Feature Story BOEING FRONTIERS Matt Ganz leads the **Phantom Works advanced** R&D unit at Boeing. This group is focused on achieving technical excellence and providing Boeing with innovative solutions that best fit customer needs. **BOB FERGUSON PHOTO** Listening ... and deciding 40 AUGUST 2008 BOEING FRONTIERS

Phantom Works President Matt Ganz believes strongly in the potential of Boeing products and technologies, but even more in the company's people

By Tom Koehler

att Ganz has seen technology development from many different perspectives. He's been a technology leader at large compa-■ nies, small startups; venture capital groups; and government, private and university research-and-development laboratories.

As the leader of Phantom Works—an organization that's helping support the technology needs of Boeing's business units, as well as helping to protect the company's future by ensuring that advanced, innovative technology is ready when needed—he's been eager to share those experiences.

Since joining the company in February from HRL Laboratories in Malibu, Calif., where he was president, CEO and general manager, Ganz has made a concerted effort to meet as many of Phantom Works' 2,000 employees as possible. He also has been making the rounds with the key people within Boeing's Commercial Airplanes and Integrated Defense Systems business units who are relying upon him and his team to provide the technologies that enable the development of future aerospace solutions.

"The company is extremely well-placed for future growth and for being relevant in a rapidly changing world. I couldn't resist the opportunity to be part of that," Ganz said.

Ganz said he's been primarily in a "listening mode" during his first six months at Boeing. He recently sat down with Boeing Frontiers to share his thoughts.

Q: What's on your priority list?

A: My priorities begin with people—making sure we have the right people in the right jobs and that we challenge them and motivate them and then find the right rewards for a job well done.

If you look at our company's work-force demographics, it's clear that we are heading for a period of rapid change. Many of our employees will be eligible to retire during the next 10 years. Becoming the employer of choice for the best and brightest young technologists in the years ahead means that we need to understand their values and characteristics. Many young people are very comfortable with modern connectivity and gaming tools, for example. Many of our longer-serving employees are as well. But we will need to adjust our values and how we do our work today to become better aligned with the younger generation.

Also at the top of my list is making sure that our technology efforts are aligned with the business success of the company. Our Phantom Works team will be focused on the day-to-day technology deliverables that the business units need to be successful. In addition, we will be thinking about and making plans in support of the longer-term future of Boeing: What do we want the company to look like in 15 years, and how can Phantom Works help lay the foundation?

Q: How can the company become more innovative?

A: I'm committed to helping us maintain and accelerate our reputation as being the most innovative aerospace company.

It's important to realize that innovation is about business, not just technology. It's about listening to our customers and solving their problems. There's a difference between invention and innovation. It's really the difference between a technology being interesting and a technology being important. Truly innovative ideas are not only inventive, but they also solve a real problem out there in the marketplace by providing our customers with products and services that greatly reduce their costs and improve their performance.

Q: How does Phantom Works support the company's Enterprise **Technology Strategy?**

A: As the centrally managed advanced research-and-development organization, Phantom Works has an integral role in the company's new Enterprise Technology Strategy, and we have aligned ourselves with the new technology domain structure (see Page 40 of the May 2008 Boeing Frontiers).

Our work—particularly in support of the mid- to long-term technology readiness of Commercial Airplanes and Integrated Defense Systems, in helping to provide technologies and risk-reduction activities for newbusiness opportunities for the company, and in leveraging the technoloay being developed by others throughout the world—is well-recognized by our company leaders. We are aligned with the company's current and future success and contribute to it every day.

Along with the rest of the Engineering, Operations and Technology organization, we are committed to helping establish a one-company culture at Boeing by collaborating with our business-unit and functional partners; sharing and replicating best practices and technologies across the enterprise; and identifying and using standard systems, processes and training.

Q: What advanced technology efforts offer the most promise for Boeing in the years ahead?

A: Rather than starting with the question of which technologies are important, we are trying to understand the really important driving themes for the future of our global markets. And we're aligning our technology efforts to quickly address those themes as efficiently as possible.

Clearly, energy and environmental issues are market drivers at or near the top of the list. Global energy demand is increasing faster than oil, coal or gas supply, and our ability to deal with subsequent greenhouse gas emissions is limited. How do we flow that down into technology? There are a variety of ways, some simple—for example, driving weight out of our products directly affects their energy consumption and their environmental performance.

Another big global market driver is the potential of our businesses. governments or the public's safety to be disrupted by what we refer to as "asymmetric threats"—things like terrorism, hacking and pandemics. Again, we are looking at those problems and then working to develop technology solutions to address them effectively.

There are other themes, such as trying to understand how to deal better with massively complex systems and massive quantities of data. How do we enable people to make good decisions when interacting with these systems and data?

Finally, there's also the globalization of our markets and the technology world and trying to understand how we make good technology sourcing decisions and partnership decisions across the worldwide economy.

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