National Aeronautics and Space Administration
Office of Human Resources

Human Capital Management

It's about People...

The NASA Vision:

To improve life here,

To extend life there,

To find life beyond.

The NASA Mission:

To understand and protect our home planet,

To explore the universe and search for life,

To inspire the next generation of explorers

...as only NASA can.

At NASA, we operate on the cutting edge of the impossible.

Our mandate is to accomplish missions that will benefit all of humankind, to set daring goals that push the envelope of our Nation's scientific and technical knowledge and skills. We have our eyes fixed on goals like developing nuclear-powered rockets to orbit Jupiter…discovering other life forms in the universe…fulfilling that ancient desire to accurately predict the weather.

In the truest sense, we are explorers; and many of our goals raise unique challenges. Often, we have no comfortable body of absolute knowledge to reassure us that our goals are reachable. Often we have no clear guideposts, because we are the pathfinders.

In human terms, goals like ours create a very practical and serious question: how do we create an environment that enables extraordinary employees to rise to such challenges? How do we ensure continuity of enthusiasm and commitment over a lifetime of missions that may last for decades? How do we gain the full benefit of the rich and sometimes painful lessons we've learned?

We are successfully meeting these challenges through our innovative human capital strategy and effective business processes. Our human capital strategy is built on 5 pillars:

- Strategic Alignment
- Strategic Competencies
- Learning
- Performance Culture
- Leadership

We express these 5 pillars concretely through human capital programs, strategies and processes that enable us to leverage the power of an exceptional and diverse work force.

We know that to achieve our ambitious goals, all elements of NASA must work as a single team. Thus we have made an additional commitment, "One NASA," to foster a more productive and higher-performing NASA that better leverages our skills and resources to make our programs more viable and successful.

In the spirit of One NASA, we are implementing common procedures, capabilities, tools, and organizations that will help ensure the Agency functions as smoothly and efficiently as possible. Our Integration Team for the President's Management Agenda (PMA) demonstrates this approach. Composed of representatives from all 5 PMA areas, it ensures that we implement PMA initiatives in a well-planned, consistent and coordinated manner.

Our Freedom To Manage (F2M) initiative removes barriers to more efficient management. F2M challenges the entire NASA team - civil servants and contractors alike - to suggest creative new ways in breaking down bureaucratic obstacles to innovation or effective management. Our leaders make sure that those suggestions become reality. Many F2M suggestions have been incorporated into legislative proposals now being considered in Congress, and we have implemented internal changes in human capital management ranging from the elimination of duplicative activities to the delegation of significant human resource authorities to the lowest possible levels.

Together, F2M and a One NASA approach are supporting higher performance and more accountability through action, not process. Our efforts in human capital management are transforming the way we do business. Other agencies recognize our achievements and are using them to create successes of their own.

NASA's vision and mission are about knowledge and discovery. Ultimately, however, accomplishing the mission is about people. We are One NASA, where the whole is greater than the sum of its parts, and where together we rise to the challenge of doing what has never been done before…as only NASA can.

It's about People...

...supporting the mission a

How do you get 18,000 NASA employees and 45,000 contractors worldwide to all work towards a common goal?

At NASA, we do this by aligning human capital to support our vision and accomplish our mission and goals. We have implemented an Agencywide integrated workforce planning and analysis capability - increasing our use of flexibilities and tools to ensure a highly skilled, diverse and productive workforce.

Our human capital strategies are integrated and linked to NASA's mission, vision, core values, goals, and objectives through a Strategic Human Capital Plan (SHCP) and companion Strategic Human Capital Implementation Plan (SHCIP). The SHCP and SHCIP provide a roadmap for specific actions and initiatives that ensure we have the right workforce to achieve excellence in performing our challenging mission. The 5 pillars of the SHCP - Strategic Alignment, Strategic Competencies, Learning, Performance Culture and Leadership - are aligned with specific goals, strategies, and improvement initiatives that enhance our ability to effectively manage the workforce.

KENNEDY SPACE CENTER, FLA. – Researchers conduct underwater acoustic research in the Launch Complex 39 turn basin.

Senior leaders recognize that our greatest strength is our workforce, and developed the SHCP to assure an integrated, systematic, Agencywide approach to human capital management. The Plan was developed after a rigorous assessment of NASA's human capital strengths and weaknesses, and identified concrete, high-leverage improvement initiatives. The Administrator enthusiastically promoted it throughout NASA, and it is available to the entire workforce on the NASA Human Capital Management Web site at http://nasapeople.nasa.gov/hcm/default.htm.

Our human capital strategies link with program budgets. Under Full Cost Management, all costs – including civil service personnel costs – are tied directly to programs. In managing total program costs, managers and human resources professionals work together to find the most cost-effective mix of civil service workforce and contractor staff.

The integration of human capital strategies in addressing key programmatic objectives enabled us to successfully develop a Competitive Sourcing Plan, to implement Full Cost Management, to identify options for managing U.S. responsibilities for the International Space Station utilization, and to develop workforce strategies for a variety of program operations. Our Chief Human Capital Officer is an active member of the Program and Institutional Management Council that oversees implementation of all NASA's programs to assure they are consistent with strategic plans, have adequate resources, and are delivered within projected time frames.

Legislative proposals considered in Congress will enhance our ability to meet human capital challenges. For example, the Science and Technology Scholarship for Service offers college scholarships to students pursuing degrees in critical disciplines. In return, students commit to working for us after graduation. To address more short-term needs, we developed provisions that will enable us to compete more successfully with the private sector for top talent - including streamlined hiring authorities and financial as well as non-financial incentives for both new hires and current employees. Other provisions such as flexible term appointment authority, a superior qualifications pay authority, and the enhanced Intergovernmental Personnel Act authority will provide NASA with greater flexibility in responding to program changes and filling critical competencies.

"Each organization understands its contribution to the overall mission"

nd vision.

As a result of our actions:

- NASA's human capital strategy and plans are aligned with Agency strategic plans;
- Workforce planning is tied directly to programs and projects under Full Cost Management;
- NASA has made human capital management a shared responsibility of organizations at all levels;
- NASA is the only government agency certified to the ISO 9001 standard at the corporate level in the human resources function; and
- **In the Federal Human Capital Survey 2002, NASA rated significantly higher than the Federal average on 5 of 6 questions about Strategic Alignment:**
  - **89.8 percent of NASA respondents to the survey know how their work relates to mission goals; and**
  - **80.4 percent are informed on HR policy and benefits.**

Our goal is to support NASA's mission in a safe, effective and efficient way, and to ensure that each organization understands its contribution to the overall mission, and each employee understands his or her personal contribution. Are we making progress? Yes, says Jim Spann, Ph.D., principal investigator of the Auroral Multiscale Imaging Explorer proposal. His clear understanding of how his work fits into NASA's larger goals helped his team of scientists stay focused on the purpose of their research.

The exploration of space is the final frontier, not for a single nation, but for all of humankind. The International Space Station is the beginning of this unique cooperation.

"Our greatest strength is our workforce"

Jim Spann, Ph.D.

Communicating NASA's mission and vision - exploring the unknown, going where no one had gone before - was the easy part for Dr. Spann. The principal investigator of the Auroral Multiscale Imaging Explorer proposal met his real challenge when he asked his team of world-class scientists to answer the question, "So what?"

Coming up with an answer is a critical part of the process. Spann's project, if approved, will investigate the formation, motion and evolution of the aurora to understand its origin and cause. Spann brought the team of 5 national and 4 European astrophysicists and scientists together at the Marshall Space Flight Center in Huntsville, Alabama, and asked pointed, concise questions. "I asked them, 'Why do we want to study the aurora? How is it relevant?'" he says.

Spann helps his staff focus on the idea of the aurora as a footprint for the larger volume that surrounds the earth. What happens there helps us understand what happens elsewhere. That's the key to today's NASA. "The aurora makes for some very compelling science, but we also need to answer the harder questions."

...leveraging strategic com

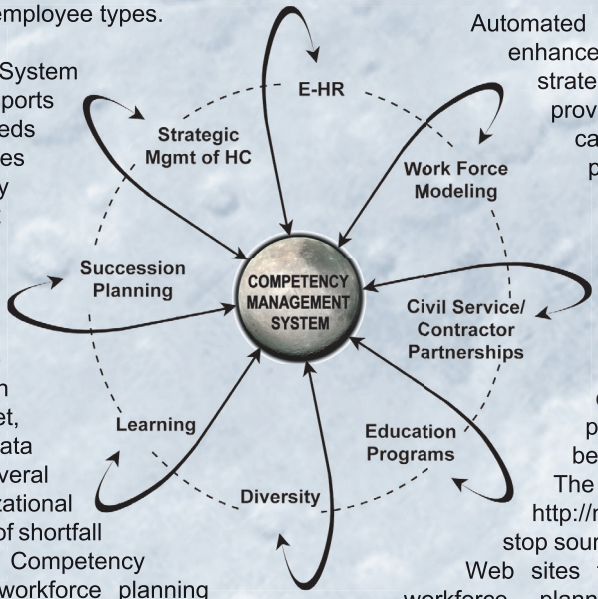
How do you ensure that you will have "state of the art" competence 10 years from now - in areas you don't even know about today?

For NASA, the answer starts with recruiting and retaining a world-class, diverse workforce proficient in strategic competencies. We have taken initiatives to:

- Provide robust workforce analysis and planning tools;
- Develop a Competency Management System to enable highly targeted recruitment; and
- Ensure that education programs reach a diverse population of students who meet future workforce needs.

We have greatly improved our workforce planning tools and made them available via the Web to managers and analysts at NASA Centers and Enterprises. For each organizational, occupational, and demographic segment of the workforce, we provide data on hiring, attrition, and on-board strength going back 5 years. Planners have access to attrition forecasts for the coming 5 years for all job and employee types.

Our Competency Management System (CMS) identifies, manages, and reports the "know-how" strength and needs of the Agency. The CMS enables us to compare future competency demands with the current knowledge base. When skills gaps are identified, the CMS ties that information into the corporate recruitment, training, diversity and education initiatives. The CMS also provides critical linkages to mission goals, integrated financial, budget, and program management. Data analyses from CMS identified several competency areas in organizational capabilities that are a potential risk of shortfall due to forecasted attrition rates. Competency assessments, along with other workforce planning data, helped to set the priorities and targeted occupational areas for our Corporate Recruitment Strategy. We will track progress in filling "at risk" competencies through the annual strategic workforce planning process.



This detailed analysis of workforce requirements shows us where to target future recruiting and outreach efforts. We have innovative programs to attract minorities and disabled persons, and to create recruitment linkages between our employment programs and university research and education programs.

Programs such as NASA University Research Centers, the Undergraduate and Graduate Student Researchers Programs, and the Harriett G. Jenkins Pre-doctoral Fellowship Program help increase the number of students seeking degrees in science, technology, engineering and mathematics (STEM) disciplines. These programs, and our Office of Equal Opportunity programs, support a diverse pool of individuals that possess the competencies NASA needs. The Education, Equal Opportunity and Human Resources Offices collaborate to connect these valuable programs to recruitment efforts, thus forming a pipeline of exceptional talent.

Looking far ahead, we actively motivate students to pursue careers in STEM, for example, through our Educator Astronaut Program. This program gives teachers an opportunity to participate in our space flight programs, as Astronauts who teach and inspire students to study STEM disciplines.

We have expanded our employment pipeline through greater use of the Cooperative Education Program, the Federal Career Intern Program, and Contracting Intern Program. The Administrator's Intern Program targets a select group of highly qualified, diverse science and engineering candidates.

Automated processes and systems have also enhanced human capital programs and strategies. The NASAJobs Web site provides useful information about NASA career opportunities. The automated position description system enables managers to efficiently create position descriptions online. The NASA Organizational Profile System provides managers with real-time information including retirement eligibles, awards history, within-grade-increase dates, personnel strength, and other pertinent information to assist in better management of their workforce. The NASAPeople Web site at http://nasapeople.nasa.gov offers a one-stop source of information and links to NASA Web sites for Human Capital Management, workforce planning, NASAJobs, training and development, etc.

Our powerful NASA STARS is an automated hiring system, which is valuable to both applicants and hiring managers. NASA STARS enables us to compete with private industry for top talent at college recruiting events. Students can apply online, and their applications can be rated electronically in a matter of minutes, so that recruiters are able to make virtually "on-the-spot" offers at recruiting events. We also provide Web sites for student employment and research opportunities.

All these efforts are designed to propel NASA to the forefront of contemporary "employers of choice."

As a result of our actions:

- The CMS provides critical linkages to mission goals, integrated financial, budget and program management and drives many initiatives in recruitment, training, diversity and education;
- The CMS is considered a model and best practice across the Federal government, is featured at professional conferences, and is highly acclaimed by various public service entities;
- We have successfully used workforce planning tools and CMS data to address real time issues such as "Return to Flight" of the Space Shuttle Program, competitive sourcing, workforce restructuring, hiring fresh-outs, recruiting "at risk" competencies, and assessing training needs;
- Our 5-year Corporate Recruitment Strategy is focused on results in improving diversity, strengthening outreach efforts, and linking employment programs to university research and education programs;
- NASA STARS provides a hiring solution that:
  - Enjoys a 98 percent satisfaction rate among applicants, based on a satisfaction survey;
  - Notifies candidates of receipt of application within minutes;
  - Has improved the time to fill vacancies by over 5 percent;
  - Provides quality applicants, and over 4 times the number of applicants compared to the manual process;
  - Generates savings of more than 40,000 hours annually; and
  - Has enabled 90 percent of NASA managers to find candidates who are good matches for their positions.
- New education programs will inspire the next generation of explorers; and
- **In the Federal Human Capital Survey 2002, NASA was significantly higher than the Federal average in 9 of 10 questions pertaining to Strategic Competencies:**
  - **79.2 percent agree the workforce has job-relevant knowledge and skills needed to accomplish organizational goals.**

Our goal is to recruit and retain a diverse, world-class workforce possessing "state of the art" competencies aligned with the mission, now and in the future. How are we doing? Jill Marlowe, Aerospace Engineer and Lynda Haines, Systems Management and Planning Executive say that the introduction of the CMS has greatly enhanced NASA's workforce planning capabilities.

Jill Marlowe and Lynda Haines

How many people are working in atmospheric science at NASA? This was a simple question posed by Roy Bridges when he came on board as Director of the Langley Research Center.

In the past, he might have waited months for an answer. But Jill Marlowe, an Aerospace Engineer at Langley who helped develop the Competency Management System (CMS) for NASA, quickly found the number of people in that branch of research throughout the agency. "We had some idea of where people were in atmospheric science, but not how many," she says. "I went into CMS and found out."

The CMS development team created a dictionary that defines Agencywide occupations in a common language. "Before, you might be using the same term to describe very different work," says Marlowe. "What does 'controls system' mean, exactly? And how does NASA's definition differ from, say, the automotive industry's?"

CMS also helps NASA achieve highly targeted recruitment. "CMS helps us know where we need to hire, says Marlowe.

Another member of the CMS development team, Lynda Haines, Systems Management and Planning Executive in the Office of the Director at Ames Research Center, also plans to use the system to respond to new, changing or phased out work. "If we have position competencies linked to program/project management, we could look at those we currently have compared to the work we'll be doing in the out years to provide a gap analysis," says Haines.

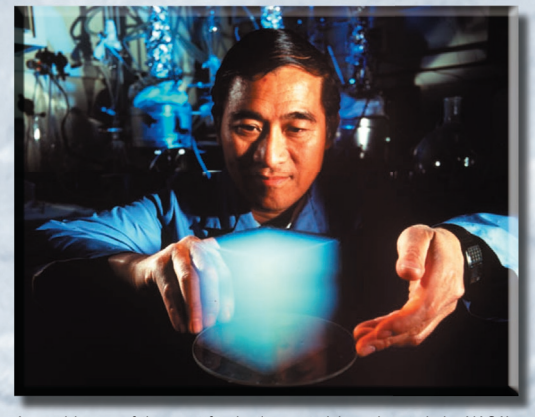
With the help of CMS, Haines hopes to enhance workforce planning capabilities. "Our workforce has broad and varied experiences and backgrounds beyond their current competencies and skills, a mix that should be tapped," says Haines.

...learning, and advancing

How do you pass on the knowledge of one generation of explorers to the next, and ensure that the lessons learned from past successes and failures are not lost?

At NASA, our answer is to promote knowledge sharing and a climate of openness, and continuous learning and improvement. We effectively and systematically capture knowledge and lessons learned from our best project practitioners; incorporate knowledge sharing and mentoring in employee development; and ensure that training and development programs build needed competencies.

We have a robust set of training and development opportunities supporting increased capability and competency enhancement of our workforce, focusing on accomplishing mission results. Formal career models guide the development and training of program and project managers, engineers, leaders, and employees in financial, procurement, safety and mission assurance, and other careers. These career models define the training, formal education and rotational assignments recommended for optimal development in each discipline area across the Agency in a manner consistent with a One NASA approach. We update these programs continually, to reflect evolutions in policy and emerging best practices. Our Project Management Development Process (PMDP) orchestrates the development of project practitioners' skill sets and competencies in collaboration with Agency-identified competencies and objectives and Center-unique needs.



Aerogel is one of the most fascinating materials under study by NASA's microgravity materials science program. Potential applications for Aerogel in industry, technology and home are widespread.

The NASA Engineering Training (NET) Program is focused on systems and system awareness. The program helps engineers to "see better" the systems that affect their performance; to retain, maintain and reclaim engineering knowledge and experience; and to identify core competencies critical for excellence at successive levels linked to current and future needs.

Our Academy of Program and Project Leadership (APPL) promotes mentoring, coaching, knowledge sharing, career development, and performance enhancement. At Masters Forums, highly successful project managers share best practices while project managers learn how to apply these practices to their projects. Our Leaders as Teachers and Mentors Initiative allows NASA practitioners to share their expertise through guest lecturing, storytelling, teaching, consulting, and mentoring. At our Project Management Transfer Wisdom Workshops, rising project managers develop their skills by studying experiences of NASA's most experienced project managers.

The Academy Sharing Knowledge (ASK) magazine ensures that knowledge learned through hands-on experience is captured and shared in a way that makes it accessible and useful to project practitioners.

A new Coaching and Mentoring Initiative will help us train leaders in conducting coaching conversations as part of their everyday way of operating, and to develop in-house coaching skills, while selectively using external coaches and organizational development specialists to build internal efforts.

We know that not all learning must take place face-to-face. For this reason we provide extensive e-learning opportunities through our Site for On-line Learning and Resources (SOLAR). It offers customized web-based training courses, course catalogs, and reference materials in the disciplines of safety and mission assurance, information technology security, occupational health, export control, human resources, financial and resources management, and others.

"We incorporate knowledge sharing and mentoring in employee development"

As a result of our actions:

- NASA has realized significant process improvements and cost savings directly traceable to knowledge sharing;
- APPL courses and programs have been awarded accreditation for graduate credits by the American Council on Education;
- APPL's ASK magazine was awarded the APEX 2003 Award for Publication Excellence;
- APPL has been designated as a Global Provider by the Project Management Institute, a distinction indicating acceptance as an international standard of excellence; and
- **In the Federal Human Capital Survey 2002, NASA was significantly higher than the Federal average in 6 of 6 questions pertaining to learning and knowledge management:**
  - **83.2 percent of NASA employees have access to electronic learning programs at their desktop; and**
  - **77.9 percent agree that knowledge sharing is occurring within their work units.**

"NASA's training and development programs build needed competencies"

Our goal is to ensure mission success by using existing knowledge effectively and acquiring new knowledge through learning. How are we doing? Just ask Susan Motil, a NASA project manager, or Marty Davis, the 40-year veteran who coached her. Their knowledge sharing experience resulted in a streamlined project review process that generates better results and saves money.

Marty Davis & Susan Motil

Marty Davis likes to say that he once had a dream - the kind that keeps you awake at night. The 40-year NASA veteran wanted desperately to eliminate the redundancy inherent in the project review process. NASA projects underwent multiple reviews by disparate teams. "I thought, there's got to be a way to streamline the process," says Davis, a program manager at Goddard Space Flight Center in Greenbelt, Maryland.

The solution? One team consisting of internal and external resources would review a project from inception to completion. Since then, he's shared his formula with many NASA employees through the innovative Knowledge Sharing Initiative (KSI), which includes Masters Forums, ASK Magazine, and Transfer Wisdom Workshops, where ASK stories are often the subject for problem-solving exercises.

Susan Motil, an employee at NASA Glenn Research Center since 1989, read about Davis's ideas in ASK, called him up, and has since applied his streamlined approach to concept reviews. Now, instead of cramming too much information into a 3-day review that left "everyone cross eyed" and left little time for detailed questions and no time at all for individual meetings between reviewers and expert engineers, she organized reviews that benefit both the panel and the project. Motil incorporated 2 sets of reviews, a system level review focused on the higher order issues and subsystem reviews for more detailed information sharing. Her goal: to get everyone to view reviews as an opportunity, and, most important, to make time for individual meetings to answer the more detailed questions. "It was amazing how well it worked," says Motil.

The end result? In addition to more productive reviewers and staff, she estimates that her first streamlined review process saved that particular project $500,000. "Hardly something to shrug off," she says.

...focusing on results and a

How do you achieve measurable results when your primary mission is all about knowledge and discovery?

At NASA, we get tangible results in the intangible domains of knowledge and discovery by creating an environment that focuses on results, motivates employees to perform, and ensures fairness in the workplace. We have taken initiatives to ensure that our performance management system focuses, from top to bottom, on accountability for results; and that employee rewards and recognition programs link to performance - which helps us achieve our goals.

Seven explicit performance criteria hold members of our Senior Executive Service (SES) directly accountable for performance results and for strategic management of human capital. The criteria call for high performance by our leadership in terms of the President's Management Agenda; the health of NASA; equal opportunity and diversity; collaboration; professional development; mission success; and fair, equitable, performance-based evaluation of employees. We select, promote, appraise and reward senior executives according to how well they meet these criteria. We cascaded these 7 performance criteria, modified as appropriate, to all supervisors and managers; then to the remaining workforce with the focus on achieving mission success.

NASA's Mars Exploration Rovers are designed to study the history of water on Mars. Each rover could travel as far as 100 meters in one day to act as Mars scientists' eyes and hands, exploring an environment where humans are not yet able to go.

Our Human Capital Accountability Self-Assessment System measures the success of human capital programs in linking human resource practices to Agency strategic objectives and increased performance capacity. Tracking human capital outcomes helps managers better integrate "people management" with other Agency plans and management tools. It also provides a fact-based rationale for improving human capital programs and initiatives that are integrated with our Strategic Human Capital Plan and Implementation Plan.

In reinforcing the performance culture, intensive study and benchmarking indicated a good alignment between recognition and awards programs and the Agency's performance expectations to attain mission success, but we have defined a strategy for strengthening it even more.

This strategy includes:

- Instilling more accountability through elements such as leadership commitment and clear awards criteria;
- Creating additional flexibility in using performance incentives;
- Educating the workforce about recognition and awards programs and how they relate to individual performance and mission success; and
- Enhancing management's ability to use recognition and awards program data to support business decisions.

Our Office of Human Resources collaborated with NASA Enterprises and Centers to develop an implementation plan that identified and prioritized improvement actions to more effectively link recognition and awards to performance results. The implementation plan includes an assessment of improvements and periodic sharing of lessons learned. Our Accountability System assesses and measures the impact of this improvement initiative. Managers, in turn, are held accountable for evaluating and rewarding performance fairly and in a timely fashion.

Fostering a high-performing organization that fully leverages skills and resources requires integration of human capital management with an extensive array of accountability systems. This accountability infrastructure includes our Strategic Human Capital Plan and Implementation Plan with metrics linked to Agency strategic plans, the President's Management Agenda, Human Capital Standards for Success and One NASA. Accountability for human capital management is addressed in the leadership performance standards. We have implemented "One HR" within our human resources (HR) community at Headquarters and the Centers as another mechanism for ensuring shared accountability and an integrated approach in addressing workforce challenges.

"We get tangible results in the intangible domains of knowledge and discovery"

ccountability.

As a result of our actions:

- Performance factors for SES and managers link to agency mission and are cascaded appropriately throughout the workforce;
- Managers are accountable for evaluating and rewarding performance fairly and in a timely fashion; and
- **In the Federal Human Capital Survey of 2002, NASA was significantly higher than the Federal average in 13 of 14 questions pertaining to performance culture:**
  - **81.5 percent of NASA employees who took the survey agree that individuals are held accountable for achieving results;**
  - **78.6 percent agree that managers, supervisors and team leaders work well with employees of different backgrounds; and**
  - **77.8 percent feel policies and programs promote diversity in the workplace.**

Our goal is to achieve excellence, by creating a performance environment in which all employees feel encouraged to contribute. Dr. Whitlow, at the Kennedy Space Center provides his leadership perspective on achieving results and maintaining accountability.

"We foster a high-performance organization - leveraging the skills essential to the Agency's Mission"

Woodrow Whitlow, Ph.D.

It makes sense to Woodrow Whitlow, Ph.D., Deputy Director of the Kennedy Space Center, that outstanding performers need to be recognized for their work. Who would argue with that? But committing to excellence, creating a performance environment and holding people accountable requires persistence and creative thinking in an agency whose primary mission has been knowledge and discovery.

A hands-on administrator, Dr. Whitlow led a staff of more than 470 scientists and engineers in 6 divisions at NASA's Glenn Research Center in Cleveland for 6 years, meeting with a different division once a week, talking one-on-one with researchers, and walking through the labs. He listened to their concerns. "People are very concerned [about performance]," he says. "If you do a great job, and I do a poor job, and we get the same rewards, how does that make you feel?"

Taking cues from the Strategic Human Capital Plan, he developed and presented a point system to each division that makes better use of the existing performance appraisal system and develops a training/coaching plan for those needing improvement. "You have to commit to excellence and provide that environment," says Whitlow, who began working for NASA in 1979 as a research scientist at Langley Research Center and has held positions of increasing responsibility since then. "The agency has limited resources right now, and that includes people. So there's room only for the best. You must channel excellent people in the right direction - one that takes into account the agency's needs."

"Effective leaders lead by example," says Whitlow. "You have to show that you care about what your researchers and staff are doing. And you have to be excellent yourself and hold people accountable."

Whitlow says his year-long stint in the Professional Development Program helped him see the big picture. "It was very maturing. I always tell people that my year in PDP was my best year at NASA," says Whitlow. "I learned, for one, that my little piece of research was not the beginning and end of the world."

...leading by example.

How do you inspire others to do things that have never been done before?

For us, the answer starts with developing leaders who are adaptable; who inspire, motivate and guide others towards goals; who mentor and challenge the workforce, and who demonstrate high standards of honesty, integrity, trust, openness and respect. We recruit people who demonstrate these qualities and guide their careers to further enhance these qualities. To do this, we have taken initiatives to create integrated, strategic training and development programs that build the leadership competencies we need.

We emphasize leadership development through multi-rater evaluation and self-assessment tools and a rich variety of local and distributed learning opportunities, workshops, seminars, conferences, and resident classes. Our Leadership Model plays a pivotal role in succession planning. It is the umbrella under which new development, mentoring, and coaching programs are created, and it has been used to refine existing programs. The Leadership Model defines leadership competencies across the Agency and is a valuable tool in creating a One NASA approach to leadership development at every Center. Leadership training and development programs provide succession-planning tools to prepare the workforce for future leadership opportunities and requirements:

- Fellowships provide executive and management training from nationally recognized colleges, universities, or Federal training institutes;
- The Project Management Development Process provides formal training and knowledge in project management, as well as on-the-job development and experience, for all levels of project practitioners - resulting in a pipeline for developing future project leaders;
- The Leadership Development Program prepares technical leaders for higher and broader levels of responsibilities by providing greater breadth of experience, developmental assignments, and shared culture/collaboration; and
- The Senior Executive Service Candidate Development Program (SES CDP) offers a structured approach to preparing for recurring openings in the SES. Designed to develop both leadership and enhanced technical competency and meet NASA's projected needs, this program provides a series of intensive developmental experiences for people with a high potential for assuming executive responsibilities.

Standing next to the nose of Atlantis, returned from its successful mission STS-110 to the International Space Station, Commander Michael Bloomfield talks with NASA Administrator Sean O'Keefe.

Our leaders-in-training increasingly demonstrate the diversity that is the strength of our workforce and our Nation. Since the start of FY 2000, the proportion of minorities and women in the supervisory ranks has increased from 32 to 35 percent, and in senior executive ranks, from 28 to 32 percent. In the mission critical science and engineering workforce, minorities and women increased from 31 to 33 percent.

The Leadership Development Program and the enhanced SESCDP program provide a broad perspective on the Agency's work. Following a comprehensive mobility study in 2002, we took additional initiatives to encourage mobility, including re-assigning high-level leaders to Centers across the Agency, requiring assignments at Headquarters for all personnel seeking entry into the SES Corps, and establishing cross-Agency task forces that work on Agency level issues. In the coming year, we will continue to educate the workforce about the value of developmental work assignments and emphasize the importance of temporary assignments in gaining broader experience and perspectives.

NASA is in a period of significant evolution, and we provide specific support for managing the attendant changes. Change projects such as One NASA and Freedom to Manage use a standard process based on the Kotter Model for leading, managing, and communicating change efforts. Employees involved in change projects have access to guidance on how to use the Kotter Model, and access to assistance in developing change management plans, facilitation of change management meetings, creation and execution of communication plans, and other support activities.

"We develop leaders who inspire, motivate and guide others towards goals"

As a result of our actions:

- 74 percent of our SES CDP graduates have been appointed to the SES Corps;
- We have created an effective process to develop leaders for future NASA leadership roles and responsibilities;
- We are building a pipeline to ensure that we will have the right kind and number of diverse leaders to achieve mission success; and
- **In the Federal Human Capital Survey 2002, NASA was significantly higher than the Federal average in 11 of 14 questions pertaining to leadership;**
  - **89.2 percent of NASA employees who responded to the survey feel the work they do is important.**

Our goal is to develop leaders who think strategically, inspire employees and achieve results. The Leadership Development Program helped Erik Denson - who leads the STARS program - stay focused on this goal.

Orlando Figueroa, Mars Exploration Program Director, said that NASA's SES CDP illustrated that strong leadership is measured by how well teams perform independently.

"You must channel excellent people in the right direction - one that takes into account the Agency's needs"

Erik Denson and Orlando Figueroa

Erik Denson's participation in NASA's Leadership Development Program allowed him to rediscover his passion and broaden his perspectives. "When you believe in what you do you become a better leader," says Denson who leads the Space-based Telemetry and Range Safety (STARS) program. "I rediscovered that I was most passionate about technology."

Not long after the training he accepted the challenge to head STARS, a technical leadership position. STARS will save approximately $40 million over the old, ground-based system, which required high maintenance and relied on archaic, complicated technologies. Denson says one of the keys to leading STARS is staying on task. "I wouldn't have been as focused as I am now without the training," says Denson.

On a larger scale, he attributes the training with providing the big picture. "I had worked at Goddard and Headquarters," says Denson. "Through the training I got a better feeling for 'One NASA' and how all of these things come together."

Orlando Figueroa says that he had his eyes opened - and what he saw wasn't always comforting. Prior to becoming the Mars Exploration Program Director, he was accepted into NASA's Senior Executive Service Candidate Development Program. "It was like taking 10,000 steps above the day to day things to see the bigger picture," says the 25-year NASA veteran.

He found himself deeply surprised by one segment in the SES CDP program that offered a kind of "It's A Wonderful Life" twist on things. "It raised the question: 'What would happen to everyone when I am gone?' A measure of my effectiveness as a leader is how well the group performs without me," says Figueroa. "This might sound crazy, but I had the opportunity to recognize that I am not indispensable. And it was painful. The program was extremely beneficial in expanding my views."

...continuously improving.

Our history is marked by a dazzling array of firsts—each stemming from the combined skills, talents and intellectual capabilities of our workforce. As a premier research and discovery organization, we know that maintaining our proud tradition depends on our ability to attract, retain and develop the best talent America has to offer.

We set ambitious goals for the future, and take initiatives to achieve them. Our integrative programs and business processes effectively respond to critical human capital challenges. We have integrated human capital programs, both within the scope of the President's Management Agenda and within NASA as a whole.

We have changed the way we do business, and have quickly seen results in achieving strategic value for the Agency. In many areas, we have set a standard of excellence for innovation in human capital management. Many agencies benchmark our systems and processes such as our Competency Management System, Workforce Planning tools, Strategic Human Capital Plan, Corporate Recruitment Strategy, our Leadership Model, the Academy of Program and Project Leadership, and a host of training and career development models.

Equally important, we have capitalized on the best that technology has to offer, using web-based approaches wherever possible. Our award winning automated recruitment system, NASA STARS, along with Web sites for student jobs and employment opportunities provide the competitive edge we need in today's employment market.

As the Federal Human Capital Survey 2002 shows, NASA is exceptionally successful in creating a high level of job satisfaction and a strong sense of commitment to our mission. Employees typically find their work intrinsically exciting and rewarding, and cite flexible work/life programs, strong support for family, and a commitment to continuous learning as additional contributors. An amazingly low attrition rate of 3.5 percent further suggests a satisfied workforce.

Building a world-class workforce to achieve NASA's mission requires innovation in human capital management and continuous improvements focused on results and sustainability. The path to effective human capital management has been clearly set by our Administrator. We have successfully met his imperative to "develop and execute an integrated, systematic, Agencywide approach to human capital management that will enable various parts of the Agency to work together as One NASA to perform the work safely and effectively, ensuring that the resources are well managed and wisely used."

With a mission of knowledge and discovery, we expect to face many new challenges in the emerging field of human capital management. Building on our human capital infrastructure of integrated systems, automated business processes and a strategic partnership with senior leadership, we are well positioned to meet those challenges.

At NASA, we know that the best technology is still the human mind. We aim, by continually improving our human capital management practices, to use that technology to the fullest.

Sean O'Keefe

Since coming on board in 2001 as Administrator, Sean O'Keefe has rallied NASA in charting a clear vision and mission: To understand and protect our home planet, to explore the universe and search for life, and to inspire the next generation of explorers.

"Our mandate is to push the envelope in aeronautics and space exploration...to do what has never been done before. NASA scientists, engineers, researchers, and technicians have made remarkable discoveries and advancements that have inspired and touched the lives of all Americans. We are an agency committed to pioneering the future," says O'Keefe.

A world-class science and engineering agency requires a world-class workforce. NASA seeks the "best and brightest" scientists and engineers to accomplish its core work. It also requires a highly competent, skilled staff to support NASA's technical programs and address the Agency's financial, acquisition, human capital and business management challenges.

"Since I became Administrator, it has been my good fortune to meet some of the most innovative and imaginative people our Nation has ever produced," says O'Keefe. "Continuing to attract and sustain a high-performing workforce - and recognizing and rewarding the talents of all of our people - is crucial to NASA's success."


Human Capital Management
It's about People....
supporting
the vision and mission.
leveraging
strategic competencies.
learning & advancing
knowledge.
embracing
accountability.
leading
by example.
It's about People...
forging new frontiers.
NASA

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