

National Aeronautics and Space Administration



KELVIN MANNING

Associate Director for Business Operations

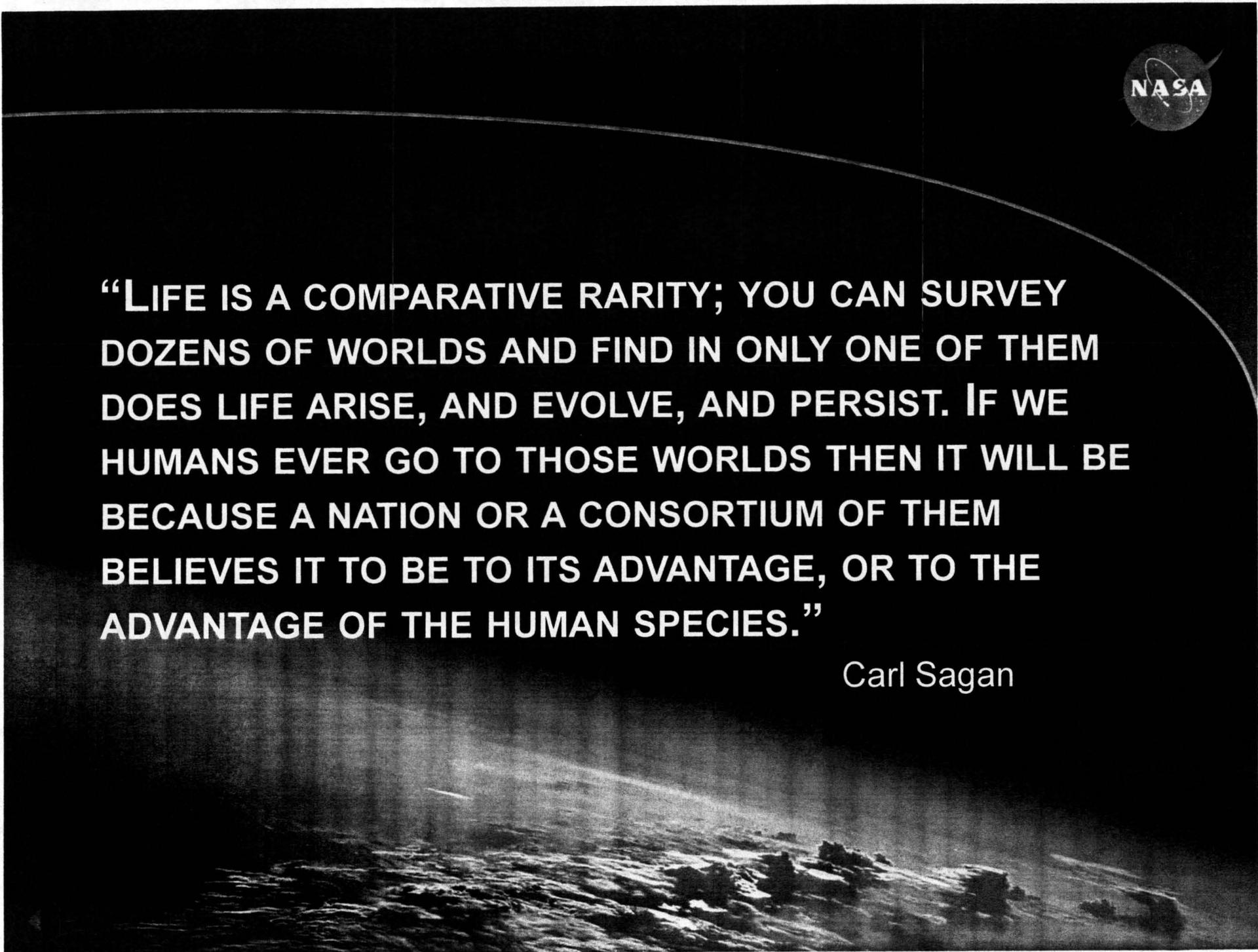
Kennedy Space Center

Tampa Bay International Business Summit
March 10, 2011



“LIFE IS A COMPARATIVE RARITY; YOU CAN SURVEY DOZENS OF WORLDS AND FIND IN ONLY ONE OF THEM DOES LIFE ARISE, AND EVOLVE, AND PERSIST. IF WE HUMANS EVER GO TO THOSE WORLDS THEN IT WILL BE BECAUSE A NATION OR A CONSORTIUM OF THEM BELIEVES IT TO BE TO ITS ADVANTAGE, OR TO THE ADVANTAGE OF THE HUMAN SPECIES.”

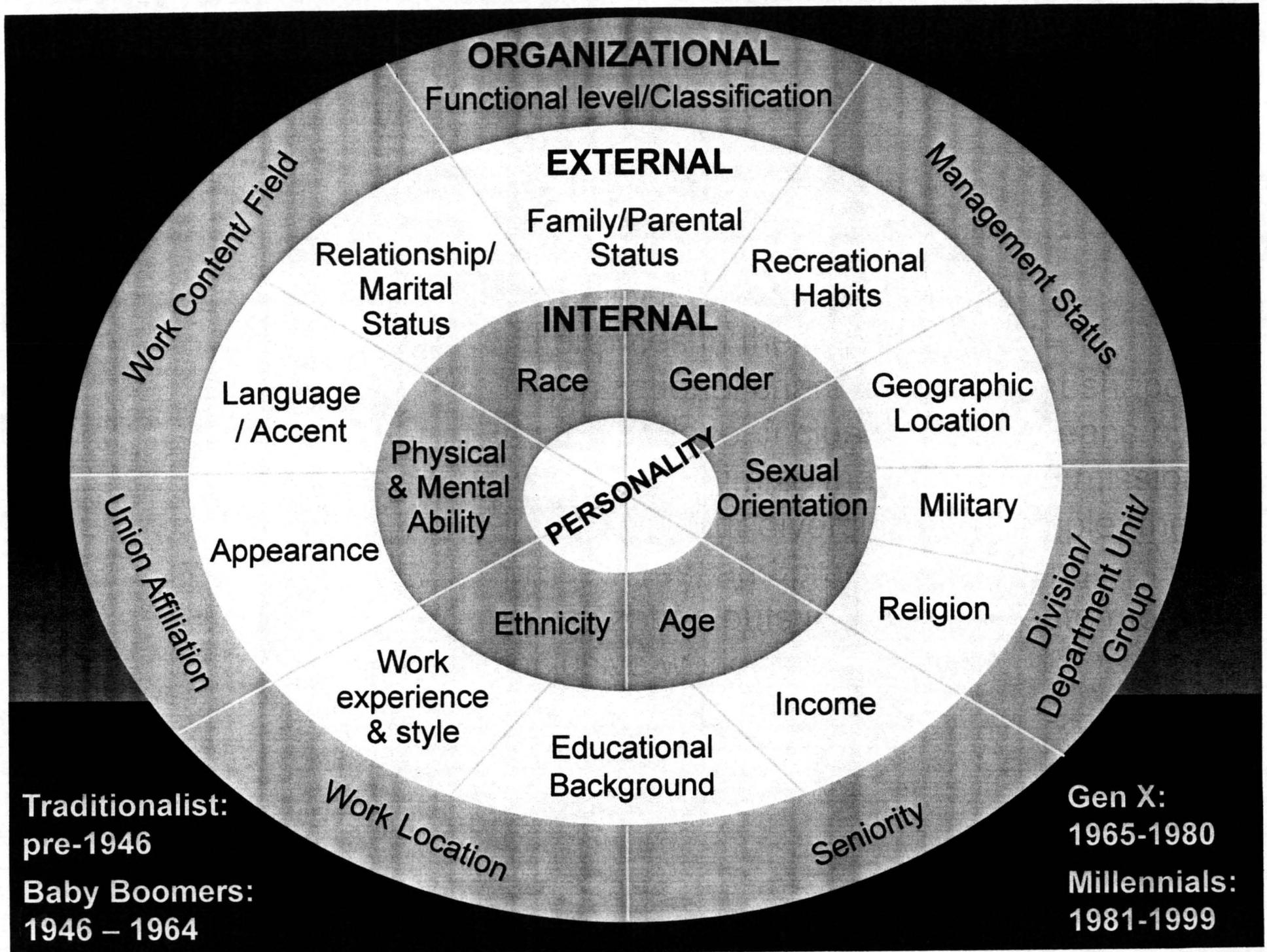
Carl Sagan





DIVERSITY AND INCLUSION

Diversity is the similarities and differences in the individual and organizational characteristics that shape our workplace. Inclusion is the means by which we optimize the benefits to mission inherent in our diversity, for example, the procedures, and practices that and organization puts in place to create more inclusive work environments.



Traditionalist:
pre-1946

Baby Boomers:
1946 – 1964

Gen X:
1965-1980

Millennials:
1981-1999



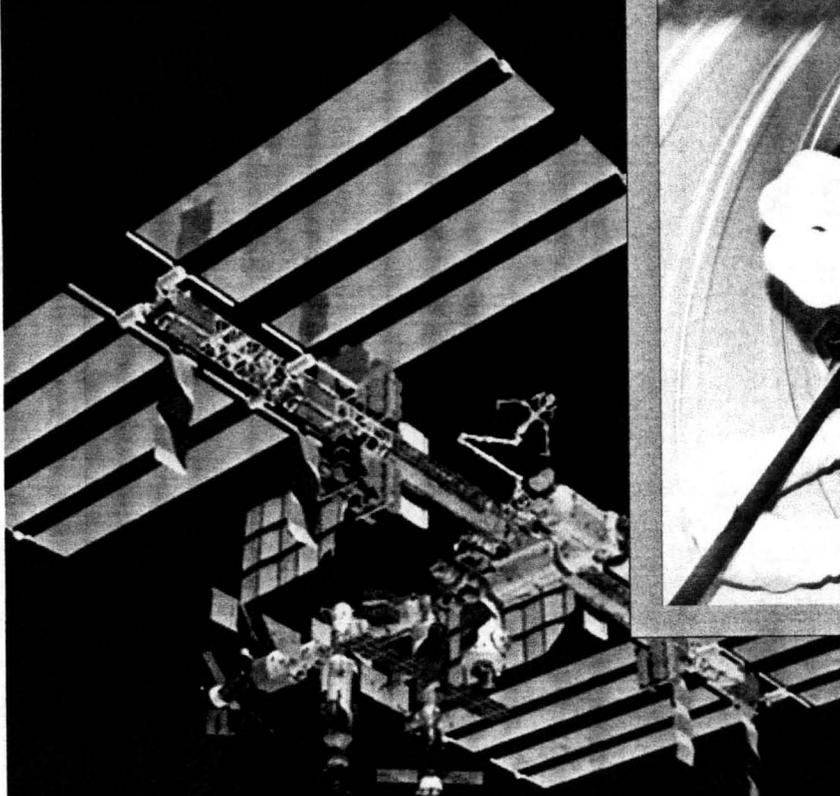
SUCCESSFUL DIVERSITY & INCLUSION PRINCIPALS

- Demonstrated Leadership Commitment
- Employee Engagement & Effective Communication
- Demonstrated Commitment to Community Partnerships
- Shares Accountability & Responsibility
- Effective Measurement





INTERNATIONAL COOPERATION





OUR VISION

KSC is the world's preeminent launch complex for government and commercial space access, enabling the world to explore and work in space





CENTER PLANNING AND DEVELOPMENT

Mission: To develop the world's premier spaceport meeting government and commercial space industry needs, through comprehensive resource planning and the formation of partnerships to ensure the economic vitality of the center.



OPPORTUNITIES

- Space Transportation & Technologies Support Systems
- Satellite Systems and Payloads
- Ground & Operations Support Systems
- Agriculture, Climate & Environmental Monitoring
- Civil Protection & Emergency Management
- ISS and Human Life Sciences
- Communications, Cybersecurity and Robotics
- Adventure Tourism
- Clean Energy
- Advanced Materials & New Products



IN 2011

**Launching two
remaining Shuttle
missions**

**Supporting Six
Launch Services
Program missions**

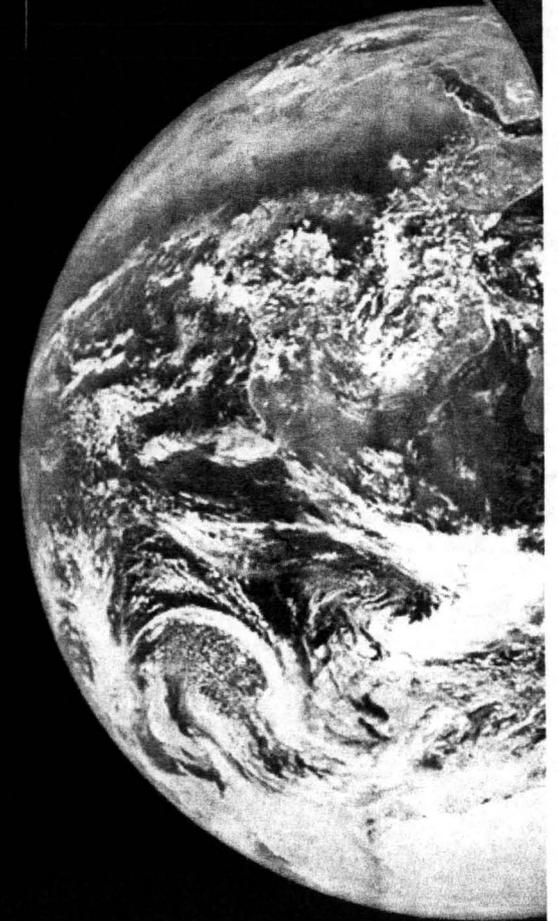


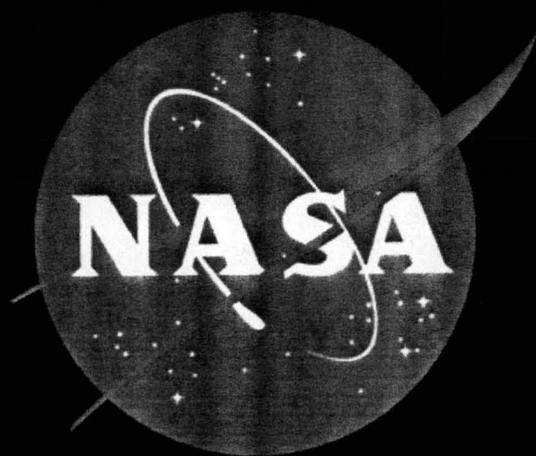
NASA will continue to explore beyond low-Earth orbit, and those efforts will continue to launch from Kennedy Space Center.



NASA VISION

**To reach for new heights and reveal
the unknown, so that what we do
and learn will benefit all humankind**





Slide 1

Thank you for having me today.

Slide 2

In his famous Pale Blue Dot speech, the late astronomer, Carl Sagan said, "Life is a comparative rarity; you can survey dozens of worlds and find in only one of them does life arise, and evolve, and persist. If we humans ever go to those worlds then it will be because a nation or a consortium of them believes it to be to its advantage, or to the advantage of the human species."

My take away from that is the emphases on collaboration as a means to a fantastic end. And as I have personally witnessed many times, if the collaboration is the product of a diverse group of thinkers then the ultimate product will be stronger, and take us further.

Slide 3

Often, when we think of diversity we picture different shades of skin color, but let's please not stop there. What we are looking for when we are talking about creating diverse work groups is bringing people together who think differently. People whose education and background, whose life experiences cause them to think and solve problems differently.

At NASA we know that the journey beyond Earth's orbit into deep space will require a diverse team of many individuals. People with the best minds and the broadest knowledge are needed. In building teams the agency focuses on making diversity and inclusion a part of identifying and recruiting talent – but they did not stop there. NASA's strategic plan includes a focus on diversity and inclusion making it a matter of policy and demonstrating a commitment at the highest level of the organization.

Slide 4

Right now we are reprogramming NASA, we are shifting gears and developing our long term strategies. And we know that to create a competitive advantage, connect with outside stakeholders and create higher performing teams diversity must be a strategic part of our planning.

But creating a diverse environment – as you may have encountered in your own business – is not always easy. It is effortless for us to stand here and talk about the benefits, but to really make it a part of our culture and workplace is a very different task.

Incorporating diversity requires a demonstrated commitment by leadership, and effective communication and education to all employees about the benefits.

The European Journal of Engineering Education discussed the results of a workforce that is not culturally diverse, and concluded that some professions, engineering for example, may miss out on valuable contributions.

It is important for those currently working in a field to understand the benefits of diversity and to reach out and recruit the next generation accordingly. The journal reported an interesting idea about recruiting practices -- it was the idea that many young women enter the engineering field, not because of women they know or because of a barrier they wanted to break, it was because the men in the field encouraged them to do so.

Creating an effectively diverse workforce is not just about hiring practices or employee education. We also know that we must demonstrate our commitments to community partners, and let people know -- internally and externally -- that diversity is a shared goal, with shared responsibilities and shared accountability.

Effective measurement of your diversity and inclusion efforts will also help to -- over time -- paint a picture of how these efforts improve performance and the bottom line. The Center for American Progress connects the dots between diversity, innovation and economic growth -- citing that to understand economic growth we must understand diversity as well as ability. The organization does not mince words when it refers to diversity as the "most powerful but least understood force for innovation."

It's not hard to understand that if everyone on the team thinks alike then the team will get stuck at the same points, but if you bring someone in with a fresh perspective or a different skill set they may help to move the entire group along.

But sometimes quantifying and relaying the results to the right audience can be a challenge. With NASA being a public organization, the bottom line is often not the primary motivator for change. So in developing a business case we had to decide what the driving forces are.

Slide 5

We are driven to explore in an effort to solve the riddles of the universe, to do that we need to collaborate on a large, global scale.

Let's look at the International Space Station, an engineering marvel, a world class microgravity lab and engineering test bed flying in Low Earth Orbit. A defining moment for the station was when my boss, Robert Cabana, and Sergei Krikalev entered Node 1 of the station, together. A station node is like a room or chamber. Multiple nodes have been put together to create the entire space station.

Node 1 was entered for the first time by an American and a Russian. No one took first place this time; this was a signal of international cooperation, of the importance of diversity. It was not about us or them; it was about working together for one goal. And that is how the International Space Station continued to be developed.

Now just think about that, different pieces of hardware were built around the world, launched into space and put together for the first time in outer space, and it all worked flawlessly.

The Station is the combined effort of five space agencies, representing 16 different nations. It flies approximately 240 miles above the Earth and is more powerful and four times larger than any human space craft ever built.

Slide 6

At Kennedy Space Center we have been given a new problem to solve, enabling commercial space flight. For the first time in the history of space exploration, commercial companies will begin to shuttle astronauts and cargo to the international Space Station.

If ever we needed diverse ideas it is now. We have never enabled commercial space flight before. Yes, we have contracted with commercial organizations to develop rockets and launch rockets, but enabling this industry is new to us, as it would be to any organization. So to develop our strategies we have looked to businesses with the skills and understanding to help us problem-solve. We know just about all there is to know about exploring the universe, we know volumes about moon dust, but we need more diversity in our decision making as we evolve into a new kind of space agency.

Our goal is to diversify the Space Center, but we are not just talking about the workforce or about decision making anymore. Now we are working to develop a Center that is home to various businesses and organizations – this time we are talking about economic diversity.

Slide 7

Kennedy Space Center took significant steps during Fiscal Year 2010 to grow its strategic partnerships and position the spaceport to become a multi-user space launch complex supporting both government and commercial space activities. We have also developed a Center Planning and Development Office. The office is charged with enabling communication between NASA executives and industry leaders.

The Center Planning and Development office is our “front door.” This is where our potential partners can bring unsolicited ideas with the potential to help move the Space Port forward. This office has also been working to form public, private partnerships that are essential to enhancing economic vitality of the center.

Slide 8

By partnering with outside agencies who helped us look at future from different perspectives we have been able to target areas of business opportunities that will help us align with our capabilities and help us achieve our vision.

In the future you should expect Kennedy Space Center to be leading the industry in the development and processing of Space Transportation and Technology Support Systems, Satellite Systems and Payloads and Ground and Operational Support Systems. We will also have a prominent role in agriculture, climate and environmental monitoring; civil protection and emergency management; human life sciences research; advancing communications; cybersecurity and robotics; space tourism; clean energy; and advanced materials and new products derived from space technologies.

Slide 9

Our first and foremost priority for 2011 is to safely launch and land the final space shuttle missions. The final flight of Atlantis, will closeout an historic three decades of discovery and exploration aboard the Space Shuttle. But, it is important to keep in mind that wheels stop will not just bring the shuttle program to a close, it will signify the beginning of the next chapter of human exploration of space.

Our next and equally important priority is to support the Launch Services Program as they launch five more missions this year, with the Mars Science Laboratory launching in November. This program has launched the scientific instruments and satellites that have enabled tremendous discovery.

Slide 10

NASA is changing -- Kennedy Space Center will emerge from this change as the launch complex of the future, designed to serve the needs of the worldwide aerospace community.

As a result of successful planning, we will move to occupy a broader, bolder place within the worldwide space community, supporting a variety of private and public customers.

The Center has the capabilities, facilities and highly skilled workforce to provide unique and significant skills to the space community, and has the capabilities to make accessing space less costly and more routine.

NASA will continue to explore beyond low-Earth orbit, and that effort will continue to launch from Kennedy Space Center.

Slide 11

More than 25 years ago, NASA selected a new class of astronauts that was unlike any that had come before it. In 1978, in order to prepare for the upcoming Space Shuttle program, NASA selected a group of astronaut candidates with a wide variety of backgrounds that brought a wealth of knowledge and experience to the new program. That variety brought diversity of a different sort, as well, as NASA selected its first African-American and female astronauts.

With the release of the 2011 strategic plan NASA renewed its dedication to diversity – identifying “Teamwork” as a core value. A multidisciplinary team of diverse, competent people across all NASA Centers is our most powerful tool for achieving mission success. Our approach to teamwork is based on a philosophy that each team member brings unique experience and important expertise to project issues. We are committed to creating an environment that fosters teamwork and processes that support equal opportunity, collaboration, continuous learning, and openness to innovation and new ideas.

Now with the shuttle program ending, and new challenges on the horizon, it is only with diverse teams of collaborators that we will achieve the vision for NASA – to reach for new heights and reveal the unknown, so that what we do and learn will benefit all humankind.