

# Who — and where — are the leaders of tomorrow?

And can we tap them for the good of the industry, and the nation?

A BDN Aerospace Marketing White Paper

*The American aerospace industry faces unprecedented challenges today. Aviation and aerospace remain vital for the world's future growth and stability, but industry leaders must overcome technical limitations, business constraints and a host of political, social and economic problems with global implications.*

## The past as future

Technical and managerial excellence is a necessary but not sufficient attribute to address these issues. Leadership derived from a compelling vision for the future and purpose that rally people to do amazing things is more essential than ever before. Leadership will be the key to aerospace success when talented industry professionals harness vision and motivation.

### Worldwide problems challenge heritage

The U.S. aviation industry is not only an economic powerhouse. The industry's heritage also distinguishes the business and science of flight from other endeavors. Aerospace embodies some of the most remarkable technical achievements in human history. The entire era of powered flight extends just over a century, and astonishing milestones occurred within a single lifetime. Orville Wright lived to see the U.S. Air Force fly the B-36, an intercontinental strategic bomber whose wings spanned nearly twice the length of the first powered flight at Kitty Hawk, N.C. A few months later, Wright could marvel as the experimental Bell X1 completed the first manned supersonic flight. A child who witnessed the Wright Flyer lift off its rail at Kill Devil Hills could easily have lived to watch the



grainy TV image of Neil Armstrong setting foot on the Moon in 1969. Space travel has become almost routine since the Moon landings. Today's aircraft are bigger, faster, safer and more reliable than ever before. Those who earn their livings in aerospace share deep pride and satisfaction in the work they accomplish daily to support their enterprises.

### Room for improvement

Recently, however, many observers have suggested that aerospace is stagnant. International economic disruption has eliminated large jetliner manufacturers and affected orderly development of aircraft and support systems. Tight defense budgets and schedule stretch-outs have generated upward cost spirals, research reduc-

tions and fewer jobs for promising young engineers. The implications of these problems are serious. For several years, international air shows have rarely introduced new aircraft. Technological improvements occur today in incremental steps, not huge strides. The U.S. supports barely half a dozen new military airplane projects, and most of these started at least a decade ago. The few commercial jet programs in development are behind schedule and over cost.

### Inspirational leadership

Does this slower pace mean that aerospace has reached its limits? Have the industry's best days passed? What made the golden age of aerospace different, and how can the industry look to its past to restore and rebuild its potential?

Leadership is the answer. History remembers the names of the industry's founders as great men and women, people whose achievements have marked progress from the start in companies that still lead the way — Wright, Curtiss, Grumman, Northrop, Bell, Boeing and Piasecki, to name just a few. Aerospace companies have become large and complex to handle global markets and huge economic problems, but they still rely on the talent, commitment and ambition of employees who seek



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direction and inspiration from senior executives.

What we should recall, beyond their technical skill or even genius, is how these leaders infused in others the energy, commitment and dedication to achieve together what no individual could accomplish alone. We should take as examples the remarkable passion of the few who inspired larger groups to put aside personal concerns and willingly make small but vital contributions that led to astonishing results. For example, North American Aircraft president Dutch Kindelberger led the designers and mechanics who completed the prototype P-51 Mustang, arguably the greatest piston-engine fighter ever conceived, just 117 days after the Army Air Force ordered a new aircraft.

Aerospace leadership in the golden age involved creating the environment – sufficient material resources, team spirit, shared responsibility and no-nonsense accountability – to encourage and sustain the intense effort to design and build exceptionally capable systems quickly and efficiently, the continuous, critical work to improve these products, and the openness to better alternatives as they arose. Straightforward management developed tolerance and trust among team members who were loyal to their enterprises and their executives through thick and thin. As complexity increased, success in these endeavors came not from luminous genius or singular personalities. Instead, companies grew up with hard, directed work, the ability to learn and recover quickly

from mistakes, a willingness to apply innovative techniques, materials and processes, and most importantly, an appreciation for people.

**Opportunity knocks**

What is so different now? Our own economic, social and political crises seem more dire to us than those of the past, but past generations overcame many obstacles, some more pervasive and serious than those facing us. Aerospace grew despite the difficulties confronting its development, and the industry moved ahead with tools and processes that seem almost laughably primitive by our standards. In this light, failure to move forward because we bemoan our problems and minimize our powers is a disservice to ourselves and future generations and dishonors the work of our forebears.

Leadership is within the grasp of aerospace professionals regardless of the roles they play in their organizations. Executives and managers, engineers, designers, administrative specialists, production and support staffers all want to become part of new and exciting developments in



*The first P-51 Mustang flew less than 4 months after it was ordered in 1940. This P-51D, since modified with a second seat, was still flying 64 years after its manufacture.*



the industry. People want to escape from the humdrum of routine and accomplish something unique and powerful. They often cannot make this leap, however, without the vision of leaders who enable them to harness their own interests in innovative projects. Leaders can help them share the excitement of deep emotional involvement and ownership in products that may continue contributions to human progress long after they themselves are gone.

Many commentators argue that leadership is beyond the capacity of most people, that the ability to inspire and facilitate achievement is a rare talent imbued in those few with an indefinable but recognizable charisma or genius. There are such leaders to be sure, but aerospace puts the lie to this idealized view. Most of aviation's founding fathers were not charismatic. Many of them were, in fact, downright eccentric, weird, or even unpleasant characters. What they shared, however, was vision and a strong sense of purpose. They did not motivate everyone they met, but they did touch enough people of talent to enable them to turn ideas

into reality and then into thriving enterprises, despite failures along the way. They simply never gave up.

#### **Vision and purpose**

Many of us have the same potential. Technical barriers to new breakthroughs in aerodynamics, propulsion, materials, avionics and system design will yield to focused effort. Aerospace is ripe for future revolutions that could open the industry to new participants and make vibrant contributions to the national and global economies. Breaking down these barriers often is more a matter of perseverance than inspiration, just as it was for the pioneers, but leaders must still inspire others to keep working. In sum, the people have changed, but conditions for leadership excellence in aerospace remain essentially the same. The industry still relies firmly on its people, most of whom look for humane, concerned and competent guidance from their leaders. Aviation truly can harness the talent and capabilities of its current and future generations of workers to renew the industry and realize its still vast potential. Vision and

*As of this writing, Bell/Agusta Aerospace has approximately 80 orders for its BA609 Tiltrotor, which first flew in 2003 and is expected to attain FAA certification in 2011.*

purpose are the qualities that will inspire and motivate achievers in the future, just as they have driven success through more than a century of amazing aerospace accomplishments. Professionals who choose to lead with vision and purpose today could transform their great heritage into an even greater destiny and someday add their names to the list of legends that started it all. 🚀