



CIO Issues

Interview: Boeing CIO Scott Griffin

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» Most people think of commercial airplanes when they hear the name Boeing. But the era of a single manufacturer producing an entire airplane has come and gone, and Boeing has changed with the times.

Today, Boeing's capabilities extend beyond commercial airplanes to include integrated military platforms, advanced technology for defense systems, and even electronic enablement of airplanes. In other words, Boeing specializes in wireless connectivity on a grand scale, and technology so advanced as to be almost beyond recognition.

As Boeing's vice president and CIO, Scott Griffin bears responsibility for all I.T. strategy, systems, network operations, architecture, processes, and people.

Boeing is the world's leading aerospace company and the largest manufacturer of commercial jetliners, with capabilities in military aircraft, rotorcraft, missiles, satellites, launch vehicles, and advanced information and communication systems. Its reach extends to customers in 145 countries around the world.

Griffin began his career at Boeing in 1979 and has held a broad range of assignments throughout the company. He became VP and CIO of Commercial Airplanes in October 1997, a position he held until his promotion to Boeing CIO in October 1999. In addition to holding that title, Griffin chairs the company's Information Technology Process Council and is a member of the Boeing Engineering Council.

Born and raised in Fresno, California, Griffin earned an undergraduate degree from Fresno State University and a master's degree in business from the University of Puget Sound.

On the very day Boeing's latest pride and joy -- the Boeing 777-200LR -- debuted and made a record nonstop flight from Hong Kong to London, Griffin spoke with CIO Today. Exuberant, intelligent, and gregarious, he was delighted to reveal that Boeing's aptitude is for more than just altitude.

CIO Today: What are your top concerns as CIO?

Griffin: Boeing is changing from a manufacturing company to a technology company. Historically, people have thought of Boeing as a manufacturer of aerospace platforms -- aircraft, missiles, spacecraft, and satellites.

But today, more and more of the fabrication of the parts for those products is being done by our partners, and we have become a large-scale systems integrator -- a company focused on integrating and assembling those parts.

Additionally, more and more of our products are services or systems. One example is the U.S. Army's Future Combat System, which will

transform how soldiers use communication and information technology in the field to integrate the battlespace. It involves everything from radios to middleware. It's not a traditional manufacturing product, it's a "system of systems."

Managing that change is both challenging and exciting. I.T. is an essential enabler of change, and our key concern is bringing new technologies to the table at the right time.

Beyond transformation, I would say I have the same concerns as most of my peers: adequate [security](#) 🛡️, appropriate response to government regulations, integration of solutions, and I.T. people development.

In I.T., people are your most valuable resource. Intellectual capital is worth so much more than the nonhuman assets. I want to make sure our people understand where the aerospace industry is going, and how I.T. is changing and improving so they can continue to make a contribution to Boeing.

CIO Today: Has the I.T. environment changed from 5 years ago?

Griffin: Very much so! The critical skills needed today are vastly different than they were just five years ago. Programming used to be the most critical skill because so much was created from scratch. Today we look for people who can reuse existing code to build something new and/or integrate everything that exists now.

It is no longer logical to reinvent the wheel and write new code for everything. We need large-scale systems integration, not stand-alone, and often redundant, systems that can only provide limited functionality.

I.T. used to be treated as a cost center. The old model was to invest in hardware and software that reduced I.T. costs and/or increased I.T. efficiency. But the new model calls for investments that decrease the cost of business or improve cycle time. If an investment increases the I.T. costs, but decreases the overall cost of doing business, then we review it and consider implementing it. That's the exact opposite of the old days!

CIO Today: How have new legislative demands affected the I.T. department and the CIO in particular?

Griffin: Boeing is a major U.S. defense contractor, so compliance with regulations is a big deal for us. Sox [the Sarbanes-Oxley Act] is only one of the big challenges. Another, for example, is the International Traffic in Arms Regulations that requires Boeing to restrict access to certain information by non-U.S. persons.

Part of the design for the 777 was done at our Boeing Design Center in Moscow. Our design processes ensure that we understand where designs are created and which technologies are used to create them. The Product Lifecycle Management suite, coupled with powerful collaboration tools, allows the design team in Moscow to work in tandem with designers in Seattle.

All of this work has to be done with careful adherence to all legislative and regulatory requirements of the U.S. and Russian governments.

CIO Today: Which enterprise component or technology will be growing most in terms of its slice of your company's budget pie in the next 12 months?

Griffin: First of all, the way we spend our IT budget is changing. Boeing recently consolidated its I.T. to get better leverage from technology across the company. About one-third of our budget is spent on developing new technology and two-thirds on sustaining I.T. already in place.

Over the next four years we would like to see that ratio flip flop, so that we are spending two-thirds of our I.T. resources on innovation and deploying the new technology across the enterprise.

One of our largest I.T. investments today is integrating and deploying the Product Lifecycle Management suite from Dassault Systems. This allows the program developing the Boeing 787 Dreamliner to design concurrently with our major partners, regardless of where they are located around the globe. The new design processes coupled with the PLM system significantly reduce the time required for design and integration of the airplane parts, plans, tools, and processes.

CIO Today: Can you walk us through the decision-making process of implementing a large-scale business-process management initiative?

Griffin: In 2004, Boeing created an I.T. Investment Board, which is chaired by our chief technology officer, Jim Jamieson. The I.T. Investment Board is chartered to ensure that every I.T. investment that Boeing makes benefits the global enterprise. Each function or business unit within the company is represented on the board, and comes to this forum to propose new investments.

This is very different than the old model, where every business unit, program, and site did their own I.T. investments.

Every project must have a business case or support a regulatory requirement. We are interested in investments that increase our agility, enhance our ability to react to changing market conditions, or increase our efficiency.

If an I.T. project helps us to get to market first, decreases our cost of doing business, and/or reduces our cycle time, then we are very interested. The I.T. Investment Board makes those determinations, and invests our I.T. resources for the future.

CIO Today: What are one or two software or hardware products your company uses that you would describe as outstanding?

Griffin: Boeing I.T. has 17 strategic I.T. partners, and we rely upon all of them for support. Two partners that stand out are Dassault Systemes and Cisco Systems.

Dassault provides the core of our PLM systems suite. Within this suite is Catia v5, which provides digital product definition and simulation; Enovia, which provides integrated solutions to simulate the entire product lifecycle; and Delmia, which enables us to develop and anticipate optimal processes for our manufacturing needs.

The design of parts, plans, tools, and processes across the supply chain is changing the way we design, build, deliver and support our products. PLM makes all of that possible.

Our relationship with Cisco is slightly different. Both Boeing and Cisco are striving to become network-centric enterprises and we continually share best practices with each other.

In a network-centric world, every asset is a node on the network and is capable of sensing the environment, effecting change, and making decisions. We are also striving to make our products network-centric. This is a breakthrough concept, and it is good to have I.T. partners who speak the same language.

CIO Today: Which emerging technology do you see as most important to the enterprise?

Griffin: Boeing Technology tracks ten near-term key technologies, and nine long-term technology enablers. We consider all of them to be vital to improving our products, as well as the processes we use to create and support them.

One of the near-term technologies that is affecting our products is autonomous systems. This includes a number of synergistic technologies such as telematics. This field allows us to produce completely autonomous vehicles for our military customers.

Another near-term technology is systems of systems. This is changing the way our products operate and communicate with one another. An example of this is Connexion by Boeing, which connects a commercial airplane to the ground via a broadband satellite Internet connection. This allows passengers to stay connected in flight, but also allows the airplane to constantly communicate large amounts of logistical and maintenance data to the ground.

CIO Today: Where do you go to do your research on new technologies?

Griffin: Boeing has an advanced research and development organization called Phantom Works, which reports to the Boeing chief technology officer as a sister organization to Boeing I.T. Phantom Works has created a number of strategic relationships with universities for pure research, and is responsible for pulling technologies developed through those channels into Boeing R&D.

Our latest program, the U.S. Army's Future Combat Systems, developed as a research program within Phantom Works. Boeing I.T. is fortunate to have a technology partner such as Phantom Works to ensure that the new technologies that we deploy into production are thoroughly tested and ready for use.

For research on trends and changes in the I.T. industry that are affecting CIOs in general, I'm part of The Research Board with other Fortune 500 CIOs, as well as the CIO Strategy Exchange. These CIO peer organizations allow us to benchmark different technologies and strategies across industries.

