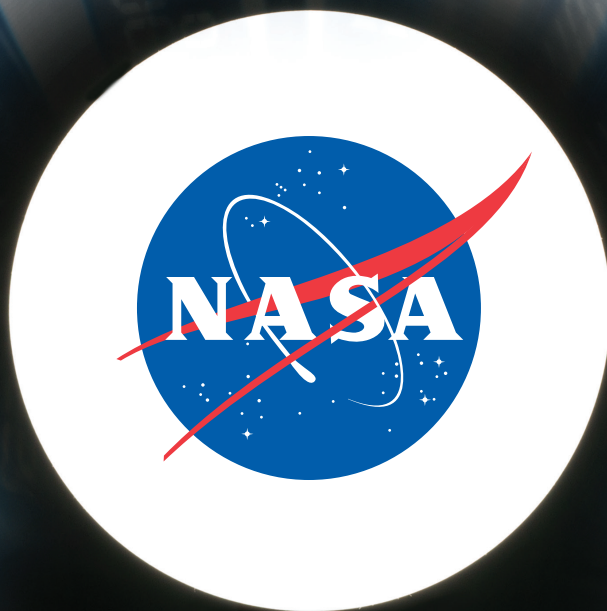




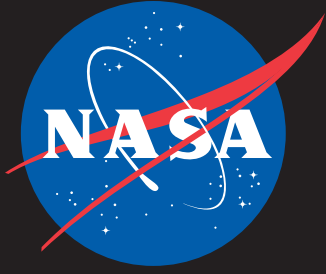
# IT Talk

January - June 2019

Volume 9 • Issues 1-2



## Digital Transformation at NASA



# IT Talk

Jan - Jun 2019 Volume 9 • Issues 1-2

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# Message from the NASA CIO

The Office of the Chief Information Officer (OCIO) continues to look for ways to improve IT services and better safeguard NASA's data. NASA is continually looking for modern, innovative, and collaborative technologies with embedded cybersecurity protections to help us accomplish our important work while balancing costs and benefits. One way to help us do that is through digital transformation. OCIO is co-leading NASA's digital transformation with the Office of the Chief Technologist (OCT). Digital transformation represents rethinking how NASA does business, and in OCIO this is an opportunity to radically change our services and deliver value to customers in other ways. This effort involves change in leadership and continuous learning. In this issue, we'll take a closer look at NASA's digital transformation path and why you should care.

Some of the key areas of focus include the following:

1. Implement O365 across NASA
2. Improve and strengthen the IT workforce strategy
3. Enhance and improve customer satisfaction
4. Share data and secure collaboration with external entities
5. Transition NASA to a more efficient and effective operating model for end-user capabilities
6. Improve NASA's resilience and cybersecurity posture by strengthening the ability to protect NASA's people, systems, and data

I truly appreciate everyone's hard work and dedication over the past year. You are the reason we've achieved success thus far. Keep up the good work!

*~Renee*



**NASA Chief Information Officer's Executive Council F2F**  
6-8 Nov 2018, Armstrong Flight Research Center, Edwards, CA

3rd Row: Kofi Burney, Rob Powell, Henry Yu, Jeff Seaton, Eric Everton, Tom Miglin, Shenandoah Speers, Mike Witt, Danny Harvill, Dana Mellerio  
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Rob Binkley, Keith Bluestein, Sean Gallagher, Roger Clason  
1st Row: Stacy Counts, David Walters, Neil Rodgers, Annette Moore, Barbara Henry, Renee Wynn, Jane Maples, Grace De Leon, Vanessa Stromer, Dinna Cottrell

# Goddard Preparing for the Emerging Artificial Intelligence Revolution

By Michelle Birdsall, Communications Specialist, Goddard Space Flight Center

While not new, the latest advances in artificial intelligence (AI), machine learning, and data science signal a coming revolution that will figure prominently in the digital transformation era. Efforts to develop AI—technologies that allow machines to think and act through sensing, comprehending, acting, and learning—have ebbed and flowed since the field first emerged in the 1950s. Recent increases in the availability, volume, and complexity of data and improved computing power and storage, combined with advanced and mature algorithms, are enabling AI's latest comeback.

To reinvigorate AI efforts, NASA's Goddard Space Flight Center recently held its first major AI workshop in almost 25 years. Goddard brought together more than 300 attendees (both onsite and online) with 50 presenters to share advances, challenges, success stories, and perspectives on a wide range of AI applications and tools. Actively engaged attendees networked, posed questions, and provided feedback during breakout sessions, panels, poster sessions, and a machine learning tutorial.

Goddard Chief Technologist Peter Hughes, sponsor of the event, stated, "I came to Goddard 30 years ago to work on AI, where it has been done in pockets, but now applications are exploding. This workshop is just the start of Goddard's renewed efforts to partner and collaborate on AI projects supported by Data Science advances that will yield profound opportunities and results through interdisciplinary science, engineering, and exploration." He cited the Jet Propulsion Laboratory's AI Pilot Program, with its 25 projects to demonstrate how AI can be transformative, as a leading source for inspiration.

AI enablers and capabilities intersect with several disciplines at Goddard: mathematics, science, engineering, computer science, data science, information technology, and human factors. AI applications, which include big-data analytics, computer vision, robotics, intelligent sensing, assisted decision making, and speech recognition, have broad applications across industries, from space exploration and Earth science to transportation and medicine. Societal benefits discussed include wildfire and hurricane detection, better cancer imaging, and autonomous vehicles.

Workshop organizer and chair Jacqueline Le Moigne, Goddard Senior Fellow and Assistant Chief for Technology, expressed the importance of showing the breadth of AI technologies being pursued. She issued a call to action, stating, "The real revolution of AI is coming, and NASA should embrace these technologies." From MIT's need for partners to test open-source AI programs in 2019 to Amazon's and Microsoft's cloud storage solutions and applications that make big data—the fuel for AI—more accessible to more people, opportunities to get involved abound.

Look to Goddard to lead followups, with current plans to host a follow-on workshop at another center. Whether you identify as an early adopter or fast follower, or are merely curious about AI, Goddard's Office of the Chief Technologist can help you identify and build interdisciplinary partnering opportunities both within and beyond NASA to develop AI technologies that are quickly gaining traction as viable solutions to solving complex problems.



## JPL Selects Randi Levin as New Deputy Chief Information Officer

By Whitney Haggins, IT Communication Strategist, Jet Propulsion Laboratory, California Institute of Technology

After an extensive executive search, Randi Levin was announced in December 2018 as Jet Propulsion Laboratory's (JPL) new Deputy CIO/Deputy Director for Information Technology. She officially joined the OCIO in January. Randi came to JPL with a résumé that reflects her role as an innovative and transformational business and technology executive with proven experience in entertainment, government, domestic, and international operations, along with consulting and other industries. Levin has 35 years of experience; a strong technical background; a reputation as a flexible and highly experienced leader; and a personality that aligns well with the OCIO's people, goals, and initiatives. She recently served as the CIO and vice president of technology services at Forest Lawn Memorial—Parks and Mortuaries, one of the United States' largest privately owned and centrally run cemeteries in the Greater Southern California area. While at Forest Lawn, Levin created a strategic plan for digital transformation and implemented many corporate initiatives. Her strong technical background enabled her to gain experience in all levels of managing IT organizations, including prior roles as CIO and VP at Cast & Crew Entertainment Services and General Manager and Chief Technology Officer (CTO) for the city of Los Angeles.



Vikash Mansinghka, MIT, gives a presentation titled "Probabilistic Programming and Artificial Intelligence" at the NASA Goddard Artificial Intelligence Workshop on November 29, 2018. MIT seeks collaborators and partners for testing in 2019 as it develops open-source programs with potential application to data gathered from current Goddard and NASA projects.

# Supply Chain Risk Management (SCRM)—

## Why It Takes More Than the Procurement Organization To Ensure Uncompromised Products

By David Flowers, NASA OCIO SCRM Analyst, Glenn Research Center

“YOU GOT AN F!” No one likes to get an F as a rating on any assessment, but that’s exactly what happened to NASA in November 2015 and May 2016. In what area, you ask? In the Federal Government Biannual Supply Chain Risk Management assessment. Fortunately, in the four semiannual assessments since then, NASA has improved to a rating of C+. Then, In May 2018, the NASA Inspector General released report IG-18-019. This report is a call to arms for all the stakeholders in the IT and communications technology community, as well as the procurers and users of those products to improve our SCRM practices agencywide.

WHILE NASA HAS IMPROVED ITS SUPPLY CHAIN RISK MANAGEMENT EFFORTS SINCE THE PROCESS WAS FIRST MANDATED IN 2013, WE IDENTIFIED PERVASIVE WEAKNESSES IN THE AGENCY’S INTERNAL CONTROLS AND RISK MANAGEMENT PRACTICES THAT LEAD US TO QUESTION THE SUFFICIENCY OF ITS CURRENT EFFORTS.

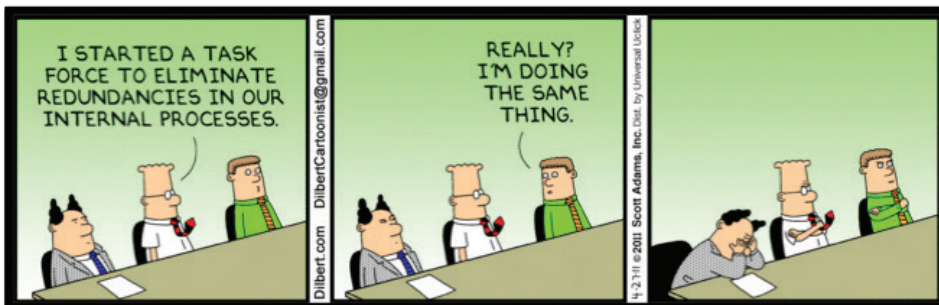
NASA IG Report IG-18-019

SCRM seems to be the latest catchphrase coming out of Washington, DC, as well as seemingly every reputable hardware, software, and firmware manufacturer around the globe. The irony of it is that many people do not know what SCRM is, and the ones who think they do just think it is a problem or issues in the supply chain delivery schedule.

The reality is that IT and communications supply chain risk management can save your project, program, center, or mission, or it can be detrimental to them all with a single incident. SCRM is not the future state or a future goal for NASA; it is the stark reality of the way we need to do business to ensure mission success in all domains of our efforts.

SCRM is the process for managing supply risk by identifying susceptibilities, vulnerabilities, and threats throughout NASA’s supply chain. Additionally, SCRM is the development and enactment of mitigation strategies to combat threats, whether presented by the supplier, the supplied product and its subcomponents, or the supply chain itself. Knowing the risk is not enough to thwart the human, intentional, or accidental threats; you must also know your risk tolerance.

NASA has had a rocky start to meeting the Federally mandated SCRM requirement, but there is a light at the end of the tunnel. The NASA CIO, Renee P. Wynn, and her team have taken an aggressive approach to providing SCRM services to the agency, and you will see changes in the policies and processes soon. The goal is not to grind mission objectives to a halt, but to deliver uncompromised products across the IT and communications spectrum. If everyone does their job and is mindful of SCRM practices, then our networks, data centers, and missions will be protected from unwanted breaches and bad-actor manipulation.



NASA Needs One SCRM Program – Establish Continuity

## Collaborative Editing in Office 365



By Luis Barés, Enterprise Collaboration Services Lead, Kennedy Space Center

Now that NASA has migrated employees to the Office 365 platform, users can collaboratively edit Word documents, PowerPoint presentations, and Excel spreadsheets. Collaborative editing is the ability for multiple users to work in real time and see each other’s edits all within one document, presentation, or spreadsheet. Previously, this capability was only available through NASA’s approved instance of Google Apps for Work and available to those with paid licenses to the Google Suite. Now everyone at NASA can enjoy the benefits of coauthoring within the Office suite of products!

Currently NASA has implemented Outlook, Skype, OneNote, OneDrive, and Office Online (Office apps in the browser). Users can experience the collaborative editing features by visiting the Office 365 portal at <https://portal.office.com> and selecting any of the Office applications from the browser (Word, Excel, or PowerPoint). From within the Office application, users can use the “share” function to extend a coauthoring invitation from the document, spreadsheet, or presentation to other NASA users. This same feature also exists within the locally installed version of these tools, which means that there are many avenues to enable coauthoring within your teams today! Similarly, users can start a coauthoring session by opening their OneDrive (locally installed or in the browser) and following the same sharing steps there.



# Digital Transformation at NASA

*By John Sprague, Acting Associate CIO, Transformation and Data Division, NASA Headquarters*

NASA's vision of digital transformation (DT) sees the agency fully leveraging the evolving digital technologies on a transformational journey to advance agency missions, enhance efficiency, and encourage a culture of innovation. DT at NASA is driven by eight compelling goals:

- Accelerated technical and engineering innovation
- Increased efficiency and effectiveness of business processes
- Efficient, reliable, and safe mission systems and missions
- Real-time, data-driven decision making
- Agile workforce, facilities, and IT infrastructure
- Integrated collaboration and partnerships
- Advancement of exploration, discovery, and science
- Extended aerospace leadership

Digital transformation has been embraced and broadly pursued in the world of IT, including at NASA, because of the rapid advancement and convergence of a broad range of powerful digital technologies, including the following:

- Cloud computing (along with micro services, containers, etc.)
- Automation and robotics
- Big data/data mining/analytics
- Artificial intelligence/machine learning
- Agile software development/DevOps/DevSecOps
- Internet of Things (IoT)/sensors
- Integrated multidisciplinary modeling and simulation
- Augmented reality/virtual reality/visualization
- High-performance computing
- Mobile access
- Collaboration
- Social media

In early December, NASA held another in a series of meetings to draft the Agency's digital transformation strategy. This December DT meeting was held in Washington, DC, at the National Coordination Office for the Interagency Networking and Information Technology Research and Development (NITRD) Program, and it brought together NASA center and mission directorate DT representatives. The meeting was opened by J.F. Barthelemy, of Langley Research Center, and Dr. Bryan Biegel, of Ames Research Center (co-leads for the DT Formulation team), who framed the meeting as a pivot point between DT data gathering and drafting recommendations.

The one-year DT formulation effort was commissioned in March of 2018 by the Agency Program Management Council (APMC) to

# Digital Transformation at JPL: *Advancing the Culture of Innovation*

By Janet Zadeh, Office of Digital Transformation, Jet Propulsion Laboratory, California Institute of Technology

To realize the vision of a digitally connected future, JPL has embarked on a journey of digital transformation (DT). Defined as “thinking differently about evolving our data, work practices, and digital technologies to excite talent, accelerate missions, and encourage a culture of innovation,” JPL joins the rest of the NASA family in embracing the future.

JPL has created the Office of Digital Transformation (ODX), under the leadership of Dr. Mag Powell-Meeks, to provide the guidance needed to achieve these goals. Taking advantage of the matrixed structure of the Lab and the range of expertise that already exists throughout the organization, the ODX focuses on involving everyone at JPL in this journey.

“The ODX aligns, coordinates, enables, and integrates DX projects across the Lab by working with Digital Strategists from each of the four data domains—Engineering, Mission Assurance, Science and Technology, and Mission Support,” says Powell-Meeks. These strategists participate in the DX Working Group, the Enterprise Architecture Board, and Data Domain Teams, all of which work together in support of the JPL DT initiative.

“By including people from all across the Lab, we ensure we are focused on those areas that will make the most significant difference,” explains Powell-Meeks. “It also enables us to understand and positively evolve employee experience.”

There are three elements to JPL's DX Implementation Strategy:

- Design a digital ecosystem to enable agility and insights through the combination of mature data and integrated systems.
- Accelerate business and workforce processes so JPLers can achieve more with less.
- Nurture a culture of digital innovation that enables better employee/partner experiences.

Underlying all DT efforts is an emphasis on the data life cycle. In fact, the initial focus of JPL's digital transformation is data maturity and access. Through a federated, interactive, journey-mapping approach, JPL is identifying practices and transformative technologies to solve specific data challenges.

Actions taken so far include the adoption of a new information access policy, ongoing deployment of tools and processes that assess and open appropriate data, and plans for training JPLers on correct data handling.

“Data is the engine of innovation—it is a prized institutional asset that provides valuable insight for future missions. We're making it work harder by ensuring it is secure, appropriately marked, findable, accessible, interoperable, and reusable across as many systems as possible,” concludes Powell-Meeks.

recommend NASA's path forward for digital transformation. The activity is cosponsored by the Office of Chief Technologist (OCT) and the Office of the Chief Information Officer (OCIO). Dr. Biegel said, “By using DT tools and techniques in this workshop, such as G-Suite to engage the simultaneous creativity of all participants for collaborative brainstorming and rapid document drafting, this meeting demonstrated the power of DT approaches and significantly advanced our progress towards a proposed DT strategy for NASA.”

The data gathered by the DT team prior to this meeting featured NASA projects demonstrating the value of digital transformation, as well as the challenges and opportunities for NASA—identifying where DT is most needed and would have the greatest return on investment. Centers

and organizations were also asked to rate their own “digital maturity” to determine their level of readiness to undertake digital transformation.

Digital transformation data collection, including internal and external DT benchmarking and a literature review, was conducted from May to November 2018, with visits to all NASA centers and directorates, other government agencies, and industry partners and companies on the cutting edge of digital transformation. A diverse team of representatives from across NASA conducted in-person and phone interviews to collect information to help guide NASA's DT formulation. The team found many examples of DT already complete or underway across NASA and as many ideas for future DT opportunities to enhance the way NASA works.

At the December meeting, participants discussed and drafted

- notional high-level findings and recommendations,
- how the agency should select its strategic DT investments and early pilot projects,
- strengths and weaknesses of various models of DT governance,
- how a day in the life would be different in 2025 for key NASA work roles, and
- simple depictions of NASA's DT initiative.

After further refinement, including coordination with NASA senior leaders in DT-related areas and agency stakeholder review, NASA's digital transformation strategy and implementation framework will be proposed to the APMC in 2019.

# NASA Shared Services Center Pioneers Robotics Process Automation for Federal Agencies

*Doug LeMere, Communication Specialist, NASA Shared Services Center*

The NASA Shared Services Center (NSSC) uses digital employees—“bots”—to shift Federal employees and contractors to more challenging high-value work. Since 2006, NSSC has provided mission support services to NASA with the goal of reducing resource expenditure, improving the quality and timeliness of service delivery, and providing a positive customer experience. Times and technology have changed, but these goals remain. The NSSC continuously explores opportunities to innovate and improve the delivery of mission support services.

One such innovation is the introduction into the workforce of digital employees. NSSC's Intelligent Automation Services (IAS) Team is using Robotic Process Automation (RPA) to develop automated work instructions. RPA allows employees to configure bots to capture and interpret existing applications for processing transactions, manipulating data, triggering responses, and communicating with other digital systems. RPA software mimics human interaction with computers, enabling NSSC to automate processes and have digital employees perform them. Bots have supplemented and complemented the work of the NSSC's workforce, freeing up human employees' time for more complex and higher-value tasks.

A digital employee shares several characteristics with human employees. Like human employees, digital employees require user information technology (IT) credentials, licenses, access roles, desktop computers or virtual

machines, supervisors, and work instructions. Bots replicate human interactions and mimic common tasks such as queries, cut/paste, merging, button clicks, etc. They operate effectively in the user/interface layer and are able to automate rules-based work without compromising underlying IT infrastructure.

Bots never become distracted or tire of doing repetitive work, so mass quantities of work performed by bots have greater reliability than work performed by human employees.

Since its inception 12 years ago NSSC has grown to provide over 60 services to NASA, spanning the areas of financial management, procurement, human resources, enterprise services, and agency business services. The implementation of RPA supports NSSC's mission of providing timely, accurate, high-quality, cost-effective, and customer-focused support for selected NASA business and technical services. Because using bots reduces the time humans must spend completing repetitive, mundane tasks, federal employees and contractors can shift their attention to performing more cognitively challenging and creative work.

## Overcoming challenges associated with RPA Implementation

While NSSC recognized the potential efficiencies that RPA offers, there was some initial hesitation to venture into an area where no

other federal agency had gone before. NSSC's journey into RPA was fraught with IT security concerns, but it overcame them. Collaborating with the agency and Chief Information Officer organizations, NSSC addressed challenges with credentials, NASA systems integrations, and internal control procedures.

Additionally, NSSC's management was concerned with how the workforce would react to RPA, and especially with employees' perceptions that they might lose their jobs to bots. Through a series of employee outreach events, NSSC shared its plans for implementing IAS. It created a Web site to explain IAS and RPA and invited employees to be a part of this exciting opportunity. Employees were invited to “think ‘inside the bot’” for a moment and ask themselves, What repetitive tasks bog us down such that we would like a bot to perform them? How can automation allow for greater productivity? How can we increase performance and improve accuracy and customer service?

NSSC successfully socialized the workforce to IAS/RPA. Now, employees are offering ideas for work suitable to bots. Thus far in 2018, employees have submitted, through an online tool, over 300 ideas for process innovations and improvements. Some ideas become candidates for bots, while others result in simple process reform. Innovation and continuous improvement are encouraged at all levels of the NSSC organization, with award opportunities for those individuals who submit the best ideas.



*NSSC's RPA Implementation Team (left-right): Pinar Moore, Pam Wolfe, Michael Dukes, Lisa Monus, and Farrah Fouquet.*



(Bots, continued from page 8)



*What do bots look like?  
Here you see NSSC's RPA bots in action.*

NASA was the first agency in the Federal Government to implement RPA, and today NSSC has three bots in production, running nine processes. NSSC's first bot, named Washington, performs funds distribution work for NSSC.

Washington also performs four processes for procurement, including document imaging, scanning files, and creating folders to establish grant packages. A second bot, named Adams, performs funds distribution tasks for the agency. NSSC's third bot, Pioneer, creates procurement requests for the Office of the Chief Information Officer. A fourth bot, Beacon, is planned to go into production in the first quarter of fiscal year 2019. Opportunities for bot utilization span all lines of business at NSSC.

No NSSC employee has lost a job as a result of successfully implementing RPA. To the contrary, every employee whose previous work is now performed by a bot has been shifted to more challenging work. NSSC intends to employ more RPA bots in the future to better serve its lines of business and to enable employees to dedicate more of their time to higher-value work. The results of IAS at NSSC are encouraging and indicate that RPA implementation can and should expand across agencies. RPA is an affordable, efficient, and effective means to shift federal resources from low-value to high-value work.

See NSSC's video demonstration of bots in action at <https://www.youtube.com/watch?v=x1YxTUbgm4&amp;feature=youtu.be>.

## The “New Norms” of Information Technology

By Jaumarro A. Cuffee, IRD Communications Strategist, Johnson Space Center

NASA continues to embrace cloud technology and implement the Strategy to Improve Network Security. With changes in the way we access NASA resources and the technology (software and hardware) we use when accessing NASA resources, a curious question keeps coming up: “What’s the new norm?”

Information technology users want to know what resources are accessible, from which types of devices, and what actions are necessary to secure and maintain access to the information and resources they need to support NASA missions, programs, projects, and day-to-day activities.

In short, the “new norm” is persistent change versus paradigm shift.

The introduction of computers in the workplace was a paradigm shift. The new norm became using technology instead of manual tools, but the new norm of using computers and other information technology is not a static norm.

For IT, a new norm is fleeting. Digital transformation changes how technology is used to address ever-changing needs and threats. Ever-changing needs and threats mean ever-changing technology.

The new norm is that IT is a part of our lives at work and at home. The new norm is that IT (at work and at home) will continue to be

a target for criminals, and we will need to be ever vigilant to avoid work and life interruptions. The new norm is that software is more often a subscription service than a static shrink-wrapped package with disk and activation key. The new norm is that keeping up with IT will continue to be more persistent change than paradigm shift.

For IT users looking for a new norm, stay informed on IT policies that affect IT access and use. Office memos are no longer pinned to a bulletin board. The new norm is to deliver them to your desktop via e-mail. Never stop learning what your systems and software can do to support your activity in missions, programs, projects, and office productivity. User guides and how-to manuals are no longer stacked on a shelf. The new norm is to post them online and in different formats (.pdf, audio, video). And regarding the oldest resource of all—office-mates—the new norm is not limited to “phone a friend” but allows us to reach out to office-mates in the next cubicle, another building, or a different NASA center using e-mail and Skype. In the larger context, though, the new norms are the same old things—stay informed, keep learning, and help each other.

The more things change, the more they stay the same—even with the new norms of IT. Stay informed. Keep learning. Help each other. Make this your norm.



# Goal 4: Value—Maximize Business Value by Optimizing IT

By Jonathan Walsh, IT Strategic Planner, and Meredith Isaacs, Communications Specialist, NASA Headquarters

To sustainably support the achievement of NASA's extraordinary science and discovery objectives, as well as its complex infrastructure and ongoing digital transformation, the agency's information technology (IT) must use intentional operating models and acquisition strategies while reducing duplicative services. To ensure the business health of the agency's IT, NASA identified Value as an IT Strategic Goal for Fiscal Years (FY) 2018-2021.

The successful planning and delivery of IT products and services to fulfill customer needs requires insight into NASA's IT investments, data-driven decision making, portfolio management maturity, and strong program and project performance. NASA has begun transforming its IT operating

model to manage this complexity by streamlining its IT governance process and engaging senior leadership representatives in the IT Council, performing agencywide IT investment portfolio reviews, and developing roadmaps to guide implementation.

By the end of FY 2021, NASA has committed to empowering data-driven strategic decisions and intentional IT operating model choices, increasing the effectiveness of investment analysis and prioritization, and strengthening IT strategy execution through disciplined program and project management. We will perform assessments to identify IT capability gaps and closure strategies, establish an IT portfolio management capability, and enable transparent and effective

execution of the IT portfolio. These efforts will be supplemented by maturing acquisition, software life cycle management, and vendor management capabilities.

By embracing value through the strategic management of IT, we will strengthen our support for NASA's incredible achievements in the years ahead.

To view NASA's IT Strategic Plan for Fiscal Years 2018-2021, visit <https://www.nasa.gov/oci/itsp>.

Questions about NASA's IT Strategic Plan? E-mail [agency-itsp@mail.nasa.gov](mailto:agency-itsp@mail.nasa.gov).

## Space Flight Awareness Honoree

By Meredith Isaacs, Communications Specialist, NASA Headquarters

For his work with mission voice communications services, Goddard Space Flight Center's (GSFC) Jean-Guy Dubois will receive the Space Flight Awareness Honoree Award. Dubois serves as the Service Element Manager (SEM) for Agency Mission Voice Services and led the Mission Next Generation Voice (MNGV) Initiative.

"Jean-Guy has proven a key leader within NASA Communications (NASCOM), specifically in regard to the Mission Voice Network.... Since June of 2016, he has been instrumental in developing hardware, software, materials, process, and operational improvements that increase reliability, efficiency, and performance on the Mission Voice Network.... His technical expertise and leadership skills have been critical to progress made in maintaining and enhancing the Agency's Mission Critical Voice infrastructure," said Curt Suprock in his nomination of Dubois.

The Space Flight Awareness Program,

part of the Human Exploration and Operations Mission Directorate (HEO), was established in 1963 to recognize those who are dedicated to astronaut safety and mission success. The Honor Award commends employees who have demonstrated dedication to quality work and flight safety.



Congratulations to Dubois for receiving the Honoree Award and thank you for all of your hard work to support mission communications with collaborative and thoughtful solutions!





## European Union Institution CIO Forum

March 26, 2019 - Washington, D.C.

## NASA Receives a B+ on FITARA

By Treasure Arthur, ITBMD Business Consultant, NASA Headquarters

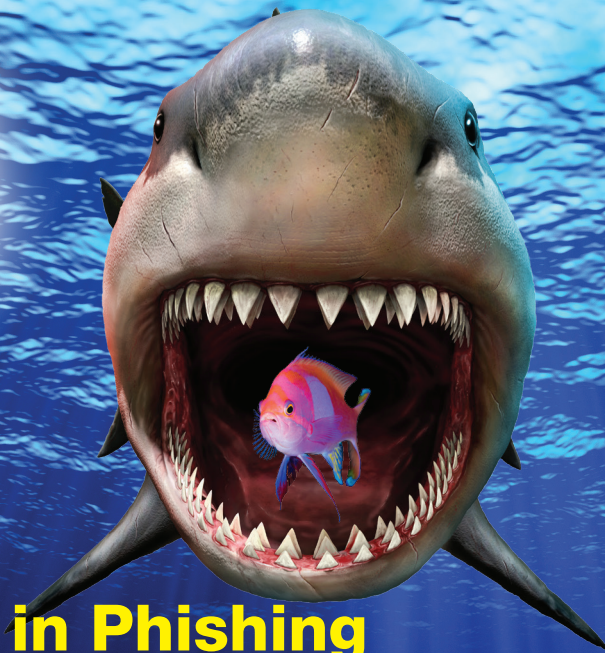
On December 11, 2018, the House Oversight and Government Reform (OGR) Committee released the seventh version of its Biannual IT scorecard. NASA received a B+, a significant improvement from the C+ score from May 2018. The OGR Biannual IT scorecard grades 24 government agencies based on the implementation of the 1) Federal Information Technology Acquisition provisions (FITARA), 2) Making Electronic Government Accountable By Yielding Tangible Efficiencies Act of 2016 (MEGABYTE), and 3) Modernizing Government Technology (MGT) Act.

Since the initial release of this scorecard in Nov. 2015, NASA OCIO has proactively engaged with GAO and other key stakeholders to report comprehensive and accurate data while maintaining a commitment to executing the NASA mission, rather than 'gaming the score.' Collectively, through our efforts, NASA continues to improve in several aspects, with notable progress in incremental development of IT projects. Incremental development of IT projects is an effective management practice that delivers capabilities to users more rapidly and increases the likelihood that projects achieve cost, schedule and performance goals. Thanks to the agency's work and

transparency of the Major IT investment owners, NASA reported a new data set of software development projects and found that 75% of these software projects followed incremental development practices. Their work in reporting this information significantly contributed to the increase in our IT scorecard.

Many thanks to the Flight Operations Directorate (FOD) at Johnson Space Center, the Payload Operations Integration Center (POIC) at Marshall Space Flight Center, the High-End Computing Capability (HECC) team at Ames Research Center, the Agency Applications Office, and others across the Agency who supported these efforts.





## Help Reel in Phishing

By Meredith Isaacs, Communications Specialist, NASA Headquarters

Many are now familiar with phishing, having seen and heard warnings in their offices. Phishing is when bad actors attempt to gain access to your personal, financial, or sensitive information through fraudulent e-mails and duplicitous links and attachments.

These messages are often designed to mimic retailers, companies, banks, and even your acquaintances or colleagues. Sometimes they include incentives, assurances that seem too good to be true, and promises of rewards. Others may employ scare tactics, pose as fraud prevention, and threaten inconveniences if you do not comply with instructions. You may see statements like “confirm identity,” “verify information,” or “call to get a refund.” In order to gain access to your information, phishing e-mails will instruct you to open an attachment, click on a link, or reply/call with your information.

While these e-mails may look real, they hide a number of tricks. Company logos and e-mail design can be stolen or mimicked, and these phishing messages may use similar e-mail addresses or Web sites. Rewards and threats over inaction are designed to make you respond. Through these methods, the bad actors gain pieces of your personal or work information, building to an attack against you personally or against your organization.

To help protect yourself and your organization, think critically about the e-mail you receive. Were you expecting a file from your coworker? Do you remember making an order, or did a tracking link show up unexpectedly? Do the e-mail addresses, language, and logos look off to you? Many phishing e-mails contain clues you can recognize to avoid the lure.

- Check for misspellings in the e-mail, links, or body.
- Hover over links (without clicking) and the full address will pop up. If the two do not match, or if the real Web address in the pop-up is suspicious, do not click!
- Think twice about e-mail attachments and open them only if they are expected.
- Verify suspicious e-mails from those you know.
- Use strong passwords, like pass-phrases, and keep software up to date.
- Always complete NASA's annual cybersecurity training and any others assigned to you by their due date. They contain important reminders and information about how you can keep yourself and the agency safe.

If you think you have received a phishing message, report it to NASA's Security Operations Center (SOC), available 24x7, at [soc@nasa.gov](mailto:soc@nasa.gov). Remember, cybersecurity begins and ends with you. Don't be the meal – catch the signs before they catch you!

## JPL Parking App receives Digital Edge 50 award from IDG

Whitney Haggins, IT Communication Strategist, Jet Propulsion Laboratory, California Institute of Technology

Jet Propulsion Laboratory (JPL) has been named an honoree of a 2019 Digital Edge 50 Award from IDG. This prestigious honor is bestowed upon a select group of organizations that have executed digital transformation initiatives with significant, measurable business impact.

JPL's winning entry is the JPL Park app to help combat the decades-long problem of driving around searching for parking in a landlocked environment.

To find a solution, JPL hosted an internal parking app hackathon which ran for a month with a final competition where all JPLers could participate in person or via video conference. It yielded two winners whose ideas, along with features from the other contestants, were combined to create the JPL Park on iOS and Android. JPL Park uses real-time data to show commuters how many spots are open in specific parking areas. Ground sensors were added, along with large digital displays at the entrances, voice information for hands-free notification while driving, and analytics designed to help both the employees in realtime and JPL management using the data for planning future events.

The system uses Geofencing technology that triggers a voice update on available parking spots once a vehicle is within range of JPL (the range is configurable by the user).

JPL Park also includes a “future parking” feature, which predicts parking space availability for every hour of every workday at the Laboratory campus, based on historical parking data. The historical parking data provides information to employees to make better commuting decisions as well as to JPL decision makers for how to structure JPL's remote worker program.

JPL accepted its award at the AGENDA19 Conference held March 18-20, 2019 in Ponte Vedra Beach, Florida.

# NASA CIO Named to Federal 100

By Meredith Isaacs, Communications Specialist, NASA Headquarters

FCW has named NASA CIO Renee Wynn to the 2019 Federal 100 list, now in its 30th year. A judging panel selects the winners from hundreds of nominations to recognize the best of Federal IT each year. Recipients are honored at a gala in Washington, DC, in March.

Wynn is not the first from NASA to be recognized by the Federal 100. Since 2010, 16 of NASA's IT leaders, program executives and managers, computer scientists, and cybersecurity experts (among others) have been recognized by the Federal 100 for their contributions to enterprise and Web services, cybersecurity, and innovative IT solutions.

These winners include 2011's computer scientist Tim Baldrige for his work with security, identity, and PIV usage through the Identity, Credential, and Access Management (ICAM) Federal working group, along with 2017's

Kevin Murphy—Program Executive for Earth Science Data Systems. Murphy worked to turn satellite data into visualizations used by 1.5 million scientists and the public and supported the transition to commercial cloud services.

In 2018, Jim Walker was lauded for his work on Robotics as a Service to automate time-consuming tasks through process robotics. Magalene Powell-Meeks (2014) of the Jet Propulsion Laboratory (JPL) applied IT project plans to mission events, allowing IT to better meet mission requirements.

2013's Sasi Pillay—then the Chief Technology Officer for IT—developed a mobile strategy with cybersecurity and service benefits. Michael Powers (2018) led NASA's HTTPS Web site conversion for the highest compliance in the Federal Government while also decommissioning unused sites. NASA's contributions to Federal IT include these stories and more.

Congratulations to Wynn and all of NASA's past winners on their Federal 100 recognition. Here's to the next ten years of accomplishments within Federal IT!

## Ten Years of NASA on the Federal 100

<b>2019</b>	Renee P. Wynn
<b>2018</b>	Mamta Patel Nagaraja Michael Powers James "Jim" Walker
<b>2017</b>	Luis Barés Kevin Murphy Tomas Soderstrom
<b>2016</b>	Joanne Woytek
<b>2014</b>	Magalene Powell-Meeks
<b>2013</b>	Tony Facca Sasi K. Pillay Tomas Soderstrom
<b>2012</b>	Deborah Diaz
<b>2011</b>	Tim Baldrige Linda Cureton
<b>2010</b>	Emma Antunes

## Did You Know?

### ***Self-Service Features Available via the Enterprise Service Desk***

The Enterprise Service Desk (ESD) website ([esd.nasa.gov](http://esd.nasa.gov)) offers several self-service features than can be accessed from any PIV-enabled device. Without contacting ESD, you can use the self-service features to:

- Find links to reset your passwords
- Search more than 1,900 knowledge articles to help resolve issues
- Create tickets and requests and check ticket status for yourself or on behalf of others
- Approve requests (if you are an approver)
- Take surveys when your tickets and requests are closed
- View assets that are assigned to you
- Leave feedback to help improve service

Next time you need to contact ESD, instead of calling, visit our website.

# SACIO Forum Photos



NASA CIO, Renee Wynn and Senior Advisor for Cybersecurity, Robert Powell participated in meetings with the International Space Agency CIO (SACIO) forum, held February 4-7, 2019 in Paris, France. Space Agencies participating in this forum included NASA, CNES (France), ESA (Italy), DLR (Germany), JAXA (Japan), and CSA (Canada).

IT Talk

National Aeronautics and Space Administration

**Office of the Chief Information Officer**

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