commands, creating a simpler and safer working environment.

Safety, integration and interoperability

Moving forward, the Public Safety team is emphasizing safety, integration and interoperability as it introduces iForce to more law enforcement agencies. Additionally, as Rockwell Collins develops its supply chain and dealer network, our team is exploring ways to adapt iForce for other public safety applications.

“We are bringing a level of integration and reliability that this industry currently doesn’t have,” said Berry. “There’s demand for that, and we think public safety is going to be a significant growth area for us.”

By Katie Shatzer
Successful relationships – whether professional or personal – require a great deal of work. They take constant communication, teamwork, honesty, trust, respect and dependability. Those characteristics also hold true when it comes to building a powerful brand in an increasingly competitive business environment.

At Rockwell Collins, three brand pillars – personal relationships, innovation and heritage – were established to serve as a guiding force as we work to bring our brand to life and distinguish our company from our competitors.

These pillars help form the foundation of our brand and are firmly rooted in our corporate vision and values. Additionally, they help us form positive experiences for customers as we strive for industry-leading customer satisfaction.

In the second of a series of articles about our brand, we take a closer look at the importance of building strong customer relationships by examining how we work with two customers: the United States Army’s 160th Special Operations Aviation Regiment (Airborne) and Southwest Airlines.

**Building loyal relationships**

There’s not a day that passes at Fort Campbell, Ky., when Marcus Frye doesn’t remind his employees to make sure our customer has exactly what it needs. The manager of Customer Service Engineering for Rockwell Collins does so not because he has to, but because he understands the importance of trust and the effect it has on our company’s reputation with our customers.

With a dozen customer service engineers scattered around the globe, Frye’s team ensures customers have dependable, durable and reliable systems. Seven of these
OUR BRAND

individuals are responsible for providing daily support for the Common Avionics Architecture System (CAAS) cockpit on MH-47 and MH-60 helicopters flown by the U.S. Army’s 160th Special Operations Aviation Regiment (Airborne).

“These soldiers put their lives on the line each time they go out on a mission, so it’s critical that we provide them with the best support possible,” said Frye. “To do so, we try to make ourselves available whenever they need us, and we do everything possible to resolve equipment problems as quickly as we can.”

For the past 23 years, Rockwell Collins has been on site at Fort Campbell, providing avionics support for both the MH-47 and MH-60 aircraft. Our company also provides support at Hunter Army Air Field near Savannah, Ga., and Joint Base Lewis-McChord near Tacoma, Wash.

According to Jessica Weyant, program manager for our Performance Based Logistics (PBL) contract, that onsite presence – combined with our reputation for working quickly and our ability to understand our customers – has led to a loyal relationship and contributed to multiple contract wins over the years.

“Our recent PBL contract guarantees [product] availability to our customer 100 percent of the time. It also allows the Army to better project its annual maintenance costs,” explained Weyant. “We’re performing well because we’re working alongside the customer, understanding what’s going on, and getting them answers in hours instead of days.”

Monty Egan, a senior customer service engineer in Savannah, says these loyal relationships make all the difference when it comes to providing support and potential solutions.

In fact, the relationship between Rockwell Collins and the 160th has been so strong over the years that the 160th actively involves our employees in various levels of collaborative problem solving.

“We’re there to support the 160th when they need us,” said Egan, who joined Rockwell Collins nearly 14 years ago after retiring from the U.S. Army. “Working together, we’re able to develop better solutions that meet their needs. This benefits both of us.”

For more than 20 years, Rockwell Collins has been providing avionics support for the MH-60 Black Hawk helicopters from the 160th Special Operations Aviation Regiment (Airborne) of Fort Campbell, Ky.

Log on to Brand Central
Details about our brand strategy, and tools and templates to help employees express the brand, are available via Brand Central. To access Brand Central, visit the Rockwell Collins Online Index and locate “Brand Central” under “B.”

Questions about our brand?
If you have questions about our brand or would like to schedule brand training for your area, please contact Joel Milefchik at 319.295.1898 or email jtmilefc@rockwellcollins.com.

>>>
Rockwell Collins employees Paul Dain (left) and Jeff Hudson (right) have a close working relationship with Southwest Airlines Avionics Engineer Kirk Majors. Dain serves as our sales account manager for Southwest and Hudson provides technical avionics support. The airline is headquartered at Love Field in Dallas, Texas.
Making connections

When Mike Packard moved into his current role as principal product support manager, one of his colleagues gave him a key piece of advice – learn the “fun-luving” culture at Southwest Airlines.

Employees at the Dallas-based air carrier are known across the U.S. for their warrior spirit, servant’s heart and “fun-luving” attitude. That culture also flows to suppliers like Rockwell Collins who are treated in similar fashion – with warmth, friendliness, individual pride and respect.

“I had to prove that I was capable of helping Southwest with their head-up displays, and to do that I had to learn their culture, build a rapport with their employees, and work the same way they work,” said Packard, who is based in Wilsonville, Ore. “Southwest has a very well-defined culture of family, and it’s important to the future of our company that we’re part of that family.”

The primary focal point for Head-up Guidance System (HGS®) customer support on Southwest’s fleet of Boeing 737 airplanes, Packard is no different than the hundreds of customer support employees across our company who view phones ringing as opportunities.

“Whenever Southwest calls, we do everything we can to solve their problem or help them understand why their request can’t be accommodated,” said Jeff Hudson, a senior service center lead technician in Irving, Texas, who is the primary contact for all Rockwell Collins communication/navigation equipment on the Southwest fleet. “They depend on us, and we depend on them. They’re a great group of people, and we’ve managed to build a strong relationship over the years.”

According to Mark Burrowes, director of Air Transport Product and Customer Support for Rockwell Collins, that customer-oriented attitude isn’t easy to teach. Yet, it’s prevalent across our entire customer support organization.

“We’re all working very hard to improve our overall response time by 15 percent in FY’11,” said Burrowes. “How quickly we can help our customers, our ability to understand their culture, and how we measure up to their expectations are all part of what leads to additional sales in the future.”

Regardless of where in the world our customers are, Burrowes is adamant about the fact they all receive the same top-notch support. However, he admits the relationship between our company and Southwest Airlines is unique and chock-full of lessons from which we all should learn.

“Southwest Airlines wants to do business with people they like,” said Burrowes. “You could have the best product in the world; but, if you don’t fit into their culture, you won’t win the business. They are yet another example of the positive effect strong relationships have on our company.”

10 ways to build great relationships

1. Manage the first impression
2. Demonstrate expertise in what you do
3. Build rapport
4. Be passionate about what you’re doing
5. Be a good communicator (e.g., ask the extra question)
6. Fix problems with a positive attitude and sense of urgency
7. Maintain quality at every turn
8. Set the expectation, and then exceed it
9. Be consistent
10. Show appreciation (e.g., say thank you)

Source: Shep Hyken
Shep Hyken is a customer service speaker who spoke at a recent Rockwell Collins Leadership Club meeting.
What does it take to win?

In a business environment where it’s critical to achieve market leadership and manage change, we could all benefit from sound leadership advice. So we asked leaders throughout the enterprise how the Rockwell Collins leadership model helps them achieve success.

Execute Flawlessly

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<tr>
<th>Darrell Chiavetta</th>
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<tr>
<td>Director of Capture Excellence</td>
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<tr>
<td>Government Systems</td>
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<tr>
<td>Richardson, Texas</td>
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<tr>
<td>Joined Rockwell Collins in 1996</td>
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Executing flawlessly is about breaking down barriers to meet commitments we’ve made. We each earn a reputation of excellence based on a pattern of satisfying our obligations for quality and on-time delivery. From this pattern, customers can gain confidence in us. If one of us fails to meet our commitments, we all fail.

In my role, the pursuit of execution perfection is important in every action every day. It starts in ensuring the commitments we make are reasonable. Once that promise is made, we must be relentless, meticulous and systematic in our quest to meet the customer’s goals.

Push Frontiers

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<tr>
<th>Heidi Kiser</th>
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<tr>
<td>Principal Program Manager</td>
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<tr>
<td>Commercial Systems</td>
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<tr>
<td>Cedar Rapids, Iowa</td>
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<td>Joined Rockwell Collins in 2004</td>
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To push frontiers, you must be passionate about welcoming and leading change. Our business is ever changing, so you can’t be afraid to “stir the pot” and respond with new approaches if it’s best for our customers and company.

I encourage others to embrace change for the opportunities it creates. Many times you can increase efficiency and revenue by correlating successful lessons, strategies and solutions across our business. I strive to solicit input from my network on methods and approaches to solve problems while also providing insight to others.

Exercise Insightful Judgment

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<tr>
<th>Ken Barker</th>
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<td>Director of Manufacturing Operations</td>
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<tr>
<td>Operations</td>
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<td>Sterling, Va.</td>
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<td>Joined Rockwell Collins in 2009</td>
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Exercising insightful judgment is all about making timely ethical decisions based on an analysis of available data and processes, your past experiences and the current situation. Rarely do you have 100 percent of the information required to make a perfect decision at the time needed. That means you need to be able to evaluate what you do have, make the best decision you can, and be accountable for that decision.

We owe it to all our stakeholders, both internal and external, to make the right decisions when they need to be made.
Unleash Energy

Unleashing energy means having a passion, enthusiasm and excitement toward your task, which allows you to perform at a higher level and reach your full potential.

I try to unleash energy in my team members so individually and as a team we achieve our goals. To do so, I find out what motivates and inspires them, and then use that information to drive higher results.

It’s important to be passionate about your job and continually push yourself to do more challenging tasks. Unleashing energy helps me do my best, combat complacency, and sustain higher performance.

Communicate Masterfully

To communicate masterfully, you need to understand what motivates different people, and then tailor the delivery and content of your message accordingly. People are more willing to rally around a common goal and be invested when they know how they contribute to the solution. In my role, I need to make sure everything works according to plan. That doesn’t happen without effective communication.

Also, for me, mastering anything means that I have more to learn than I have to teach. I believe I am far more effective at communicating a message when I am prepared to listen to outside perspectives.

Build Powerful Networks

Building networks helps me see things from a different angle and think differently to address issues. The best way to build your network is to be open and honest, willing to learn from others, work as a team, embrace different cultures and viewpoints, and consider situations from others’ points of view.

In my role, it is very important for me to expand my network and relationships with customers, partners and government bodies to help Rockwell Collins build our business in China. I also need to work together with employees to deliver our promises to customers and create a harmonious working environment for our team.
A LOT HAS CHANGED IN A DECADE. When Rockwell Collins spun off from Rockwell International and started trading shares on the New York Stock Exchange in 2001, our company didn’t offer business jet cabin solutions, for example, or integrated systems for ground vehicles. Suitcase-size satellite communication equipment, virtual environments and unmanned aircraft systems weren’t as common as today. And when employees talked about “tweets,” you assumed it was a noise a bird made, not a way to communicate with a colleague.

Over the last 10 years, companies around the world have made exponential advances in knowledge and computational capabilities, and Rockwell Collins is no exception. Today, our company’s breakthroughs in GPS technology, communication capabilities and avionics are supporting U.S. and coalition forces deployed around the world. In addition, an extensive fleet of aircraft — including business jets, regional aircraft and airliners, as well as military tankers, transports and rotary wing platforms — is flying safer and more efficiently with Rockwell Collins’ next-generation capabilities.

With one decade behind us, it’s a good time to ask, “What’s next?” While no one can predict the future with certainty, a look at global drivers of change and macro-level trends often provides a glimpse of the changes coming in the aerospace and defense industry. In the next pages, you’ll read more about the underlying forces shaping our business environment and the anticipated effects.

Editor’s note: There are a number of classifications for developed and developing countries. For the sake of simplicity, in this article, developed countries are defined as all nations in Europe and Northern America, plus Japan, Australia and New Zealand. The remaining nations of the world are classified as developing countries or emerging countries.
Global drivers of change

Population
By the end of 2011, the world’s population will be about 7 billion, and by the late 2020s, it’s projected to be 8 billion, according to the World Bank. By comparison, in 1800, the world’s population was only 1 billion.

Demographers expect the largest increases in population out to 2025 will be in Asia and Africa, while less than 3 percent of the growth will occur in Europe, the United States, Canada, Australia and New Zealand, according to the U.S. National Intelligence Council. India will experience the largest increase in population over the next 15 years — climbing by about 240 million people — with an estimated population of 1.45 billion in 2025.

Additionally, most nations are experiencing some type of growth in their older populations. While the level and pace of population aging vary by geographic region, declining fertility rates and improved health and longevity — especially in developed countries — have resulted in rising numbers and proportions of the older population. In 10 years, for the first time ever, people around the world aged 65 and over will outnumber children under age 5, according to the U.S. National Institute on Aging and the U.S. Department of State.

These changes in demographics will drive social and economic opportunities for some countries while challenging others.

Economics
Economists are seeing the most significant global shift in modern history — roughly from west to east — in relative wealth and economic power. As the working-age population decreases and overall population growth slows in developed countries, economic growth also is projected to wane. In contrast, in developing countries, more labor, along with more capital for investment, is expected to fuel growth.

It’s anticipated that the economies in the U.S., Germany, the United Kingdom and France will continue to be among the largest in the world over the next decade. Yet, rapidly developing countries such as India and China are expected to play dominant roles in the global economy. Already, within the last year, China surpassed Japan as the world’s second-largest economy.

In addition, the number of people considered to be in the “global middle class” will rise dramatically. A report from Goldman Sachs found that the global middle class would expand from 29 percent of the world population in 2008 to about 50 percent in 2030. Most of these entrants will be from Brazil, Russia, India and China where well-developed industrialization strategies are in place. A rising middle class means more demands for higher-end goods and services, including air travel. More national wealth also increases a country’s ability to fund defense programs.

Resources and Environment
With rising population and a larger middle class with more affluent lifestyles, demands for natural resources such as water, food, oil, lithium, gold, iron and copper are projected to increase. More demand will disproportionately increase the prices of limited resources and also heighten tensions on the world stage as countries compete for sources of supply. Major exporters of critical resources like oil — such as Brazil, Russia and countries in the Middle East — will have more financial resources to increase their economic influence through control of supply and by leveraging increased investment in defense.

In turn, an escalation in demand for natural resources also means an escalation in waste and pollution, which negatively impacts the environment. Since the environment influences how people live and countries develop, most societies naturally will seek balance between economic and environmental priorities.
Geopolitics

As developing countries such as Brazil, Russia, India and China accumulate more wealth, these countries also will accumulate more political clout. While it’s believed the U.S. will continue to have a strong influence on the international system over the next decade, a scenario where there are several powerful players on the world stage is starting to take shape. Some of these emerging players follow models different from the U.S. and other Western countries. For example, China has a system of “state capitalism” where the government owns firms and plays a prominent role in economic development.

Aging and population change also will have geopolitical implications over the next decade. Historically, older societies tend to be more stable, while societies with “youth bulges,” or high ratios of youth compared to the adult population, are most susceptible to civil unrest, revolutions, terrorism and war. While youth bulges don’t solely contribute to chronic unrest — poverty, corruption, ethno-religious tensions and political instability also may contribute — many strategists see correlations between extreme youth ratios and violence.

The uprisings in Tunisia, Egypt, Libya and other North African and Middle Eastern countries are recent examples of this correlation. In Tunisia, 5.3 million people — or about half of the total population — are under 30, according to the United Nations Population Division. While the fertility rate is falling in this country and in others in the region, a more balanced age demographic in North Africa and the Middle East — and overall stability — probably won’t be reached for another decade.

Technology

It’s estimated that there will be greater technological change over the next two decades than in the entire 20th century if the current pace of technology advancement continues.

Just think about some of the technologies that have matured over the last decade alone — smartphones, digital music players, social networking, voice over IP, flat-panel TVs, commercial GPS, digital photography, unmanned aircraft systems and LED lighting.

While the U.S. is expected to continue to be a leader in science and technology over the next 10 years, other countries are catching up when it comes to innovation leadership. For example, in China, the mastery of science and math fundamentals is already exceptional. With the advancement of other areas that contribute to innovation — such as creativity and application — the innovation leadership gap is expected to narrow.
Artificial intelligence and autonomous systems coming of age

Just as mobile connectivity has changed the way we communicate and collaborate, artificial intelligence and autonomous systems are likely to change the way we make decisions and use technology. Already, you can find examples of autonomous technology in aircraft and ground vehicles — even vacuum cleaners. These “intelligent” systems are capable of making decisions and interacting with the real world through the fusion of sensing, processing and communications.

Over the next decade, there will be more emphasis on engineering systems that can assess foreseen and unforeseen circumstances, and automatically respond or present high-level choices to human operators. For example, in aviation, the demand for more fuel-efficient aircraft, along with greater levels of precision, consistency and safety, is leading to new levels of automation and autonomy in flight decks. Breakthroughs in these technology areas also are helping advance unmanned aircraft systems.
Increasing air traffic congestion

Demand for world air travel has increased an average of 5 percent annually over the past 20 years according to the International Civil Aviation Organization. That trend is expected to continue, meaning in about 15 years, global air travel will double. Developing countries will see the most growth — especially in the Asia Pacific region. Yet, Europe and North America will continue to be among the regions with the highest volume of air travel and the most airspace congestion. For instance, according to the Federal Aviation Administration, the U.S. airlines are expected to reach the one billion passengers-per-year mark by 2021, two years earlier than previously expected, making the need for more capacity in the air traffic management system even more urgent.

Global drivers

Implementing a seamlessly interoperable global air traffic management system — as proposed in the Federal Aviation Administration’s NextGen strategy and EUROCONTROL’s SESAR strategy — over the next decade would minimize delays, save fuel, and allow more aircraft to operate safely in the same airspace. Information technology and avionics components are important parts of the solutions identified in these strategies. For example, Automatic Dependent Surveillance-Broadcast, or ADS-B, uses satellites, transmitters and receivers to supply flight crews and ground control personnel with information about the position and speed of aircraft in the area. As the illustration above shows, this new technology provides more accurate tracking and more frequent updates than current radar surveillance.

Shifting global defense spending

Changes in trends such as demographics, economics, resources, the environment and technology can easily influence the world’s security. Yet, when strategists look at global defense spending, they have to consider the economic strength of a country to build military forces along with the possible threats to its security.

Overall defense spending is projected to be flat to decreasing in the United States and western Europe in the next five years as governments focus on tightening spending. While strategists foresee some growth in defense spending in these developed countries in the latter half of the decade, it’s expected to be modest. As a result, more emphasis on upgrades, service solutions, “good enough” technologies and capabilities with lower price points is likely.

On the other hand, defense spending will become more of a priority in areas with growing national wealth such as Brazil, Russia, India and China. Over the next decade, these countries will be making defense investments to position for leadership on the world stage. According to the United States Joint Forces Command, in two decades, with the emergence of the developing countries, every region of the world will likely contain major economic powers or organizations capable of leadership to address regional troubles.

The economic importance of the Middle East with its energy supplies, combined with tribal, religious and political divisions, will continue to have implications on security. Additionally, youth bulges, intermixed with the fact that much of the Middle East and North Africa has fallen behind in industrialization, modernization and education, provide conditions for multiple or simultaneous regional conflicts over the next decade. And, if that were not enough, radical Islamists in the region who advocate violence add to the tension. These challenges, while not new, have a global reach. Over the next 10 years, as conflicts persist, it’s expected that security leaders will continue to deliberate the role military force has in international affairs in this region of the world.
More partnerships between companies in developed and developing countries

As economic power shifts, most multinational aerospace and defense companies are looking at ways to move into new markets and expand their current market shares to maintain long-term growth. At the same time, governments and companies in developing countries are trying to advance design, manufacturing and certification capabilities to benefit their local economies in the long term.

As a result, over the next 10 years, it’s likely that there will be more partnerships in the industry — many in the form of joint venture agreements — between companies based in developed and developing countries. A recent example is the COMAC C919 program. China’s government-owned aerospace manufacturer — Commercial Aircraft Corporation of China (COMAC) — asked foreign-based suppliers to establish close relationships with Chinese companies through joint ventures. In a joint venture, both companies have a stake in the business and must learn how to work together to achieve their mutual interests.

Competition becoming more global

Today, most of the major aerospace and defense companies are based in developed countries. Yet, within the next 10 years, other global competitors are expected to emerge, especially in developing countries such as Brazil, Russia, India and China.

These new companies could dramatically shape our industry. Many of the emerging countries have experience providing high-value products at a very low cost. As customers in developed countries look at ways to cut expenses over the next decade, these new companies’ value propositions are likely to be very attractive on a global scale.

The emergence of government-controlled companies in countries like China and Russia also could have implications on our industry’s competitive environment. Since the distinctions between public and private are blurred under state capitalism, governments can manipulate local market outcomes for national purposes and provide large flows of capital. Successfully established companies will develop partnering strategies to leverage this reality.
The number of people considered to be in the global middle class is expected to rise dramatically in the next 10 years. Most of these entrants will be from developing countries like India. A rising middle class means more demands for higher-end goods and services, including air travel.

Talent pool becoming more global

Over the next decade, it’s expected that emerging countries — especially India and China — will play more significant roles in the development of advanced technology. Increases in population, rising wealth, and investments in education in these countries will provide momentum when it comes to innovation leadership. As multinational companies look at ways to expand market share, maintain competitiveness, and strengthen technological innovation, employing talent in developing countries and establishing multinational teams will be key.

Advancements in connectivity over the last decade mean companies can work more efficiently from nearly anywhere in the world. A multinational team working collaboratively often can develop innovative solutions in less time and for less cost. This type of differentiation will be important in a more competitive global marketplace. At the same time, customers typically prefer to work with local businesses. For companies to expand in developed and developing markets, more local employees serving local customers will be essential.

Continuing demand for green technologies

How can we reduce materials? How can we better specify materials? How can we better dispose of materials? How can materials reduce weight? How can materials improve efficiency?

Concerns about the environment and natural resources, along with the acceleration of environmental policies at government and regulatory levels, are compelling customers and other groups to ask these questions when making buying decisions. As overall waste and pollution rise over the next decade, stakeholders will expect companies to understand and address environmental challenges — even if it increases the cost of doing business.

As stakeholders demand more solutions that save resources and cut down on pollution, green technologies will continue to be important. In our industry, the development of more fuel-efficient aircraft is just one example of how companies are using innovation to minimize environmental impacts.
Innovation strategies will become more of a science than an art

Global trends have put innovation front and center with increasing needs for new products for new and existing market segments. Yet, traditional approaches to innovation — looking at customer-defined needs, benefits, specifications and solutions — may not be enough to remain competitive in the future.

As competition becomes more global, it’s anticipated that there will be more focus on differentiation, cost competitiveness and time to market. At the same time, as global population shifts occur, and as technology continues to enable new capabilities and new jobs, people’s wants and needs also are expected to change. Therefore, to develop more successful solutions in less time and with less cost that precisely target these changing markets, innovation strategies will become more of a science than an art.

This means mathematically predicting the outcomes customers want to achieve and systematically identifying opportunities that more precisely target those desired outcomes. To do this, companies may need to rethink market research, how ideas are generated, how concepts are evaluated, and the design process. It also may mean the responsibility for devising the end solution shouldn’t lie so heavily upon the customer’s knowledge of what is possible. Instead, it’s up to researchers and developers to gather insight from the end user in order to understand and achieve the end user’s mission.

Increased focus on a broader set of stakeholders

Over the next 10 years, it’s expected that politics and political motivations will be injected into global markets on a scale that hasn’t been seen since the Cold War. As wealth moves roughly from west to east, more of it will be concentrated under state capitalism systems. In addition, the recent financial crisis has led to massive government interventions in economies in both developed and developing countries.

While political intervention can be good for business — better crafted rules and regulations can improve the flow of cash, goods and services — it can also have negative implications for businesses. Governments can limit trade and investments and change the competitive landscape with subsidies.

The increasing role of the government as a player in economics means companies will need to build trust and communicate with a broader set of powerful stakeholders. Stronger relationships with local stakeholders in served markets — customers, politicians, suppliers, media, union leaders and other people in the community — will be important in order to increase brand value, attract and retain talent, and remain competitive.

Share your thoughts — 10 trends in 10 years was developed by the Horizons editorial team and Rockwell Collins strategists to inspire employees to think about the future. If you have questions about these trends or additional insights, email empcomm@rockwellcollins.com.

Learn more

Is your curiosity piqued by these trends? Here are a few sources to learn more:

- The National Intelligence Council’s 2025 Project
  www.dni.gov/nic/NIC_2025_project.html
- Center for Strategic and International Studies
  http://csis.org/
- An Aging World
- The Expanding Middle: The Exploding World Middle Class and Falling Global Inequality
- United States Joint Forces Command — Joint Operating Environment
- Airbus — Global Market Forecast 2010-2029
  http://www.airbus.com/company/market/gmf2010/
- Boeing — Long-term Market Forecast 2010-2029
  http://www.boeing.com/commercial/cmo/
- Aviation Outlook: ICAO Environmental Report
New offices promote global expansion

To better position our company as a local provider throughout Asia and Europe, Rockwell Collins recently opened five new offices.

“We want to play a larger role globally, taking our capabilities to diverse customers around the world,” said Greg Churchill, executive vice president of International and Service Solutions. “This requires a level of local knowledge in each country or region that can only be achieved through a local presence.”

Athena systems exceed 1 million UAV flying hours

Rockwell Collins’ Athena family of flight control and navigation systems recently exceeded 1 million flight hours on several Unmanned Aerial Vehicles (UAVs) performing surveillance operations primarily in the Middle East.

Rockwell Collins Athena systems include solid-state gyros and accelerometers, magnetometers, GPS receivers, air data sensors and optional flight control software.

“Our control and navigation solutions are on more UAV platforms than any other, enabling coalition forces to successfully fly reconnaissance missions in theater,” explained David Vos, senior director of UAS and Rockwell Collins Control Technologies. “The systems provide navigation, attitude and heading measurements with superior accuracy.”

The Athena systems are used on UAVs produced in the United States and Europe.

Our company’s newest office in Shanghai, China, is one of several office openings worldwide.

Rockwell Collins on Boeing’s NewGen Tanker team

The U.S. Air Force announced in late February its selection of the Boeing Company to provide KC-46A NewGen Tankers as a replacement for the service’s KC-135 aerial fueling tankers.

The initial $3.5 billion contract encompasses the engineering, manufacturing and development phase of the program, with 18 aircraft slated to be delivered by 2017. Overall, Boeing is expected to deliver 179 tankers over the next 15 years and beyond, for a total of up to $35 billion.

As part of the Boeing team, Rockwell Collins will provide the same flight deck technology on the NewGen Tanker that’s on the Boeing 787 Dreamliner airplane. Additionally, we will provide Communication, Navigation, Surveillance/Air Traffic Management, aircraft networks and situational awareness capability to support the aircraft’s mission.

“Our company’s role on the KC-46A tanker program will provide significant development work for our engineering team over the next several years,” said Dave Nieuwsma, vice president and general manager of Mobility and Rotary Wing Solutions. “This continues the long Rockwell Collins heritage of providing U.S. Air Force tanker crews with the solutions they need to execute and enhance their mission capabilities.”

Our company’s recent expansion includes:

- The opening of an additional office in Shanghai, China, that includes the China System Support Center
- The establishment of an office in Paris to serve as the headquarters for Rockwell Collins in Europe, Middle East and Africa (EuMEA)
- The opening of new offices in New Delhi, India; and Abu Dhabi and Dubai, United Arab Emirates

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Computing Technologies for Aviation

Rockwell Collins is now a single source for end-to-end flight support services with the recent acquisition of Computing Technologies for Aviation (CTA).

CTA’s software adds an essential component to our company’s new Ascend™ flight information solutions. The Ascend portfolio allows business aircraft owners and operators to instantly access flight support, cabin services and maintenance operations information. The CTA software — known as the Flight Operations System (FOS) — allows customers to easily schedule and dispatch flights via an integrated online system. This improves accuracy, productivity and, ultimately, saves customers money.

According to Fred Powell, son of the founder of CTA and now manager of Ascend Schedule and Dispatch, the acquisition will enable aircraft owners and operators to start and end trips with FOS. Right now, the software is integrated every step of the way through scheduling and dispatch, but once the trip ends, data from the avionics has to be entered manually.

“We need data to flow from the schedule and dispatch system, to the flight deck, and then back again. When the systems are tied together in real time, and a change to a flight is made later, the data can automatically be updated in the flight deck,” explained Powell. “This provides the customer with a complete integrated solution. It’s a one-stop shop.”

Blue Ridge Simulation

In a simulated avionics environment, a realistic view of the outside world paired with genuine sensor and radar data is essential for training pilots for high-stress situations. With the acquisition of Blue Ridge Simulation, Rockwell Collins now provides both through our simulation and training solutions portfolio.

“Previously, Blue Ridge Simulation provided sensor and radar simulation as one of our subcontractors,” explained Mark Schmaltz, director of Intelligence, Surveillance and Reconnaissance (ISR) and Bomber Programs in Sterling, Va. “Now that they’re part of Rockwell Collins, we have a huge advantage. We’re the only ones with both pieces.”

In both simulated and real-life scenarios, sensor and radar data enable pilots to identify terrain, weather patterns and targets and make mission-critical decisions. Blue Ridge Simulation’s broad portfolio of sensor simulation enhances our integrated training solutions and allows us to customize systems to simulate training for specific conditions.

For instance, explained Schmaltz, in a training scenario where an aircraft is being targeted by enemy fire, the pilot would respond based on the simulated view and the simulated data shown on the fire control radar.

“The intellectual property for this high-fidelity correlated capability is important because it differentiates us in our markets,” said Schmaltz. “The only other way a pilot could experience this type of situation is in a live, expensive training environment or during real battlespace.”
Making a difference

The Rockwell Collins Engineer of the Year award recognizes employees in engineering roles whose technical creativity and innovation has had a significant impact on business growth in FY’10. All corporate winners and finalists were nominated by their peers or leaders.

Corporate winner -
Mark Billsberry
Commercial Systems
Melbourne, Fla.

Mark Billsberry’s innovative concept for a new architecture significantly improved the radio used in the Rockwell Collins Traffic Collision Avoidance System (TCAS).

Why the technology is unique: The new architecture reduced the size of the TCAS radio significantly, improved the self-calibration function, and made it less labor intensive to produce.

How the technology came about: Before Billsberry worked on avionics radio equipment, he worked in the cellular industry developing base stations for 3G firms. A few years ago, inspired by his cellular experience, an idea for the new technology came about. He submitted an intellectual property application, but the concept didn’t take off right away. Later on, he came back to the design. After modeling the architecture, he had a good sense of how well it would perform.

Why he became an engineer: When Billsberry was a child, he couldn’t resist taking apart electronics — such as his Sony Walkman® radio — to better understand the technology inside. As a principal electrical engineer, Billsberry enjoys studying electronics and finding ways to improve capabilities.

Advice for others: Don’t be afraid to do things differently.

FINALISTS

Scott Chamberlain
Engineering and Technology

What began as a small waveform project for Principal Systems Engineer Scott Chamberlain grew into a way for Rockwell Collins to enable air force pilots all over the world to perform training missions together, each flying their individual aircraft and connected to the same training environment in real time.

Gary Green
Government Systems

Technical Project Manager Gary Green oversaw the positioning and navigation elements for our successful demonstration of the Common Range Integrated Instrumentation System (CRIIS) program for the U.S. Air Force, which resulted in a contract worth potentially $140 million for Rockwell Collins.
Peter Jones’ passion and persistence helped Rockwell Collins win a prime contract to provide video, voice and data services for senior government leaders as they travel the world.

**Why the technology is important:** Security is a top priority when creating an “office in the sky” for government leaders. The technology offers a more secure architecture to meet the customer’s needs.

**How he became involved:** In 2008, Jones started on the program during the proposal stage. He had just come from a previous assignment where the team had lost a bid, and he was committed to surpassing the competition this time. As the program moved into the system requirement review, he became the chief engineer. He also provided guidance as a systems engineer and architect.

**Why he became an engineer:** As a child, Jones was inspired by his dad, who worked as a production manager and engineer for an electronics company, and as a developer and manufacturer of radio equipment in the radio broadcast industry. His dad also is an amateur (ham) radio operator.

**Advice for others:** Success comes with persistence and encouragement.

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**David Matthews**  
*Commercial Systems*

Principally Electrical Engineer David Matthews is recognized for his architectural and design work for the Pro Line Fusion™ avionics system. He also played a key role in solving an implementation problem for an important customer.

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**Kyle Oetken**  
*e-Business*

Kyle Oetken, senior infrastructure and architecture security administrator, developed software that scans incoming email for malicious files and accounts for more than 99 percent of detected email-based attacks to Rockwell Collins that fall into the category of Advanced Persistent Threats.
Paul Sheward’s innovative thinking during the development of a communication system helped Rockwell Collins win a contract with the Finnish Air Force.

**How the technology came about:** The Finnish Air Force needed a communication system that would enable air defense fighter controllers to coordinate with F-18 Hornet Fighter aircraft over a tactical data link. As the architect for the program, Sheward recommended a “system of systems” approach that combined Rockwell Collins products with new software and capabilities to enhance situational awareness.

**Why it’s important:** This program was a significant win as our company works to expand its presence in Europe. With the contract, Rockwell Collins is able to demonstrate its ability to integrate systems and work with a team of industry partners around the globe.

**Why the technology is unique:** The Rockwell Collins team faced tough competition from other companies that had built similar systems for other countries, so they developed an innovative architecture to help set them apart. According to Sheward, a lot of time was spent considering the problems, looking at requirements, and contemplating designs before providing the solution.

**What’s interesting about his role:** Sheward said there’s excitement tinged with fear when taking something from cradle to grave because you’re putting experience and expertise on the line. Yet, a big win after a long pursuit is about “as good as it gets from an engineering perspective.”

**Advice for others:** Maintain a broad perspective. In engineering, there’s no “fix-all” solution, so what allows you to think outside the box, to come up with new ideas and be creative, is broad experience.
50 years of service

Over the past 50 years, involvement in a variety of challenging projects kept Emil Grimm, a material technician in Heidelberg, Germany, committed to our company. Grimm began his professional training at Rockwell Collins – then TELDIX – in April 1961 as a precision mechanic apprentice. Until 1996, he worked in the circuit board production/electroplating area, and for the past 15 years, he’s worked in quality assurance for goods receipt checking.

Grimm said his proudest work achievement was converting circuit board production from two-sided boards to 12-layered boards. His team completed this project within three months, and it’s this type of change that’s kept Grimm with our company for 50 years.

“We handle a wide range of activities with continual new challenges,” said Grimm. “This keeps us at the forefront of production technology.”

Service anniversaries

Rockwell Collins offers congratulations to employees who have marked significant service anniversary milestones in recent months.

50 YEARS
APRIL
Emil Grimm

45 YEARS
FEBRUARY
Gary L. Bryant
Wayne S. Tull

APRIL
Linda C. Sanborn
James W. Schoeberl

40 YEARS
FEBRUARY
Peggy A. Bearbower

35 YEARS
FEBRUARY
Jerry A. Falkhauser
Vernon Hill
Christina E. Lara Reyes
Denise M. Lloyd Lawrence
Tina M. Neyens
Julie M. Vannelle
Robert S. White

MARCH
Michael F. Sedlar

APRIL
Hans-Peter Bufe
Gary L. Dimmitt
Bruce D. Hammell
Volker Lindenmuth
John R. Sanders
Judy K. Skow

30 YEARS
FEBRUARY
Phyllis M. Blech
JoAnn Chase
Lori J. Engelken
Monika Fein
Zorrie A. Forsythe
Shellie A. Gierloff
Brian J. Graybill
Mary F. Mc Cullough
Curtis D. Meyer
Petra Mildenberger
Brenda K. Parker
Karen M. Ross
Robert A. Spain
Kathy A. Stelken

Brian A. Swenson
Felicia F. Vaske
Ludwig Werner
Linda L. Wilder
Carol E. Zieser

MARCH
Diane M. Bys
Raymond Ciardiello
Debra A. Ditchfield
Thomas G. Doyle
Gary L. Garside
Cheryl E. Gaskin
Michael D. Golden
Mike H. Howerton
Deanne E. Johnson

Sandra D. Keller
Irene R. Kestel
David M. Leandres
Luis Martinez
Rosemarie Miller
James E. Osborne
Dennis E. Russ, Sr.
David C. Schletzbaum
Bruce E. Shockley
Kathleen M. Waite

APRIL
Sandra H. Blake
Timothy J. Brown
Dwayne A. Cantor
Ira J. Cruver
Darrell J. Daniele
Gregory R. Essig
Sieglinde Fecht
William S. Macdonald
Delphine M. McCray
Frank T. Mickam
Donald J. Moore
Michael L. Mulbrook
Jinnan K. Roed
Bruce A. Sparks
Sandi K. Stelken
Jose W. Sweet

TIMOTHY L.
COUNTRYMAN
Gordon B. Doak
Evelyn M. Ehrenberger
Eva Esperza Rojas
Scott B. Evenson
Joan M. Flannagan
Thomas C. Goetzman
Anne M. Grant
Ursula Hackbarth
Bernard T. Horne
Becky L. Kafer
Linda M. Kelchen
Debra A. Kleinlein
Gina D. Krug
Mitchell L. Lyman
Daniel E. Mazuk
Laura L. McLaughlin
Jessi D. Moorman
Michael D. Neleman
Maria Elena Ostos Nevarez
Kevin R. Patten
Thomas W. Pela
Lisa K. Pfeifer
Bradley M. Powell
Thomas M. Scannlon
Gregory R. Schadle
Catherine L. Schrick
Stuart J. Scott
Virginia S. Smith Moore
Pamela J. Sullivan
Cheryl M. Taylor

MARCH
Dieter Adler
Michael J. Brice
Doris A. Bruch
Joy J. Clark
Jan M. Croskrey
Alan A. Cuddon
Charles V. Dixon
Richard A. Eisenhart
RoxAnne K. Emery
Steven E. Emken
Mark R. Erenberger
Lanny H. Ericksen
Lynette M. Falck
Elizabeth Feuermheim
Brian L. Feuermheim
Thomas A. Frost
Debra A. Jensen
Dale J. Jenson
Daniel M. Johnson
John W. Mc Lane
Cynthia A. Menter
David D. Nguyen
Fae A. Pegorick
Paul Phillips
Jean J. Pollari
Bonnie L. Radloff
Garen L. Rains Jr
Todd S. Reed
Andrew G. Robinson
Klaus Roth
Mark A. Schultz
Michael Schwebler
Scott R. Sievers
James D. Sova
Simon G. Stancliffe
CELEBRATING 40 YEARS
Peggy Bearbower

Start date: February 1971

Original position: WIP Clerk in Inventory

Current position: Senior Customer Account Specialist in Material Programs-Growth in Cedar Rapids, Iowa

What is your favorite aspect of your current position? Talking and working directly with our Rockwell Collins customers and dealers — which was new to me — has been both rewarding and enjoyable.

Leonard M. Struttmann
Cheryl M. Tillman
Michael B. Tranel
Sheila M. Van Denover
Cindy R. Wahe
David M. Whitmer
Werner Wink

APRIL
Michelle I. Anderton
Bradley R. Asselin
Douglas L. Bader
David R. Baird
Scott D. Bekebrede
Robert G. Bradley
Jeffrey T. Burkle
Denice R. Burr
Jody L. Christy
Scott M. Conrad
Bruce D. Domer
John D. Doyle
Donna K. Frasher
Susan K. Gerlits
Steven J. Hinds
Lisa K. Holderfield
Michael W. Julsen
Virginia A. Klosterman
Penny J. Lacina
William E. McVay
Karl J. Moses
Gregg W. Roberts
Steve A. Samec
Guy A. Stackhouse
Teresa R. Taylor
Laura A. Whitmore

20 YEARS
FEBRUARY
Jill E. Barrett
Michael C. Benson
Didier Bevilacqua
G. S. Caldwell
Eric J. Danielson
Ronald J. Flake Jr
Carol M. Forbes
David S. Hein
James H. Larson
Douglas S. McColl
Stephen S. Neff
Louis P. Ries
Rolando A. Rodriguez
Scott E. Schultz
Daniella M. Smith
Mark W. Volner
Michael A. VosWinkle
Richard A. Wenner
Dale V. Wolf
Thomas E. Yops Jr
Roland A. Zerwek

MARCH
Jonathan C. Benya
Lindy L. Carr
Fabrice Dacquin
Joseph M. Gauci
William C. Goeddle Jr
Michael J. Gries
Debra J. Hansen
Sheeryl R. Janaszak
Sandy K. Kuennen
Gregory D. Murray
Cheryl L. Peters
Matthew G. Poellet
Phillip J. Porhammer
Carla S. Rickels
Marsha I. Robertson
Barbara J. Soukup
Craig E. Vogel
Scott A. Webber

Katherine Cox
Aaron T. Cronbaugh
William B. Curry
Conny Ericsson
Randall L. Fergesen
Brian W. Grant
Christine L. Hutchenson
Laurence Macone
Javier T. Martinez
Scott H. Nesseler
Joel D. Otto
Joyce J. Pautz
Thomas W. Pepper Jr
Jacqueline B. Petitti
Stacy A. Pickering
Denis Ribouet
Crist A. Rigotti
Mary G. Robertson
Patrick A. Thrune
Michael J. Udell
Chen Yang Wang
Tracie C. Werner
Cathy R. Yoder

MARCH
Lou Ann Anderson
Eric N. Anderson
Kenneth G. Aubrey Jr
Alan J. Averhoff
Pascal Berthou
Mark E. Bonnet
Lorraine H. Burns
Siew Mui Chan
Philip A. Clay
Carl M. Clore
Tammy A. Davis
Carlos de Paula
Rhonda R. Dittmer
Patrick C. Fay
Scott W. Galloway
Herve Gez
Lester T. Gilgette
Stephen D. Goff
Ramaiah Haridas
Stephen A. Hensley
Scott A. Kacena
Steven E. Koenck
Jason N. Koepnick
Soccoro Leon Rivas
Patti S. Little
James A. Logsdon
Rita L. Lund
Mathew J. Marshall
Shaun R. Martin
David L. McCoy
David M. Moore
Joseph A. Ourada
Thomas R. Pollock
Margarita Rodriguez
Gregory D. Schmidt
James A. Scott
Michael J. Simone
Toni M. Smith
Diarmuid R. Strasser
Linda M. Toyn
Timothy C. Trachy
David J. Turzai
Mary S. Tweeton
Wayne L. Tweeton
Irene M. Wright

APRIL
Christophe J. Aswegan
Charles E. Bassett
Kenneth E. Berg
Trudy E. Brown
Thomas Buonadonna
Mary E. Cochrane
Ralph M. Cole III
Scott D. Fretheim
Hans I. Huseby Jr
Brian E. Kubik
Rodney J. Lahr
Tammy Y. Lam
John W. Lam
Chrisy M. Lang
Haunani M. Langenstein
Louise E. Leuenberger
Robert Lombardi
Paige A. Martin
Philippe Memery
Robin D. Menster
Timothy J. Mullin
Patrick J. Murphy
Stephane Nobileau
Joseph R. Paige
Steven J. Parker
Derek J. Powell
Nicholas A. Quanrud
Tracy A. Riherd
Michael G. Sancho Jr
James P. Sankey
Martha A. Schropp
Rick M. Serovy
Jeremiah D. Sinnwell
Paul A. Smith
John L. Sullivan
Jeff H. Tenley
Demetri Tsamis
Larry J. Wacker
Matthew J. Wahlstrom
Christopher J. Zehrer

10 YEARS
FEBRUARY
Duleep S. Amarasinghe
Bradley D. Andreae
Michael E. Ball
Joseph W. Berg
Wendy M. Bratton
Maria Mercedes Bravo Castillo
Dana Canfield
Kristina L. Carver
Susie Chung
Ted A. Dietrich
Ty Du
Stacey J. Evenson
Geoffrey S. Fisher
Alexandre Gil
Francis Gilles
John Gonzalez
Judith L. Guss
Michael R. Hall
Michael G. Harrington
Annette V. Hertsmen
Damon M. Hines
Casey L. Huston
Walter E. Iffil
Deborah S. Jacobs
Vivien Joly
Mike A. Kimball
Dwight C. Kinkel
Jason A. Knox
Kim M. Kulish
Karl E. Laubengayer
Ryan J. Lawnczak
Silvia Leticia Martinez Luna
Clay A. McCrea
Mary J. McCusker
Jon L. Menges
Chad J. Oldham
Shawn M. Peck
Shawn R. Phillips
Karol L. Pierson
David Ralston
Sabyasachree Roy
Michael M. Schlosser
Torsten Schwabach
Laurie A. Sills
Jason G. Strait
Astrid J. Taen
Christopher M. Trebosovsky
Conrad L. Vickery
Tomas Viramontes Perez
David L. Wallace
Deborah J. Walters
Brian D. Ward
Jean-Marc Weiss
Gregory T. Whiteside
Sang U. Yun

MARCH
Thierry Aguet
Graham A. Ball
Eustolia Barrios Canseco
Jeff K. Bernard
David J. Blader
Brenda B. Blevins
Nancy L. Brandon
Brian J. Brower
Shelly M. Burns
Eric W. Byers
Marvin K. Cass
Philippe Cazalbou
Stephen P. Coyle
Ulrich David
Mark J. Delay
David A. Dembrow
James T. Elliott
Charles H. Errington
Damon M. Franklin
Richard L. Frye
Stephen G. Geppert
Sheila M. Gibson
Cleveland C. Gilbert
Swee Heng Goh
David B. Grinnell
Christine Hallett
Joshua T. Hamann
Pamelea J. Hammond
Chad W. Helgerson
Brian R. Hensley
Daniel C. Herke
Michael J. Hynek
Todd S. Jacobs

Emily L. Johnston
Jason P. Kinser
Heather J. Kosek
Claudia V. LaFreniere
Kathy S. Lange
Aaron C. Larson
Annette K. Lechtenberg
Robert A. Long
Donna S. Long
Jean-Francois Marronier
Estela Martinez Casillas
Donna M. McCaIn
Chris J. Miller
Brenda L. Mok
Lea M. Montross
Carrie L. Mullins
James D. Nichols
Gloria J. Nordheim
Leon Ocampo Garcia
Natallia Ochoa Valle
Guillermina Angelica Padilla Espinosa
Yolanda Perezchica Valdez
Gregory L. Pflueghaupt
Clin D. Pine
Jean-Marc Pouzet
Ian J. Reed
Ray M. Reynolds
Dorothy L. Saffels
John D. Schaefer
David J. Sherman
Scott D. Simpson
Sharon S. Tabori
Michael J. Tiffany
Jacob M. Trujillo-Arellano

Debora L. Velte
Marc Venier
Donald A. Wardlaw
Michael L. Waters
Angela M. Williams

AUGUST
Mike J. Ackman
Randy G. Aschengrenner
Richard Avsec
Jill M. Bakey
Amanda J. Barber
Elie Bardawil
Brian K. Beem
Susan M. Blake
Gary L. Block
Donald A. Boyle
Derek V. Brown
Brenda Esther Cortez Cardiel
David M. Cox
Robert A. Daniel
Roger E. DeShaw
Terrence L. Ecker
John R. Fazekeas
Laurent Fournier
Bret A. Frieden
Peter J. Gallery
Alain Guney
Paul E. Haag
Terry J. Hammer
Leigh A. Hartman
Richard G. Hockey Jr
Bridge M. Holt
Sherry Huang
Connie J. Hugins
Mike T. Huynh
Brice A. Janssens
Gregory W. Johnson
Malcolm Keers
Liec A. Kirkenmeier
Robin M. Koch
Susan J. Krewson
Donald A. Kruelski
John A. Lain
Rebecca Lopez Ojeda Matthew M. MacNider
Bridge E. Malake
Darrick Matthews
JoAnn E. McCloskey
Terry L. McKillip
Beatrice Menahesse
Patricia Mendez
Kenneth H. Myers
Shawn M. Neumann
Paul E. Newman
Travis L. Niec
Serpi Oeztuerk

April

James D. Herke
Brian R. Hensley
Pamelea J. Krewson
Joshua C. Gilbert
Stephen G. Geppert

T. ngel J. Gardner
Michael Rabe
Curtis L. Richardson
Michael M. Rivera
Nelson F. Rodriguez Gomez
David B. Sattar
Greg L. Schluter
Leona D. Sessions
William R. Smith
David J. Strachan
Patrick Telcher
Lory L. Tharp
Emma J. Trayhorn
Mervyn Tyler
Richard Va
Maria Manuela Vasquez Serrillo
Kevin J. Weber
Una U. Yang
Robert E. Yoder
Kenneth J. Young
Gregory T. Young
James M. Zehring

5 YEARS

February

Mohamed O. Abdelrahim
Justin T. Adams
Christine K. Anderson
Joella Barnes
Nigel G. Barsby
Darren M. Bass
Christie L. Beck
Diane K. Beckenbaugh
Raymond E. Bender
Thomas L. Brady
Steven J. Brainard
Johnse J. Bushlack
Chris D. Campbell
Pedro Francisco Canedlas Varela
Blake T. Carpenter
Sherwood J. Chaffe
Christopher D. Chechele
Michael F. Clement
Ellen L. Coleman
Irene Idelvia Contreras Nunez
Patrick J. Cosgrove
Erica L. Davis
Francois Delbar
Jeremy J. DeTevis

LeeRoy Herrera
Mari L. Hills
Russell J. Hodge
Jonathan M. Holland
Colleen D. Holloway
Weiling Hu
Sumaira Inayat
Richard C. Janik
Chad M. Jeffrey
Holly B. Johnston
Ann E. Kesling
Sarah E. Knock
Stephan Krumbholz
Yves LaCerte
Ezequiel R. Landeros
Justin A. Lee
Brian R. Lehman
Shameeta F. Leonard
Sarah A. Letos
Jason P. Longstaffe
John W. Lorton
Julien Lucet

Hummell

Start date: April 1976

Original position: Systems Engineer in Commercial Switching Systems

Current position:
Principal Systems Engineer in Advanced Technology Center
Communication and Navigation Systems in Cedar Rapids, Iowa

What advice do you have for new employees? Have a positive attitude in every task you perform. Tasks are an opportunity to improve your skills and to network with additional employees. *
CELEBRATING
35 YEARS
Mike Sedlar
Start date:
March 1976

Original position: Applications Engineering Department at Honeywell Commercial Systems in Arlington Heights, Ill. Later on, he transferred to a division of Honeywell that was purchased by Hughes and then Rockwell Collins.

Current position:
Principal Systems Engineer in the Cabin Systems and Architectures department in Tustin, Calif.

What was your most challenging project? We developed a simulator that was installed on an Air Force base in the Philippines. In order to solve technical challenges, several long-distance trips to the base were required.

Anne-Marie Wolsohn
Teresa M. Wolken
John D. Woodward

MARCH
Valerie K. Akiens
Jorge Alonso Alcala Nuñez
Sergio Gabriel Alfaro Reyes
Jose A. Arias
Don F. Arnold
David Avila Guzman
Benjamin C. Barnett
Andrea Blanco Borquez
Phillip W. Bonesteel
Neil D. Brewster
Lida L. Bridgers

David G. Brown
Richard A. Brunner
Paola Carolina Cano Mercado
Tabitha S. Carter
Brian M. Cayton
Mariama Ceesay
Ruben Daniel Colunga Flores
Johanna S. Cordell
Randolph D. Cordell
Michael J. Coulombe
Pierre M. Cutler
Randy L. Decious
Lisa M. Derhammer
Nicole L. Derueling
Jacob H. Dugger
Christian B. Durini
Megan E. Dutko

Cynthia Ann. Edge
Anthony P. Fiore
Joshua R. Flint
Brian S. Franks
David J. Frith
Maria Alejandra Garcia Garcia
Maritza Denise Garcia Munoz
Robert B. Goyet Jr
Patrick A. Grandt
Cecilia Viridiana Q. Guerrero
Linda L. Gutzeit
Charles E. Heidal
James R. Heiser
Tammy A. Hewitt Consalvo
Anthony Ho
Chung T. Hoang
Casey J. Hoyt
Chad E. Hughes
Michael L. Johnson
Jolene M. Jones
Clifton D. Kaderka
Lisa M. Karne
Tanya L. Kepple
John M. King
Meghan E. Klein
Mark A. Klemann
Travis S. Klopfenstein
Debra L. Knaub
Heike J. Kruse
Adriana Leyva Leyva
Doug W. Love
James D. Lu
Joseph P. Luptak III
Angelica Macias Alaniz
Kenneth R. Manley
Darlene M. Mann
Tyler W. Millen
Adriana Elizabeth Molina
Gary A. Murray
Dennis J. Nachtman
Julia Patricia Nava Ochoa
Viviana Vazquez Mondragon
Raghunath Viswanatha
Jennifer J. Voelker
Todd A. Wade
Constance J. Weidler
Jeana A. West
Timothy J. White
Ashley M. White
Ransom L. Wilkerson
Kenneth A. Wood
Holly K. Zieser

APRIL
Marco A. Ayala
Maria del Socorro Balderama Pesina
Jayna M. Barnes

Christian O. Basilio
Jack Bassett
Shannon M. Benzing
Theresa L. Bowen
Kayla A. Buck
Jody L. Burgin
Cynthia K. Calzadilla
Juan C. Camacho
Fortunato V. Cervantes
Marlene Contreras
Aline Dalmas
David L. Decker
Ramón Alonso Delgado Urbina
Timothy G. Dermott
Shreerang Dixit
Kyle W. Durfee
Daniel O. Dyson
David M. Eckert
Joseph J. Engler
William G. Ford
Peter Gillstrom
Poh Huat Goh
Ivan Gonzalez
Robert A. Green
Douglas H. Greenfield
Paul E. Harm
Lena Hernandez
Victoria Herrman
James V. Hession
Cynthia D. Hobbs
Phillip S. Howard
William D. Hulse III
Lashawn J. Jefferys
Kenneth W. Jernigan
Lindsay S. Johnson
Jeremy J. Johnson
Jimmeridh F. Johnson
Jeremy L. Johnson
Preston E. Johnson II
James G. Kaiser
Bruce C. Kaiser
Andrew Keetch
Felicity M. Kingston
Justin J. Koob
Dawn M. Kramer
Shelly A. Kreutner
Thomas W. LeClere
Qinzhi G. Lin

Reynaldo Lopez
Jonathan A. Lovseth
Andrew R. Markofski
Shane C. Martensen
Julie Marty
Santiago Mataallana
Cynthia M. McCune
Brian E. Mishmash
Jason A. Mofle
Angelica Gabriela Montemayor Cantu
Christopher J. Mueller
Jennifer M. Negron
Glenn T. Neiger
Nhat M. Nguyen
Piush A. Patel
Brenda C. Paul
Jacqueline R. Pellant
Chad M. Pflughaupt
Thai Q. Pham
Meagan M. Ralston
Mayank Rastogi
Russell T. Ritchey
Laurent Robin
Edmond M. Rogers
Brian P. Ross
Franklyn N. Roxas
Kristine B. Schmidt
Renna A. Scott
Annette F. Scott
Timothy A. Seedorff
Julie L. Segal
Nathanael D. Small
Erie M. Stancel
Scott A. Steel
Howard S. Straughan
Shanda R. Studt
Rennie T. Sweeney
Nader Tajbaksh
Walter Trach
Trevor R. Trinkaus
Sirikit T. Valentim
Kevin T. Van Deest
Anita L. Volk
Lynn D. Von Essen
Vincent A. West
Amoret L. Wingerson
Kathryn A. Zemanek
Retirees

Rockwell Collins offers congratulations and best wishes to the following employees, who have recently announced their retirements.

Jeffery L. Adrian
Mount Vernon, Iowa

Eva M. Appleby
Marion, Iowa

Mark A. Bailey
Penn Valley, Calif.

Dennis C. Beaman
Hiawatha, Iowa

James M. Bloomberg
Hiawatha, Iowa

Louis J. Borrego
Palo Alto, Calif.

Melton L. Briggs Jr
Peachtree City, Ga.

Steve W. Brock
Cedar Rapids, Iowa

Jean A. Campbell
San Jose, Calif.

Lavonne M. Card
Cedar Rapids, Iowa

David W. Chalton
Redwood City, Calif.

Linda D. Crandall
Melbourne, Fla.

Jad J. Dihu
Darien, Ill.

Max W. Dixon
McMinville, Ore.

Pamela Dougherty
San Jose, Calif.

Ninh K. Duong
San Jose, Calif.

Linda A. Engen
San Clemente, Calif.

Marcia M. Fergesen
Ryan, Iowa

Karen M. Fulford
Shellsburg, Iowa

Kailon C. Goetsche
Red Oak, Iowa

Brenda J. Goff
Marion, Iowa

James M. Hansen
Toledo, Iowa

Alan B. Hanson
Robins, Iowa

John W. Harris
Palo, Iowa

Norval J. Herrmanon
Marion, Iowa

Carl Heuermann
San Carlos, Calif.

Patric A. Hills
Cedar Rapids, Iowa

Susan C. Hinds
Cedar Rapids, Iowa

Robert M. Irish
Newberg, Ore.

Tn D. Kieu
San Jose, Calif.

David M. Knuth
Marion, Iowa

Linda K. Kueter
Bellevue, Iowa

Amin M. Manji
Cedar Rapids, Iowa

Audrey E. Matties
Cedar Rapids, Iowa

Kathy M. Miller
Louisville, Ky.

Thomas A. Miller
Solon, Iowa

Michael J. Moore
Winthrop, Iowa

Mark A. Moses
Anaheim, Calif.

William R. Nelson
Plano, Texas

Trung N. Nguyen
San Jose, Calif.

Caroline M. Ochs
Corona, Calif.

Martin F. Osier
Cedar Rapids, Iowa

Nancy A. Parker
Hollister, Calif.

Virginia D. Patton
Palo Alto, Calif.

Darwin N. Pooch
Alburnett, Iowa

David M. Price
Indian Harbour Beach, Fla.

Amado V. Ramos
San Jose, Calif.

Mary I. Reilly
Cedar Rapids, Iowa

Sheryl J. Rigoni
Cedar Rapids, Iowa

David B. Rosa
Renton, Wash.

Paul T. Rudewicz
Mission Viejo, Calif.

Ramona M. Savadogo
Cedar Rapids, Iowa

Connie C. Schutze
Snohomish, Wash.

Dale G. Svetanoff
Monticello, Iowa

Dorlas M. Theys
Plano, Texas

Anita T. Tinsley
Cedar Rapids, Iowa

Carey E. Trantham
Shellsburg, Iowa

Susan L. Tritle
Marion, Iowa

Philip M. Vater
Cedar Rapids, Iowa

Dan S. Veerhusen
Cedar Rapids, Iowa

Gerald E. Widen
Cedar Rapids, Iowa

Samuel E. Wood III
Los Alamitos, Calif.

Elizabeth G. Wright
Palm Bay, Fla.

Sandy A. Wyatt
Cedar Rapids, Iowa

Manfred W. Zehr
Cedar Rapids, Iowa

Joann L. Zehr
Cedar Rapids, Iowa

*retiree

In memoriam

Rockwell Collins offers condolences to the families and friends of the following employees and retirees, whose deaths were recently reported.

Shirley M. Bascom*
Cedar Rapids, Iowa
Jan. 4, 2011

Alfred R. Bowers*
Pensacola, Fla.
Dec. 17, 2010

Earl E. Boylan*
Newark, Ohio
Oct. 13, 2010

James R. Brousseau
Marion, Iowa
Dec. 19, 2010

Terry D. Canning*
Marion, Iowa
Dec. 18, 2010

Lonnie E. Carpenter*
Newark, Ohio
Dec. 20, 2010

Ray H. Christy Jr*
Winchester, Ky.
Oct. 9, 2010

James R. Cromer*
Vinton, Iowa
Dec. 17, 2010

James M. Curtin*
Santa Rosa, Calif.
Dec. 11, 2010

June E. Ducote*
Garland, Texas
Dec. 31, 2010

Norman J. Fenk*
Alameda, Calif.
Nov. 28, 2010

Jean M. Freese*
Cedar Rapids, Iowa
Dec. 21, 2010

Luis Gallegos*
Olivehurst, Calif.
Nov. 3, 2010

Vernon B. Hammatt*
San Diego, Calif.
Nov. 11, 2010

Gerald L. Heisel*
Lockridge, Iowa
Oct. 31, 2010

Lillian B. King*
Spokane Valley, Wash.
Nov. 29, 2010

Carl D. Knee*
Marion, Iowa
Nov. 15, 2010

George A. Krug Jr*
Cedar Rapids, Iowa
Oct. 29, 2010

James L. Lanning*
Anderson, S.C.
Nov. 10, 2010

Warren A.
Malick Jr*
State College, Pa.
Dec. 22, 2010

Lillian M. Marquez*
Las Vegas, Nev.
Jan. 11, 2011

Gloria N.
Millspaugh*
Palm Bay, Fla.
Nov. 30, 2010

David B. Moulton
Costa Mesa, Calif.
Feb. 17, 2011

Alice D. Muth*
Marion, Iowa
Dec. 31, 2010

Kristopher B. Shih
Cedar Rapids, Iowa
Jan. 14, 2011

Patrick A. Thrune
Williamsburg, Iowa
Dec. 19, 2010

Anton Udrea*
Laguna Niguel, Calif.
Dec. 16, 2010

Robert L. Wade*
Fort Madison, Iowa
Dec. 13, 2010

Ronald J.
Weindorfer*
Niles, Ill.
Nov. 7, 2010

Richard J. Williams*
Longboat Key, Fla.
Dec. 21, 2010

*retiree

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Every day, airlines around the globe count on Rockwell Collins to get planes and passengers to their destinations safely and efficiently. From advanced displays and flight controls to our award-winning weather radar and global support network, we provide the critical solutions airlines need to successfully complete their missions. To see where we’re headed, visit us at rockwellcollins.com.