

NASA AND THE FUTURE OF THE AEROSPACE WORKFORCE
Remarks by NASA Administrator Charles F. Bolden, Jr.
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My thanks for that introduction and my thanks to Marion Blakey and all of the staff of AIA for your good work on behalf of our industry. I appreciate this opportunity to share some brief thoughts with you on several subjects vital to the future of the aerospace industry as well as NASA itself. Every NASA mission of exploration and discovery is linked by one common thread: our people. The NASA workforce is among our nation's most vital assets, along with our research laboratories, field centers, and all of our aviation and space hardware. Every test flight or space mission we fly, every discovery we make that tells us about our world and about worlds beyond, are only possible through the hard work of a dedicated team.

Among my jobs as NASA Administrator is to nourish that workforce but also to replenish its strengths: finding ways to inspire and motivate the next generation of NASA scientists, engineers and workers and help them find their place within our agency. One of my immediate challenges is to advise the President on the future course of human space flight for our nation. As all of you are quite aware, Norm Augustine was empowered to lead a highly talented committee of aerospace experts in conducting a review of NASA's human space flight program and providing Dr. John Holdren, Director of the Office of Science and Technology Policy, and me as NASA Administrator with several options to support the President's evolving vision for space exploration. The

committee recently completed the bulk of its work and they are in the process of putting the finishing touches on the final report. Last week we received a summary report and yesterday the House Science and Technology Committee held its first hearings on the Augustine Committee's work. The Senate will hold its first hearing later today. The process of developing our final recommendation to the President is ongoing. Dr. Holdren and I have been involved in a deliberative process of evaluating the information we have received from the Augustine Committee to date and I have been engaged with my senior leadership team at NASA to develop our inputs for final discussion with the President. In the end, it is my hope that we will present an ambitious and sustainable exploration program that provides inspiration to future scientist, engineers, and explorers.

This takes me to my next challenge. Because of what NASA does, our focus in education is Science, Technology, Engineering, and Math (STEM). To advance STEM education, let me briefly describe some of the areas that we are pursuing and that I hope your companies are also considering if not already doing.

First, we must build NASA's and the nation's future workforce. To do this, we must seek to link student's interest in STEM subjects with the possible careers they can pursue once they graduate. By linking our agency with nonprofits, industry, community groups, and educators, we are finding new ways to inspire the next generation to study challenging STEM subjects and prepare to follow their own dreams of exploration. We will identify and develop the critical skills that are needed in aeronautics, Earth and space science,

space operations, and exploration in order to ensure we can carry out our agency's many missions.

Second, we must attract and retain students in STEM disciplines. NASA will focus on engaging and retaining students now in STEM education programs by identifying ways to strengthen the research capabilities of our Nation's colleges and universities as well as providing opportunities that attract and prepare increasing numbers of students for NASA-related careers.

We must also work to include the under represented and minority communities.

Our Minority University Research and Education program seeks to engage these underrepresented populations through a series of initiatives that include multiyear grants, which are awarded to assist minority institutions, their faculty and students, in conducting research that we can employ in future NASA missions.

Our Elementary and Secondary Education projects provide K–12 educators with the tools and experiences to further their education. These students participate in unique NASA learning experiences that enhance their knowledge of STEM and can inspire the pursuit of STEM careers. The program supports their educational institutions, providing a way to bring together students, their families, and their teachers to enrich their educations.

For our existing workforce, we are dedicated to listening to our employees and working to design a flexible career path that will make the best use of their experiences and skills. NASA is facing a complex transition as the Space Shuttle fleet is retired. Anytime an agency like NASA must change direction the most common reaction is apprehension. Change can be a scary prospect, and it can threaten our sense of security, stability, and our place in the altered landscape. People want to know: how will this affect me? Once they understand the transition, workers then seek ways they can find their place in the future. But before we can achieve that future, we must focus on our overriding responsibility to safely and efficiently execute our current space flight programs, Shuttle and the International Space Station.

Every job that is affected by this turbulent change is important to us, and while I cannot promise that we can find a new job for every job that is displaced, I can pledge our best efforts at retraining opportunities and assisting our contractor community, and the state governments most impacted by this transition with identifying ways and designing programs to make use of this experience base. Here your assistance with ideas on retraining or workforce transition will be very welcome.

For all that we have accomplished, our work in aeronautics research and development and space exploration is a business that constantly challenges us as we push into the unknown. It is not a surprise that there will be new work to be done and that along the way we will learn new lessons and find new ways to do our jobs. Significant challenges remain in ensuring that critical skills are available where and when they are needed, and

that the NASA civil servant and contractor workforce continue to have opportunities to be innovative operators, builders and managers in the post-Shuttle era. All of NASA's missions exist within a framework of national and international investments we make in science, technology, and education, and are therefore naturally subject to review and reevaluation as political and economic conditions change. Whatever uncertainty these reviews in policy may cause, we will not allow them to distract from the important work being done by NASA all across our country. As we begin our second half-century, NASA will continue pushing frontiers, answering old questions with new and inspiring missions of exploration. Ours is an agency that is critical to our nation's future.

All of these initiatives will take time and resources and a continuing commitment. This is an effort that is not just my cause as Administrator, but it is personal, too. As a husband and father of two children and three beautiful granddaughters – our son ~~one~~ now a lieutenant colonel in the Marine Corps; our daughter a surgeon now in the final stages of a two-year fellowship in plastic surgery – I know from first hand experience how important a role early science education played in their career choices. And in my school visits as NASA Administrator, I have seen the faces of young people when I explain what it was like for me to launch aboard the Space Shuttle, conduct complex space missions, work as part of a team with many skills, and talk about my own small role in space exploration made possible by my studies of science and math. Many I talk to want to play their own part in NASA's future. We must craft ways to help them pursue those dreams.

When we think of our legacy, we usually think of the results of exploration – new understanding about Earth and the universe in which we live; scientific discoveries that unravel the mysteries of other worlds; and learning to live and work in space. All of these are what NASA does. But an equally important legacy, one that will last long after we are gone, is a public engaged and involved in every NASA mission and in the work supporting our aerospace industry to which AIA has for so long been dedicated. Our partnership in this endeavor is more important than ever before and we at NASA stand ready to work with you in new and exciting ways.

Thank-you.