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The Role of a Chief Innovation Officer in the Federal Government

Vanessa Peña

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POLICY INSTITUTE
1701 Pennsylvania Ave., NW, Suite 500
Washington, DC 20006-5805



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For More Information

Vanessa Peña, Project Leader
vpena@ida.org, 202-419-5496

Mark S. Taylor, Acting Director, Science and Technology Policy Institute
mtaylor@ida.org, 202-419-5491

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Preface

In March 2016, the Office of Science and Technology Policy (OSTP) requested that the IDA Science and Technology Policy Institute (STPI) describe a set of approaches to improve innovation in and the effectiveness of the Federal Government. The innovative approaches identified create new processes, products, services, and methods of delivery; have been implemented or are in the initial stages of implementation; and have led to improvements in outcomes, efficiency, effectiveness, or quality related to Federal Government activities.

The objective of this project was to describe the lessons learned from the implementation of innovative approaches and identify opportunities for how to support the scaling up of these approaches throughout the Federal Government. *The Role of a Chief Innovation Officer in the Federal Government* report describes the varied roles of the CINO, the rationale for their establishment, ways to create such a position in the Federal Government, including identifying and sourcing potential candidates, and how to facilitate their success.

Prior to its publication online in 2019, this report was an internal Federal resource for Federal Government employees. It was published online to help benefit Federal and non-Federal communities alike. Because this report was written 3 years prior to its 2019 online publication, some of the URLs referenced may no longer be valid.

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The Role of a Chief Innovation Officer in the Federal Government

[Chief Innovation Officers] look across the board and figure out how to do things better, faster, and tie those activities into the overall management structure.

—Bryan Sivak, former Chief Technology Officer,
Department of Health and Human Services¹

A. Overview

Whether you call them information officers, technology officers, innovation officers, or some other title, their primary job is the same: making sure an organization runs with a focus on innovative approaches to delivering its products and services. This report considers differences in how the position of principal innovation officer, referred to here as Chief Innovation Officer (CINO), is defined in different sectors as well as within the Federal Government. The information in this report is largely derived from academic journals, news reports, and interviews with former and current CINOs in the Federal Government. This report is intended to guide Federal Government employees as they consider how to institutionalize the roles and responsibilities for innovation within their agencies. In addition, appendices provide profiles of four CINOs ([Appendix A](#)) in government, describe supporting policies ([Appendix B](#)), and list additional resources and reading materials that may be helpful as agencies consider the CINOs' roles, development, and impact ([Appendix C](#)).

B. Introduction

Whether confronting an emerging, novel challenge or making a decades-old process more efficient, leaders of Federal agencies may benefit from designating a CINO. A CINO works to harness, foster, execute, and manage innovative ideas so that they can be effectively executed to create impact and value for the organization. CINOs, common in the private sector, have more recently been established at several Federal Government agencies, including the Department of Health and Human Services (HHS), the Department of Transportation (DOT), the U.S. Agency for International Development (USAID), and the Department of Energy (DOE). Many government agencies at the state and local levels have also recently created CINO positions.

¹ J. Stinson, "Chief Innovation Officers: Do They Deliver?" *Stateline*, February 6, 2015, <http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/2/06/chief-innovation-officers-do-they-deliver>.

The role of a CINO is inherently flexible with sometimes purposefully ambiguous boundaries. To use a football metaphor, CINOs can be a bit like a “free safety” position, with their portfolios defined around an agency’s priority needs. Generally, CINOs can:

- Connect people and break down silos to tap into employee ideas in innovative ways;
- Reframe problems in order to change thinking patterns;
- Celebrate and encourage employee engagement in innovative work within an agency;
- Lead agency-wide initiatives to change core underlying processes, improve performance, and increase efficiency; and
- “De-risk” innovation, guiding employees through the transition between old and new processes.

The primary role of a CINO is *not* to innovate, but to provide recognition and support (e.g., time, funding, training, and management support) for Federal employees to identify and implement innovative ideas. Despite their working in Federal agencies with different operating contexts, government CINOs have similar understandings of their role.

- Bryan Sivak, former Chief Technology Officer (CTO) at HHS: “What a CINO can do is create the right conditions to cultivate innovation. This begins by creating a space for multidisciplinary teams to interact.”²
- Chris Gerdes, former CINO at DOT: “It’s not about me. I’m not the Chief Innovator, I’m the ‘Chief Facilitator of Innovation.’ I help other people, and celebrate how awesome their work is.”³

1. Why

Appointing a CINO lends visibility and authority to the role of innovation within an agency. In addition to demonstrating commitment to innovation, appointing a CINO can signal to employees that new approaches and changes to core agency processes are welcome. One of the biggest impacts of hiring a CINO is that career employees can become more empowered to take initiative. A 2012 survey conducted by the professional services company Accenture on how companies support innovative ideas found that more than a quarter of respondents had previously avoided pursuing an innovative idea due to a fear of a negative impact.⁴ CINOs play a role in addressing

² B. Sivak, in-person interview, January 29, 2015.

³ C. Gerdes, phone interview, July 1, 2016.

⁴ Accenture surveyed 600 corporate employees, 200 corporate business decision makers and 200 self-employed individuals, *Corporate Innovation Is Within Reach: Nurturing and Enabling an Entrepreneurial Culture*, Accenture, <http://www.fintech-ecosystem.com/assets/study-corp-innovat-n-entrepreneur-l-culture---accenture-fall-2015.pdf>.

these sentiments by encouraging risk-taking and rewarding employee initiatives that contribute towards a culture of innovation. “People often feel that they are in a box where the lid is closing. It is hard to execute on ideas in a hierarchical system full of red tape,” said Sivak.⁵ CINO’s can facilitate the development and execution of innovative ideas, finding ways and providing management support to break through bureaucracies.

Appointing a CINO can yield high-value benefits for the agency and amplify senior leadership’s capacity for realizing an agency’s mission. A CINO’s responsibility is to nurture the innovation ecosystem within the agency. CINO’s are force multipliers. Sivak remarked, “Innovation very rarely comes from one person; it usually comes from a number of people with diverse backgrounds who come together and collaborate.”⁶ In this way, CINO’s are positioned to tap into the collective insights across an agency and disrupt stubborn institutional barriers like information silos, closed process systems, and resistance to change.

2. How

Although there is no single “playbook” for defining a CINO’s role, some commonalities exist across agencies that are developing CINO positions:

- Providing a clear understanding of the CINO’s mission, role, and authority within an agency: For CINO’s, or any leadership position tasked with overseeing innovation, the position must be imbued with clear authority and direction in order to fully realize its potential impact. Providing this authority may include agency leadership balancing explicit and visible commitment with a degree of hands-off management and implicit trust.
- Attracting the most qualified candidates: CINO’s may be sourced from inside or outside the Federal Government, but in most cases, agencies have hired CINO’s from outside government on a short-term basis (2 or 3 years). In other cases, the CINO role was assigned to a career civil servant or program manager with insights or experience working within the agency.
- Promoting the CINO’s role by establishing a supporting innovation “home” in key functional areas, such as information technology, human resources, legal, or acquisition—Agencies can designate the CINO role within various CxO arrangements or existing leadership positions to best suit the agency’s organizational structures, priorities, and mission.

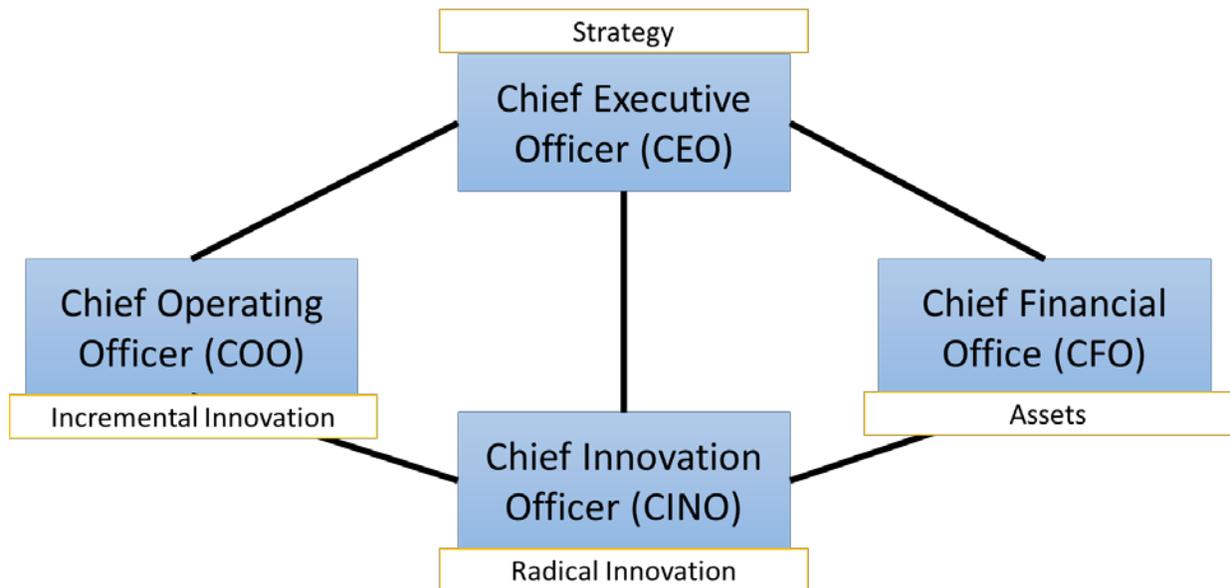
⁵ B. Sivak, in-person interview, January 29, 2015.

⁶ Ibid.

C. Background

1. History of the CINO Role

The role of CINOs was first coined and described in 1998 by Larry Miller and William L. Morris.⁷ They described the CINO as a Chief, or “C-level,” position in industrial corporations responsible for radical innovations in research and development (R&D). In this setting, a CINO supports the functions of the Chief Executive Officer, who manages both radical and incremental innovations; the latter facilitated by the Chief Operating Officer (Figure 1).⁸



Source: Adapted from W. L. Miller, “New Fourth Generation of Innovation Management Theory & Practice: Part 2,” *Journal of Creating Value* 2 (1) 124–149, <http://journals.sagepub.com/doi/pdf/10.1177/2394964315627259>.

Figure 1. Roles of CxOs in Innovation

Since the early 2000s, it has become standard practice in the corporate world for a CINO to lead initiatives broader than R&D.⁹ In a 2012 survey conducted by Accenture of more than 500 large organizations in the United States, the United Kingdom, and France, 60% of organizations

⁷ W. Miller and L. Morris, *Fourth Generation R&D: Managing Knowledge, Technology, and Innovation*, Wiley, 1998.

⁸ W. L. Miller, “New Fourth Generation of Innovation Management Theory & Practice: Part 2,” *Journal of Creating Value* 2 (1) 124–149, <http://journals.sagepub.com/doi/pdf/10.1177/2394964315627259>.

⁹ J. King, “The Rise of the Innovation Officer: How Has the CINO Role Increased in Popularity in Recent Years?” *Innovation Channel*, Innovation Enterprise, 2017, <https://channels.theinnovationenterprise.com/articles/16-the-rise-of-the-chief-innovation-officer>.

responded that they employed a CINO or similar position, an increase over the 54% reporting so in 2009.¹⁰

In addition, CINOs have increasingly been appointed in state and local governments.¹¹ CINO positions in these settings were established to tackle a range of challenges, from fixing potholes to alleviating homelessness and violent crime, to bolstering economic development. Multiple states, including Colorado and Massachusetts, have CINOs, as do more than two dozen cities, including Austin in Texas and Kansas City in Missouri.¹²

There are similarities between CINO roles in the private and public sectors. Corporate CINOs typically identify and pursue new markets, new services, and new ways of working. Public sector CINOs similarly identify and pursue new processes for problem-solving, new service delivery mechanisms, and new ways of improving the services provided to U.S. citizens. In both private and public sectors, CINOs allow for the institutionalization of innovation to occur smoothly, using their expertise to effectively communicate and guide the development of ideas and create pathways for their sustainable execution.

2. Distinctions among CxO Roles

It is common for Chief Information Officers (CIOs) to act as CINOs.¹³ A 2014 survey of state CIOs found that two-thirds of respondents perceived sparking innovation in government operations as a critical part of their role.¹⁴ Still, which officer takes on the role of CINO remains fluid. If technology integration and deployment are top priorities, a Chief Technology Officer (CTO) may be a suitable “home” for an agency’s innovation portfolio. In other instances, agencies may designate their CIO or other senior managers with enterprise-wide experience and insights into agency-wide processes as the lead for innovative activities (see Resource Box 1).

¹⁰ Large organizations are defined as organizations with revenues greater than \$100 million, see W. Koetzier and A. Alon, *Why “Low Risk” Innovation Is Costly, Overcoming the Perils of Renovation and Invention*, Accenture, 2013, <http://www.innovacion.cl/wp-content/uploads/2013/05/Accenture-Why-Low-Risk-Innovation-Costly.pdf>.

¹¹ J. Mulholland and N. Knell, “Chief Innovation Officers in State and Local Government (Interactive Map),” *Government Technology*, March 28, 2014, <http://www.govtech.com/local/Whos-Making-Innovation-Official.html>.

¹² J. Stinson, “Chief Innovation Officers: Do They Deliver?”

¹³ Ibid.

¹⁴ National Association of State Chief Information Officers (NASCIO), TechAmerica, and Grant Thornton, *Charting the Course: Leading Collaboration During Uncertain Times*, 2014 State CIO Survey, September 2014, http://www.nascio.org/Portals/0/Publications/Documents/2014_State_CIO_Survey_FINAL.pdf.

Resource Box 1. The Role of the CxO

Chief Technology Officer (CTO), Chief Information Officer (CIO), and now Chief Innovation Officer (CINO): the alphabet soup of abbreviations can create confusion. Because the CxO position is relatively new, the nomenclature is not fully standardized and remains fluid. Still, some distinctions among these roles can be described as follows:

- A COO is an individual tasked with managing internal business operations like human resources and system procurement
- A CIO is the individual tasked with oversight of acquisition and operation of information technology systems supporting agency functions and mission.
- A CTO is the individual—preferably with a technologist background—who oversees deployment of technologies and sourcing of new technological solutions to address the organization’s mission.
- A CINO is the individual specifically responsible for driving and directing innovation efforts within an organization. For example, an agency may wish to hire or designate a CINO to lead a reorganization, to oversee the re-engineering of business processes, to develop new policies, or to strengthen engagement with stakeholders and the public. A broad vision for this position opens new possibilities for organizing and leading change.

While the CINO role may seem an ambiguous one, Jennifer Pahlka, founder of Code for America, cautions that the CINO’s role should not be restricted to modernizing digital tools and services, but rather focus on leading innovation activities more holistically.

Ann Mei Chang, CINO and Executive Director of the U.S. Global Development Lab at the U.S. Agency for International Development (USAID) says: “There are cases where organizations have both [the CTO and the CINO] filled by the same person because there is some overlap in skillset.... Innovation often gets conflated with technology, which is an issue because it implies that innovation requires technology.” “Innovation is equally, if not more, important outside of the realm of information technology,” emphasizes Matthew Dunne, former Chief Operations and Strategic Innovations Officer at the Department of Energy’s Office of Energy and Efficiency and Renewable Energy. Chang further explains, “Innovation is about achieving better results by changing the way we do business, being more agile, being more data driven, and being more open to new ideas. The tech industry has been a leader of innovation, and technology is only one of many tools that can drive innovation.”

Sources: J. Pahlka, “The CIO Problem, Part 2: Innovation,” *Code for America*, May 31, 2016; A. M. Chang, in-person interview, July 7, 2016.

D. Considerations for Use

Federal agencies may wish to consider deploying a CINO when there is a need to do the following:

- champion organizational innovation within the agency;
- improve the organization’s innovative capability;
- actively facilitate and lead innovation implementation;
- influence agency culture to create an environment open to innovation;
- recognize the structural and personal barriers to innovation; or
- explain and assist colleagues in overcoming these barriers.

However, the CINO role is a relatively new concept. The designation of a CINO role is not a requisite for encouraging and implementing innovative activities. The creation of the role could also have unintended consequences, such as adding another layer of bureaucracy to an organization's structure. Nonetheless, the current record of accomplishment for Federal CINO demonstrates that the role can have a positive impact on an agency by fostering a culture of innovation across the agency; supporting agency processes, products, and services; and meeting emerging needs. Refer to [Appendix A](#) for profiles that illustrate experiences of former and current Federal CINO.

Some alternatives for agencies to establishing a formal CINO position could include implementing focused initiatives to foster culture change and institutionalizing mechanisms that instill a shared purpose around innovation. These initiatives could include establishing an innovation strategy to help employees align around a unified purpose and building capacity for innovative activities via forums or the creation of physical spaces that foster open dialogue. Certainly, these activities could also be done in conjunction with developing a CINO position to support an agency's role as a catalyst for change.

E. Implementation Guidelines

When establishing a CINO position, Federal Government agencies may wish to consider various ways to define the position's role and methods to identify and source candidates.

1. Ways to Define the CINO Role

CINOs are not cookie-cutter positions. They can play a combination of multiple roles within their agencies, including that of teacher, manager, advocate, and evaluator.

a. Teacher

The teacher role for a CINO includes weaving innovation into an organization's cultural fabric. CINOs provide individuals in their organization the skillsets necessary to foster and manage innovation on a small scale.

Example: Training Staff on Innovation at DIA

The Defense Intelligence Agency (DIA) Office of Innovation has few permanent staff outside of the CINO. Most of the staff are on a one-year rotation from other directorates within the agency. Nicknamed "Sherpas," these detailees shepherd innovation projects from their native directorate under the tutelage of the CINO while cross pollinating ideas from other parts of the organization. As a "train the trainer" model, once the rotation ends, the staff bring these new entrepreneurial skills to their home directorate.

b. Manager

CINOs must oversee and support the execution of creative initiatives, which usually involves supervising the steps taken as an idea is implemented as well as providing resources to ensure that the innovation is successful. CINOS may facilitate funding and provide advice to promising innovators. This advice often includes proven techniques that will help innovators implement their ideas.

c. Advocate

CINOs can help bolster innovation by acting as a vocal proponent for creative ideas and innovators who might otherwise become discouraged by negative reaction from superiors. CINOs are in a position to support those who wish to implement changes in the organization. As Code for America founder Jennifer Pahlka noted, “CINOs who see themselves as coaches, obstacle removers, and air cover for career bureaucrats to innovate on their own terms can have significant success, but often need to ensure the credit goes to the departments, not those formally charged with innovation.”¹⁵

Example: Advocating for Innovation at HHS

[Bryan Sivak](#), formerly CTO at HHS, encouraged creative individuals in the department by sponsoring their endeavors. By doing so, he helped shield creative individuals from unwarranted opposition from leadership. Similarly, he often approached other parts of the department to seek options for supporting initial seed funding for proposed innovative ideas. If the initial project yielded promising results, he then used this evidence as a basis for further funding to scale up and diffuse the approach.

As advocates, CINOs also serve as effective communicators of the potential impacts of innovative ideas across the organization. Through effective communication, they can garner support from an agency’s leadership so that a promising idea is given an opportunity to be tested to prove its value to the organization.

¹⁵ J. Pahlka, “The CIO Problem, Part 2: Innovation,” Code for America, May 31, 2016, <https://medium.com/code-for-america/the-cio-problem-part-2-innovation-af24ebc038e5#.zighmgj0d>.

Example: Supporting Ideas at the U.S. Coast Guard

Tyson Weinert, a former Innovation Program Manager at the U.S. Coast Guard and now a Senior Program Director at LUMA Institute, worked hard to ensure that employees who have innovative ideas are connected to the organization's strategic needs. Weinert led a complete overhaul of the organization's dated program model and worked with the Innovation Council to transform the [Innovation Program](#) into a modern and relevant program design based on human-centered design principles and crowd-sourcing technologies. The newly "reimagined" program solved organizational challenges while recognizing talented innovators through the program's awards component. Under the new program design, [innovators](#) are invited to headquarters to take part in human-centered design sessions that can advance their ideas and are presented with an award by the Coast Guard Commandant during the same trip. In 2013, ten individuals received awards and honorable mentions on behalf of their respective teams who collaborated on these award-winning innovations.

In one example, Weinert recognized the potential of a promising, yet underdeveloped idea to build a database that easily tracks incident command personnel in a fraction of the time compared with previous methods. The idea had significant potential to better inform decision-makers and responders at all levels, but was nearly passed over by the awards committee during the initial review. Weinert advocated that the innovators of this idea receive an honorable mention to encourage them to continue their work and develop prototypes through an iterative approach to problem solving. The innovators returned to work where the word started spreading as a direct result of the newly formed insights from the headquarters stakeholder engagement meetings. Later, a Coast Guard office sponsored the project for further development. Beta testing launched in January 2015, and the database is now touted as a "next-generation" idea that closes the gap between division needs and priorities.

d. Evaluator

CINOs are visionaries who help evaluate new ideas and determine their feasibility and potential impact. In the face of limited resources, CINOs can serve as gatekeepers to ensure that the most feasible or high impact ideas are selected and brought to the implementation stage of the innovation process.

Example: Value-Based Evaluation of Ideas at the VA

[Patrick Littlefield, Director for the Department of Veterans Affairs \(VA\) Center for Innovation](#), developed a blended, value-based evaluation process in which ideas are rated based on the perceived value of their impacts in terms of the following criteria: clinical value, customer value, operational value, direct and financial value, and societal value. The weightings across these criteria are specific to each individual proposed idea and their contexts. The process to evaluate ideas involves end-users, such as staff from the VA's operating centers, and others who would be involved in implementing the ideas.

Successful innovation leaders are committed to demonstrating the value proposition of new innovations, but it can be difficult to do so when the inefficiency (or inefficacy) of the status quo was not being measured. Successful leaders do not prematurely settle on identifying success

metrics; rather they begin with flexibility in their role and take the needed time (often a year or longer) to define them.¹⁶

e. Additional Key Roles

The following additional key roles and responsibilities identified from studying corporate CINOs could be considered when defining the role of Federal CINOs:¹⁷

- Supporting best practices and establishing methods to facilitate creative thinking by identifying novel ideas, encouraging transparency, sharing information, and learning from innovative activities.
- Helping people generate ideas by integrating new platforms and mechanisms that allow employees to share their ideas.
- Identifying new opportunities by understanding gaps and trends and identifying opportunities for new technologies, products, and services to meet needs or improve status quo.

f. Resources for Agency Development of the CINO Role

Former and current CINOs developed the resources below to help agencies shape the CINO role (Resource Box 2 and Resource Box 3).

¹⁶ T. Wedell-Wedellsborg, "What It Really Means To Be A Chief Innovation Officer," *Harvard Business Review*, December 5, 2014, <https://hbr.org/2014/12/what-it-really-means-to-be-a-chief-innovation-officer>.

¹⁷ A. Di Fiore, "A Chief Innovation Officer's Actual Responsibilities," *Harvard Business Review*, November 26, 2014.

Resource Box 2. Considerations for Agencies from a Former CINO

Several points that agencies may wish to consider when defining the CINO role include:

- Clarify vision. Start out by asking yourself, why have you decided to hire someone for this role? What are the goals you are trying to achieve? Are you willing to commit to making this a fundamentally important role in your agency? Taking the time to articulate these answers is an essential clarification exercise. If appointments are just a “checkbox” decision without a thoughtful direction in mind, then the outcomes are likely to be ineffective.
- Establish clear goals. At the outset, clearly scope the CINO role, its expectations, and the measurements of success. Consider working collaboratively with your incoming CINO to fully articulate their job description.
- Remain flexible. An inherent amount of flexibility is essential to success: “By now, it is widely recognized that if you are developing a new idea, you have to stay flexible in the beginning and be ready to deviate from the original plan. What fewer people realize is that this is equally true when you establish innovation units. Marry yourself too firmly to a specific setup, model or metric at the outset, and trouble will soon ensue.” [T. Wedell-Wedellsborg] In a spirit of continuous learning, agency leadership may consider how to re-visit and re-evaluate the job responsibilities assigned to the CINO. Bryan Sivak adds, “Innovation itself should be an iterative process—so why shouldn’t the job as well?”

Sources: B. Sivak, email correspondence, November 6, 2016; Quote from T. Wedell-Wedellsborg, “What It Really Means to Be a Chief Innovation Officer,” *Harvard Business Review*, December 2014.

Resource Box 3. Sample CINO Job Description

The Chief Innovation Officer (CINO) shall serve as the chief facilitator of innovation, looking across and outside of the department for opportunities and assisting senior leadership in obtaining the tools and connections necessary to successfully move those opportunities forward. The CINO will assist in training and educating employees on how to support innovation and create processes that encourage employees to turn their ideas into a prototype that may be tested and evaluated for broader adoption. He shall serve as a liaison between bottom-up innovation from those closest to the challenges and top-down innovation at the strategic level. Specific duties include:

- Assisting [the department] in establishing a culture of innovation through the development and implementation of tools, training and processes
- Identifying and, with the support of the secretary, deputy secretary and [other relevant top senior leadership], removing barriers to innovation across the department while creating mechanisms for department staff to prototype and develop their ideas; and
- Identifying potential innovation that could aid the department’s mission and mobilize resources of the Federal Government to support its development.

Source: C. Gerdes, email correspondence, November 2, 2016.

2. Identifying and Sourcing CINO Candidates

a. Characteristics of CINO Candidates

Each government agency has its own context, priorities, and needs for establishing a CINO. The specialty skills that individual CINO candidates bring should align with the high-priority needs of the agency. If technological change is at the top of an agency's agenda, agencies may wish to prioritize candidates who bring product design and development experience with a background in high-technology centers (such as Silicon Valley). If agency priorities are to generally suffuse a culture of innovation, agencies may wish to identify candidates with strong leadership backgrounds, including skills in integrative thinking, problem solving, behavioral management, project management, and communication (see Resource Box 4 for further on integrative thinking).¹⁸

Resource Box 4. Integrative Thinking

Roger Martin, former Dean of the Rotman School of Management at the University of Toronto, wrote "I have spent the past 15 years...studying leaders with exemplary records...and found that most of them...have the predisposition and the capacity to hold in their heads two opposing ideas at once...they're able to creatively resolve the tension between those two ideas by generating a new one that contains elements of the others but is superior to both. This process of consideration and synthesis can be termed 'integrative thinking.'" Integrative thinking may be a useful trait to consider for CINOs, given the need to look at challenges across an agency, analyze possible conflicts across policies and processes, and identify a resolution that transforms those processes and outcomes for the better.

Martin identifies four main components of integrative thinking that may be useful considerations when identifying traits and experience of CINO candidates:

- Salience is determining which factors, often multi-dimensional and interdependent, are significant to the relevant goals or enterprise-wide outcome being sought.
- Causality is analyzing how salient factors are related to one another, including non-linear and complex relationships, to create a nuanced picture of a problem.
- Sequencing is visualizing how pieces of the problem fit together, avoiding piecemeal solutions.
- Resolution is identifying creative solutions in a holistic fashion.

Source: R. Martin, "How Successful Leaders Think," *Harvard Business Review*, June 2007.

b. Pathways to Hire CINO Candidates

The choice of an appropriate avenue for hiring a CINO or senior innovation position depends on agency-specific hiring flexibilities. Agencies may consider how bringing in either a temporary or

¹⁸ R. Platt, "Roles and Skills of a Chief Innovation Officer," slide presentation, April 20, 2010, <http://www.slideshare.net/rplatt/roles-and-skills-of-a-chief-innovation-officer-final>.

permanent hire within or external to the Federal Government would be perceived by the rest of the workforce, their respective learning curves to understand the agency's operations, sources of funding, etc., and how a temporary or permanent position may impact trust and relationship building across the agency. Whether looking to hire CINOs into temporary or permanent positions, a menu of hiring options are applicable to most Federal agencies, as briefly described below and further in Appendix B. Federal employees may wish to consult with their agencies' human resources office for agency-specific guidance.

1) Temporary hires

Temporary hires are those brought in for specific duties and responsibilities on short-term detail assignments. These positions can be advertised via Federal job announcements. Details may be limited to existing agency personnel, the agency, or the Federal Government. A temporary detail can last from 60 days to multiple years. In addition, it can be reimbursable (the host agency reimburses all salary costs, travel, and administrative costs) or non-reimbursable. Another avenue to bring in CINOs and CTOs temporarily has been the Intergovernmental Personnel Act (IPA), which allows personnel to be recruited to serve in a temporary position from other Federal agencies, state and local governments, colleges and universities, Indian tribal governments, federally funded research and development centers (e.g., DOE's national laboratories), and other eligible organizations.¹⁹ The initial term for IPA assignments is up to two years and can be extended for another two years.

2) Permanent hires

Permanent hires can be brought in through Special Appointing Authorities. For instance, some agencies have authorities that enable direct hiring of a limited number of scientific, engineering, professional, or administrative personnel without many of the usual requirements and restrictions that can belabor the hiring process. Such authorities can enable agencies to recruit and hire more quickly than possible through typical government means. In addition, flexibilities exist to facilitate hiring of veterans, disabled veterans, military spouses, and others without competition.²⁰ Permanent hire CINOs could also be sourced from the Senior Executive Service or Candidate Development Programs. In addition, agencies could post a job announcement on USAJobs.gov. Processing applications via a public announcement and sourcing candidates through this route may take several months before hiring. Agencies may be able to restrict eligibility to existing Federal employees within a specific office or agency, which could reduce the time to identify candidates for interviews, selection and onboarding to a few weeks.

¹⁹ Title 5 CFR Part 334—Temporary Assignments Under the Intergovernmental Personnel Act (IPA), <https://www.gpo.gov/fdsys/granule/CFR-2012-title5-vol1/CFR-2012-title5-vol1-part334>.

²⁰ OPM.gov, "Frequently Asked Questions: What are the special appointing authorities some agencies include in their vacancy announcements?" 2017, <https://www.opm.gov/FAQs/QA.aspx?fid=de14aff4-4f77-4e17-afaa-fa109430fc7b&pid=8f814f58-3b23-4ad2-a246-1f620c32f61a>.

F. Lessons Learned

An agency's implementation of the CINO position can include several mechanisms to help the CINO quickly understand the agency's challenges and context, thereby shortening the learning curve. Below are some lessons learned from implementing CINO roles and ways agency leadership facilitated their success.

1. Role Definition Connected to the Mission

In creating a CINO role, senior leaders have connected the position, its responsibilities, and authority to execute on ideas with the context of the priorities related to accomplishing the agency's mission. "Innovation is the path, and impact is the destination," remarked Ann Mei Chang.²¹ It has been beneficial for CINOs to develop metrics and measurements for tracking their success that align with agency priorities. "When a government leader creates a role like a [CINO] and defines it too broadly," Jennifer Pahlka comments, "it is usually driven by a diagnosis that's hard to argue with: ossified processes and practices, lack of questioning of the status quo, resulting in low performance...giving a [CINO] a lot of freedom to do whatever is necessary to change the organization seems like the right answer, but it can end up looking like a bit of magical thinking."²²

2. CINOs Embedded at the Top

The flexibility inherent to creating a CINO position allows agencies to tailor the position to specific contexts. However, CINOs themselves emphasize the importance of embedding the position at the top of the organization for the person to be effective. This stature enables CINOs to play an ambassadorial role and bridge sources of innovative ideas at all levels of the organization. There is also benefit derived from having CINOs present at the table for both emergent time-critical situations and important, strategic decisions. "If the person in this role has a seat in those discussions (and, importantly, contributes based on their unique positioning and skillset), very interesting things can happen," comments Bryan Sivak.²³

Simply having a CINO's office located near a deputy or assistant secretary can be an important signal to employees regarding the agency's commitment to innovation and willingness to integrate changes to the agency's work. A practical metric for senior leadership support of the CINO includes whether or not the CINO can easily get on leaders' calendars to share new initiatives and areas where further leadership support may be necessary. In addition, Matthew Dunne advises, "giving the CINO flexibility (if not *carte blanche*) to recruit a team (on a temporary or permanent basis) is an important element of the CINO's success."

²¹ A. M. Chang, in-person interview, July 7, 2016.

²² J. Pahlka, "The CIO Problem, Part 2: Innovation," *Code for America*, May 31, 2016.

²³ B. Sivak, email correspondence, November 6, 2016.

3. Institutionalizing Innovation

As with many leadership positions, the personality of a particular CINO indelibly shapes his or her portfolio. Progress may stall or end when the individual leaves if innovation activities rely only on the individual in the CINO position. The challenge for both the CINO and for senior agency leadership is to ensure that innovative approaches are successfully institutionalized and mainstreamed to an adequate extent before a CINO's tenure ends.

Successfully building a culture of innovation within a department or agency remains one of the main challenges for CINOs.²⁴ A frequent challenge with bringing in private sector talent is unfamiliarity with navigating the structure and timeline of government processes. What they perceive as a quick change can be more complicated than initially thought, for example, due to engrained authorities, policies, processes, and procedures. A CINO must balance the desire to affect change in a reasonable time frame with a recognition that moving too fast can derail a project.

The position of CINO cannot be created and then abandoned to succeed on its own; a lesson learned from past CINOs is that support is needed from the top of the organization to help institutionalize innovation as a process and practice. Otherwise, agencies run the risk of creating a CINO role that serves as an island of innovation without bridges and with little impact. Institutionalization can include a well-articulated strategy regarding the role of innovation across the agency. Without this and other supporting mechanisms in place, CINOs run the risk of being “window dressing.”²⁵

4. Guidance Within and External to the Agency

Pairing the CINO with an internal agency “buddy” may be particularly helpful if bringing in a non-Federal candidate to lead the agency's innovation portfolio. The “buddy” can be another senior leader, such as a member of the Senior Executive Service, who helps the CINO navigate the learning curve of understanding inefficiencies and opportunities to arrive at solutions within the agency. A “buddy” with strong credibility across the agency can further help the CINO encourage trust, participation, and sharing among employees.

In addition, agencies establishing a CINO position have turned to other Federal innovation experts to help mediate and support the newly appointed CINO. The growing Federal community of former and current practitioners can help share lessons on effective approaches to execute organizational changes and ways to engage with functional experts, such as general counsel and contracting officers.

²⁴ L. Mansfield, “3 Key Challenges for the CINO,” *InnovationManagement*, 2017, <http://www.innovationmanagement.se/2015/12/01/3-key-challenges-for-the-cino/>.

²⁵ F. Allen, “Most Chief Innovation Officers are Just Window Dressing,” *Forbes*, April 2012, <http://www.forbes.com/sites/frederickallen/2012/04/03/most-chief-innovation-officers-are-just-window-dressing/#1220b3c1439d>.

G. Future Considerations

It is a fairly new practice to designate formal CINO roles within the Federal Government. Evidence of CINO impacts are largely anecdotal (see [Appendix A](#) for profiles of Federal CINOs). Future considerations in further developing understanding of the CINO role and its benefits include identifying ways to

- Leverage knowledge and experiences from Federal and other CINOs across sectors to identify relevant challenges and solutions,
- Institutionalize the CINO role and the portfolio of activities that he or she leads,
- Review the types of resources and needs relevant to supporting the CINO's role, and
- Measure success (e.g., that reflect Federal agencies' goals, including number of new ideas generated, number of ideas implemented, cost savings, reduced timelines for providing products or services, and economic benefits).

These concepts could be addressed by establishing and strengthening a community of interest that includes Federal practitioners, such as current CINOs and senior leaders who have established the CINO position at their agencies. Engaging with extant communities of practice targeted at Federal and non-Federal audiences (see [Appendix C](#)) could be a starting point for further dialogue, sharing, and learning from the application of the CINO role across different organizational contexts.

Appendix A.

Profiles of Four Federal Chief Innovation Officers

Whether the key priority was implementing culture change or instituting new processes for agency work, the following profiles illustrate the ways CINOs are able to drive change and innovation at their Federal departments and agencies.

Ann Mei Chang, Chief Innovation Officer of the U.S. Global Development Lab at the U.S. Agency for International Development (USAID)²⁶

Background

Before coming to USAID, Ann Mei Chang spent more than 20 years in Silicon Valley, including serving as Senior Engineering Director at Google for 8 years. There, she led global engineering for Google’s mobile applications and services, oversaw the growth of Google’s mobile business by a factor of 20 in just 3 years, and delivered over \$1 billion in annualized revenues.

Chang is the first Executive Director for the U.S. Global Development Lab, where she also serves as CINO.²⁷ The Global Development Lab was established in April 2014 as an innovation hub within USAID with missions to:²⁸

- Use open and directed innovation to produce breakthrough development innovations that are sourced, tested, and scaled solutions with proven impact; and
- Catalyze the transformation of the development community, opening up development work to anyone with good ideas, creating new and sustaining existing partnerships, applying data and evidence to decision-making, and harnessing advances in science and technology.

Definition of the CINO Role

Chang described her role as nurturing innovation. “Often,” Chang observed, “we think of innovation as the thing we’re trying to do—and so we hold hackathons or contests to invent something that no one has thought of before. But I believe that most of the good ideas that can

²⁶ Information derived from A.M. Chang, in-person interview, July 7, 2016.

²⁷ USAID, “U.S. Global Development Lab,” 2017, <https://www.usaid.gov/globaldevlab>.

²⁸ USAID, “About the U.S. Global Development Lab: Our Mission,” 2017, <https://www.usaid.gov/GlobalDevLab/about>.

transform our lives probably have already been thought of somewhere. The question is, how do we create the right systems and culture that will nurture those ideas and help them thrive and become mainstream so that they can have massive impact?”

Guiding and Executing Innovation

Chang guides and executes innovative activities through a three-stage innovation process: disrupt, develop, and mainstream.

- Disruption is sourcing new ideas for innovations, tools, or approaches that could be transformative. The goal is to test as many ideas as possible, as quickly as possible, in order to figure out which have the most potential for impact. Chang provides encouragement from failure, as it is common and expected at this point.
- Development includes working across USAID to apply the most promising solutions and embed innovative ideas, tools, or approaches in existing programs. In this stage, the goal is to gather evidence that the innovation can have a positive impact on agency priorities.
- Mainstreaming occurs as idea iteration and refinement continue. In this phase, the successful and validated solutions are incorporated as standard practice across the agency.

Chang believes that “sexy” new things tend to be overemphasized when promoting innovation: “That’s the flashy part, but not the substance. Innovation is about achieving dramatically better results, which comes from taking risks, a persistent focus on testing and improving solutions, and breaking through impediments in the current system. Sometimes that comes in the form of a cool gadget, but more often it is the result of application and tedious refinement of existing tools.” She says, “we seek to drive greater innovation across the agency by changing the culture, the systems, the incentives, and the mechanisms so that we become more open, agile, evidence-based, and catalytic with the result of more cost-effective and sustainable solutions.”

Lessons for Agencies

Chang described the following lessons for agencies considering establishing a CINO:

- Understand the value of the CINO role. If the agency’s top priority is delivering stronger return on the dollar, Chang argues, innovation is essential to moving the needle: “Otherwise, most organizations have a tendency to stick with lower-risk, proven approaches. The incentives are often to stick with the tried-and-true solutions that you won’t get in trouble for.” Because agency leadership faces so many different pressures, it is essential to have a senior leader specifically focused on building momentum for innovation and constantly trying to bend the curve in its direction.

- Establish supporting mechanisms. USAID established, through the Global Development Lab, an innovation team to support the CINO’s responsibilities. This team helped to generate a critical mass of employees dedicated to identifying best practices and promoting innovation across the organization. “It’s much harder,” Chang observes, “when people are trying to work in isolation to push the boulder up a hill rather than having a team and space to innovate together.”

Matthew Dunne, former Chief Operations and Strategic Innovation Officer at Office of Energy Efficient and Renewable Energy (EERE) in the Department of Energy (DOE)²⁹

Background

Prior to working at DOE, Matthew Dunne worked at a law firm specializing in international business litigation and counseling. He served as the Acting Chief Counsel for the then-nascent Advanced Research Projects Agency–Energy (ARPA-E) from 2010 to 2012. He subsequently became Chief Operations and Strategic Innovations Officer under the Assistant Secretary for EERE. While not formally designated as a CINO, Dunne played key leadership roles promoting innovation at ARPA-E and EERE.

Definition of the CINO Role

Dunne viewed his role as guiding innovation by focusing on the outcome: “I would tell my customers at ARPA-E or EERE..., ‘treat me as a travel agent. You tell me where you want to go, the budget, and the timeframe. But you have to be pathway-agnostic and let me choose how to get you there. If I get you to San Francisco by next week, let me choose if I’m going to fly you non-stop, if I’m going to put you on a red-eye, if I’m going to fly you through Chicago, or maybe you’ll have three stops on the way. But don’t care about the path by which you get there.... All you should care about is that you ended up accomplishing your objective.’”

“For instance,” Dunne explained, “the Federal Acquisition Regulations (FAR) provides a degree of latitude and white space for creativity, but a compliance-driven culture has difficulty embracing that flexibility. In a culture of performance, you should sit down with the customer, preferably face-to-face or maybe video conference if you’re geographically dispersed, and say, ‘Explain to me what your mission objective is. Explain to me what you want to accomplish.’ And after a full understanding of what the customer is trying to achieve, then you give that customer five different options of how to achieve that.”

²⁹ Information derived from M. Dunne, phone interview, July 18, 2016.

Guiding and Executing Innovation

At ARPA-E, Dunne helped support the launch of the agency. When Dunne came onboard, ARPA-E had a small staff and had only been in existence for less than a year. Dunne remarked, “I had to just dive in to the weeds, talk to a large number of people to try to figure what were the things I needed to know about. I didn’t know what I didn’t know. And so I took on myself a lot of the responsibilities.” During his tenure, Dunne said he “put a lot of hats on my own head. The idea was...to start out a new process that would be compliant with the key legal provisions but also administratively efficient. We had scarce resources in terms of Federal employees...and also a limited budget...Once I got the process started up, I would train someone else to take over the job, then I would hand off those hats so that we would continue to have a smoothly running machine.”

The Assistant Secretary of EERE tasked Dunne with “changing as much as possible, with a preference towards changing everything as quickly as possible.” Overseeing a large re-organization that affected hundreds of employees in three states, Dunne helped harmonize diverse practices, reaffirmed the common mission of different business units, and brought a more coherent set of processes to the organization.

Generally, in his roles, Dunne helped break down organizational silos, particularly in areas in which work was highly segmented with little interaction among employees. “Bell Labs was so successful,” Dunne explained, “because everyone ate lunch together in the same cafeteria—studies have documented that common daily interaction was the genesis for so many of the innovative breakthroughs Bell Labs produced.”

“Conversations that cut across silos and create informal relationships are essential for building trust. Without trust, you can’t have innovation,” Dunne said. “You have to know the people, trust their expert judgment and be able to work together to accomplish the common objective. Without trust, there is a very quick communication; someone will shoot a question and the response is almost always, ‘No, you can’t do that.’ Instead, [with more developed relationships], the response should be, ‘Okay. I understand your question. Tell me more. Help me understand what you’re trying to do and then I’ll give you some advice over how you can do it maybe a different way and what you envision.’”

Lessons for Agencies

Dunne shared the following lessons for CINOs and agencies establishing a CINO or similar position:

- Empower the CINO. Being directly empowered by the Assistant Secretary of EERE was critical to Dunne’s efforts. In particular, the commitment shown by the Assistant Secretary of EERE provided credibility as Dunne approached staff and sought solutions to challenges experienced across all levels of the organization.
- Involve career staff. Beyond support from the top leadership, support from career Senior Executive Service (SES) support was essential for Dunne. Ideally, a consensus

will exist among SES members that there are discrete areas for agency improvement. Political appointees inherently have shorter tenures; without career staff buy-in, you will lose the war even if winning a battle. To grow a culture of innovation, it is vital that SES employees authorize the employees they manage to invest time in innovation activities, such as participating in communities of practice.

- Provide training on to build a culture of performance and recognition. Training helped address some of the obstacles in implementing culture change, include shifting practices from compliance to performance across varied functional offices (human resources, information technology, legal, and contracting, among others). A culture of compliance is characterized by an emphasis on stringent rules and punitive measures. Dunne remarked, “A culture of compliance constantly emphasizes what the rules are ‘You can’t do this, you can’t do that; this is prohibited; that’s verboten.’” Dunne perceives that this issue is institutional, not individual, noting that training and performance measurement are heavily based on rule adherence; this context can make it difficult to advance novel approaches. It is also important to publicly recognize individual and team innovations. Supervisors can make cash or time-off awards, but in many instances, public recognition, along with a certificate or small trophy that can be displayed, is of equal or greater value.

Chris Gerdes, former Chief Innovation Officer at the Department of Transportation (DOT)³⁰

Background

Chris Gerdes is a mechanical engineering professor on leave from Stanford University. He was appointed as the first CINO for the Department of Transportation (DOT) in 2016. His appointment was temporary and since 2017 has returned to Stanford University.

Definition of the CINO Role

Gerdes explained his role as CINO at DOC as having three primary objectives:

1. fostering the department’s culture of innovation;
2. reducing the internal barriers to innovation; and
3. looking for other ways the department can further support outside innovation

“There may be numerous people with different titles related to innovation across the agency,” Gerdes explained. He recognized his goal was not to consolidate innovation solely under his responsibilities, but rather to act as a connector and enabler, offering to build a network of

³⁰ Information derived from C. Gerdes, phone interview, July 1, 2016.

innovators across stove-piped portfolios and send the message that he is a resource to help others do their jobs.

Gerdes saw himself as an evangelist for popularizing innovative tools. His day-to-day work focuses on empowering Federal employees, understanding their struggle points, and helping them to work through them. “People are trying to do things differently and they’re really open to people who can help do that,” he says. “I try to be very high energy and excited about this and about the new ideas. But it’s important that this is not about me; I’m not the chief innovator, but really the chief facilitator of innovation.”

Guiding and Executing Innovation

Gerdes’s experience provides an interesting contrast to other CINO positions, underscoring that there is no one-size-fits-all approach. He lacked his own budget and staff, and saw himself as somewhat outside of the organizational structure—but is adamant that this status has helped him be more effective. Gerdes’s role was not strongly defined within the organizational hierarchy, which allows him to be flexible and go up and down within the organization. He relied on strongly motivated volunteers to infuse a more innovation-minded culture. He saw an upside to not having a budget, noting, “You’re not tracking it, you’re busy creating value.”

For Gerdes, getting staff talking about and appreciating new approaches has been a significant step in shifting agency culture—and approaches that may seem trivial can have big impacts. For example, Gerdes began carving out a few minutes in the weekly agency meeting of senior leadership to spotlight staff doing innovative work. He saw that with everyone intently focused on day-to-day demands, there hadn’t been time to celebrate people who were doing things in different ways. When individuals in those meetings began acknowledging and celebrating that new approaches were important and were succeeding, he viewed this as a positive impact that sharing these activities to senior leadership was changing the narrative.

Gerdes viewed two phrases as essential for executing innovative ideas: “What if?” and “Yes, and...” Gerdes pushed agency employees to set aside constraints and imagine the solutions. “Everywhere has constraints,” he observed; a useful way forward is to set obstacles aside momentarily. He recommended to start envisioning ideal outcomes and then add the constraints back in. because, frequently, perceived constraints are not the same thing as actual constraints. One of the most common barriers is the perception of legal constraints (whether or not they exist). “Saying, ‘Oh, you need to talk to [legal] counsel,’ often functions as a conversation-ender and initiative-killer.” From there, the idea of a legal obstacle often “takes on urban legend [status], and it grows and it grows until you can’t do anything.... What I did in a couple of cases was say, ‘Well, okay, I’m going to [get legal] counsel,’” Gerdes said. He stressed that in his experience, legal counsel staff were thrilled to be engaged and take part in problem-solving conversations at the agency.

In those cases, Gerdes used “Yes, and…” as a way to get beyond perceptions of obstacles. He explained, “The goal of ‘Yes, and…’ is to consciously think about what somebody is saying, acknowledge that it’s been heard, but deliberately build on top of it instead of rejecting the communication.” Asking counsel to apply “Yes, and…” may not eliminate actual legal barriers; the answer may be “Yes, and you will go to jail,” but the goal is to keep the conversation active and to explore ways to (legally) accomplish creative ideas.

Gerdes also popularized the concept of a prototype. Just as the moon landing resulted from a series of carefully designed and incremental missions with associated prototypes, every innovative idea requires a starting point. “I often suggest people think of the simplest way to test their idea. Then make it simpler,” said Gerdes. Committing to making a prototype or taking concrete steps toward one in 30 to 60 days keeps ideas moving forward.

Lessons for Agencies

Gerdes described the following lessons for CINOs and agencies:

- Work across innovation stages. For any CINO, it is vital to take an interest in the hands-on details as well as the big picture. “I do feel like that’s really important to be willing to kind of roll up your sleeves and say, ‘Let me help,’ as opposed to, ‘Let me just talk in bullet points,’” Gerdes stated. “We are made up of a lot of different agencies here in the DOT and some of them are much more mature in their thinking than others. In some parts of DOT, for instance, idea generation may be well developed, but their struggle may be, ‘Now, how do we actually take that first step?’…Whereas some in other parts of the agency, they’re asking, ‘How do we start to think of ideas? How do we think about possible things that we can do?’”
- Listen to reframe problems and solutions. Gerdes’s “outsider status” allowed him to push breakthroughs in ways of thinking. “People here are so smart, so dedicated,” he says, “[and still yet] they get locked into patterns of [how] things have always been done. What I find is that sometimes just a slight suggestion, a slight reframe, sets people really off and running. A lot of times it may just even be an observation about where the discussion is going, and people are like, ‘Wow, that’s brilliant. You changed our thinking,’” Gerdes said. “I didn’t do much. [They] were [already] thinking that way. I just pointed [something] out.”

Additional Resources

[Where Does USDOT Fit in with Innovation?](#)—Post by Chris Gerdes, June 1, 2016

[HHS, DoT making the buzz around innovation a reality](#)—Interview with Chris Gerdes, July 28, 2016

[Culture of Innovation](#)—One-hour webinar led by Chris Gerdes, March 10, 2016

Bryan Sivak, Former Chief Technology Officer (CTO) at the Department of Health and Human Services (HHS)³¹

Background

Bryan Sivak served as CTO for HHS between 2012 and 2015. Prior to that, he was the CINO for the State of Maryland, CTO of the District of Columbia, and a founder of software companies InQuira and Electric Knowledge.

Prior to his arrival at HHS, Sivak's predecessor, Todd Park, laid the foundation for HHS's portfolio of innovation activities. When Sivak joined HHS, he picked up responsibility for these programs and developed them into a formalized structure. Sivak launched the IDEA Lab to house some of the early programs established under Park.³² The IDEA Lab functions as a wrapper for all innovation activities within HHS and works to create a space for employees to pilot, test, and grow innovative ideas. The IDEA Lab is designed to solve crosscutting departmental issues that significantly improve HHS's business processes, products, services, or use of technology. Sivak launched several new programs at the IDEA Lab, including the Ignite Accelerator and Entrepreneurs-in-Residence programs.

- The Ignite Accelerator functions as a way for staff to infuse startup approaches to their problem solving and improve programs.³³ Innovative ideas are crowdsourced from employees, and the promising ideas are then funded as pilots.
- The Entrepreneurs-in-Residence program brings external talent into HHS for a tour-of-duty, temporary assignment.³⁴

Definition of the CINO Role

Sivak saw his role, in part, as helping to “reignite the flame” that initially brought people to work for the government. His goal was to help empower employees to instill change, encourage them to contribute creative ideas, and provide top cover to allow ideas to flourish. “Many who have been in government for a while feel that they are stuck in a box with the lid closing,” he observed, “this may stem from a culture of responding to new ideas with a ‘no,’ where potential solutions are met with reservation and a list of reasons why the problem is impossible to overcome.” This attitude is lethal for employee motivation and goes against many people's intrinsic value to improve upon the status quo.

³¹ Information derived from B. Sivak, phone interview, July 27, 2016, and in-person interview, January 29, 2015.

³² HHS IDEA Lab, <https://www.hhs.gov/idealab/>.

³³ HHS IDEA Lab, “Ignite Accelerator,” 2017, <https://www.hhs.gov/idealab/ignite-accelerator/>.

³⁴ HHS IDEA Lab, “Entrepreneurs-in-Residence Program,” 2017, <https://www.hhs.gov/idealab/eir-program/>.

Guiding and Executing Innovation

During his tenure as HHS' CINO, Sivak looked for ways to accelerate and more effectively implement the desired outcomes of the Department. Among Sivak's goals in HHS were to help employees get their ideas heard and tested, and embedding the tools of rapid feedback and iteration into everything the Department did. In Sivak's view, innovation very rarely comes from one person. He saw it as beneficial to increase opportunities for communication between specialties and diverse backgrounds across HHS. Sivak worked to address these challenges and others by implementing methods that led to changes in culture and operation, primarily through standing up the relatively small office focused on innovation, IDEA Lab. The IDEA Lab used a variety of mechanisms to seed, test, and implement innovative ideas. If the idea showed success, the results were used as evidence to receive larger funding from elsewhere in the Department.

To accomplish his work, Sivak had implicit management support from the HHS Secretary and the Deputy Secretary to make decisions about what innovative programs and projects to initiate. Sivak was situated in the Deputy Secretary's office suite, which was helpful in breaking through bureaucratic hierarchies in organizations. Because of this proximity, Sivak could update leadership on a regular basis and his ideas were well supported. He said, "if I needed the Secretary [or] the Deputy Secretary to speak in an event, or to send a note to somebody, they would always do that and it wasn't a big deal at all." Sivak also emphasized the need for resources. He remarked that "resources are important. I don't think you need a ton of resources [or] millions of dollars, but you need something to build teams and fund ideas and activities."

Lessons for Agencies

Sivak emphasized the following measures that CINO's and agencies could support to concurrently change culture and processes:

- **Realign incentives.** Sparking innovation may require realigning organizations so that there is an incentive system in place to counter incentives that encourage people to follow processes and the status quo. Straying from the process in an attempt to innovate risks reprimand for not following an agency's prescribed policies and procedures. This situation can oddly divorce outcomes from accountability—after all, if the project fails they can disavow responsibility since the individual in charge followed the predetermined procedure.
- **Help employees feel valued for creativity and performance.** Give credit to high-performing or creative employees. Instead of taking credit for the work of their employees, managers should defer successes to them. Giving employees credit gives them incentive for going above and beyond, and it also reflects well on the manager who oversaw their work.

Additional Resources

Q&A: [HHS CTO Bryan Sivak on Disrupting Government Culture](#)

[Implementing a Department-Wide Innovation Strategy](#)—GovInnovator interview with Bryan Sivak

Appendix B.

Supporting Policies Related to CINOs

Legislation, authorities, regulations, and other policies that could support the development of the CINO role at Federal agencies include flexible human resource authorities, such as those for temporary appointments and increasing pay. Federal employees should consult with their human resources office for agency-specific guidance on the use of the examples described here and other hiring and pay authorities that may could facilitate agencies' ability to attract, hire, and retain highly qualified CINO candidates.

Expedited Hiring Authorities

Examples of authorities to expedite hiring include:

- Direct hire authority—governed by 5 U.S.C. Section 3304 and 5 CFR Part 337, Subpart B—allows Federal agencies to appoint candidates into positions without regard to 5 U.S.C Section 3309 through 3318.³⁵ Government-wide direct-hire authorities include those for information technology management and acquisition positions, among others.
- Veterans excepted service authority—governed by Schedule A, 5 CFR Part 213.3102(u)—allows Federal agencies to non-competitively hire disabled persons.³⁶

Pay Authorities

Examples of authorities designed to increase pay in certain circumstances are as follows (and in Table B-1):

- Critical Position Pay Authority (CPPA)—governed by 5 U.S.C. Section 5377 and 5 CFR Part 535—allows Federal agencies to the ability to fix the pay of exceptionally well-qualified individuals in critical positions at a rate higher than would be otherwise

³⁵ OPM.gov, “Hiring Information: Direct Hire Authority,” Governmentwide Authority, 2017, <https://www.opm.gov/policy-data-oversight/hiring-information/direct-hire-authority/#url=Governmentwide-Authority>.

³⁶ OPM.gov, “Disability Employment: Hiring,” Schedule A Hiring Authority, 2017, <https://www.opm.gov/policy-data-oversight/disability-employment/hiring/#url=Schedule-A-Hiring-Authority>.

payable.³⁷ A 2014 report by the IDA Science and Technology Policy Institute found that the CPPA was an underutilized flexibility.³⁸

- Scientific and Professional (ST) positions—(governed by 5 U.S.C. Section 3014 and 5 CFR Part 534 Subpart E—allow Federal agencies to set and adjust the pay of employees under a pay-for-performance system.³⁹

Term Appointments

Examples of hiring authorities with term-limited appointments include:⁴⁰

- Intergovernmental Personnel Act (IPA) Mobility Program—governed by 5 U.S.C. Sections 3371 through 3375 and 5 CFR Part 334—allows Federal agencies to temporarily hire skills personnel from state and local governments, institutions of higher education, Indian tribal governments, and other eligible organizations.⁴¹
- Senior Executive Service (SES) authority—governed by 42 U.S.C. Section 1863(g) and 5 U.S.C. Sections 3131 through 3152—allows Federal agencies to appoint individuals into positions for up to 3 years with the ability to non-competitively convert the position into a permanent position.

³⁷ OPM.gov, “Pay & Leave: Pay Administration,” Fact Sheet: Critical Position Pay, 2017, <https://www.opm.gov/policy-data-oversight/pay-leave/pay-administration/fact-sheets/critical-position-pay>.

³⁸ IDA Science and Technology Policy Institute, *History of the Critical Position Pay Authority and Options to Support Its Use*, IDA Document D-5159, March 2014, <https://www.ida.org/idamedia/Corporate/Files/Publications/STPIPubs/2014/ida-d-5159.ashx>.

³⁹ OPM.gov, “Senior Executive Service: Scientific & Senior Level Positions,” Senior Level (SL) Positions, 2017, <https://www.opm.gov/policy-data-oversight/senior-executive-service/scientific-senior-level-positions>.

⁴⁰ Further information on Federal authorities related to term appointments can be found in a 2014 report by the IDA Science and Technology Policy Institute, *Federal Term Appointment Hiring Authorities for Science, Technology, Engineering, and Mathematics Personnel*, IDA Document D-5148, April 2014, Table 1, p. 10, <https://www.ida.org/idamedia/Corporate/Files/Publications/STPIPubs/2014/ida-d-5148.ashx>.

⁴¹ OPM.gov, “Hiring Information: Intergovernment Personnel Act,” Overview, 2017, <https://www.opm.gov/policy-data-oversight/hiring-information/intergovernment-personnel-act>.

Table B-1. Select Pay-Related Authorities Based on 2014 Pay Scales

Name/Type	Basic Pay Cap
Government-Wide Authorities	
Critical Position Pay Authority (CPPA)	\$201,700 (EX-I)
Senior Executive Service (SES)	\$181,500 (EX-II)
Scientific or Professional Positions (ST)	\$181,500 (EX-II)
Pay for certain senior-level (SL) positions	\$167,000 (EX-III)
Superior Qualifications and Special Needs Pay-Setting Authority	Higher than minimum of appropriate grade
Recruitment Incentives (component of "3R")	May not exceed 25 percent of the annual basic pay
Relocation Incentives (component of "3R")	May not exceed 25 percent of the annual basic pay
Retention Incentives (plus Group) (component of "3R")	May not exceed 25 percent of the annual basic pay; 10 percent for a group or category of employees
Agency-Specific Authorities	
DHHS and VA: Title 38, Health Care Positions	\$400,000 (aggregate pay, basic pay not specified), Secretary prescribes minimum and maximum aggregate pay at least every 2 years
DHHS and EPA: Title 42, Special Consultants	No statutory cap, DHHS prescribed at \$250,000 (2011), \$350,000 for the National Institutes of health (NIH), the Food and Drug Administration (FDA), and the Centers for Disease Control and Prevention (CDC)
DHHS: Title 42, Fellows	No statutory cap, DHHS prescribed at \$155,500
DHHS: Title 42, Professional, Scientific and Executive R&D	\$157,100 (EX-IV), and two positions at \$181,500 (EX-II)
DHHS: Title 42, Senior Biomedical Research Service	\$201,700 (EX-I)
DHS-HSARPA: DARPA Section 1101 "piggyback"	\$167,000 (EX-III)
DOD: Highly Qualified Experts (HQEs)	\$167,000 (EX-III)
DOD-AFRL: Science and Technology Reinvention Laboratory	\$157,100 (EX-IV equiv.) (pay banding system)
DOD-ARL: Science and Technology Reinvention Laboratory	\$157,100 (EX-IV equiv.) (pay banding system)
DOD-DARPA: Section 1101	\$167,000 (EX-III)
DOE: Excepted Service (EJ and EK Authority)	\$167,000 (EX-III) (pay banding system)
DOE- ARPA-E: DARPA Section 1101 "piggyback"	\$167,000 (EX-III)
NASA: Critical Position Pay Authority	\$233,000 (Vice President's salary)
NSF-National Science Board: Term Appointment	\$167,000 (EX-III)
Agency-Specific Authorities (cont.)	
ODNI and Intelligence Community: HQEs	\$181,500 (EX-II) to \$201,700 (EX-I), (approval by the Director of National Intelligence); greater than \$201,700 (EX-I) (approval by the President)
USDA: Agriculture Senior Scientific Research Service	\$201,700 (EX-I)

AFRL = Air Force Research Laboratory; ARL = Army Research Laboratory; ARPA-E = Advanced Research Projects Agency - Energy; DARPA = Defense Advanced Research Projects Agency; DHHS = Department of Health and Human Services; DHS = Department of Homeland Security; DOD = Department of Defense; DOE = Department of Energy; EPA = Environmental Protection Agency; HSARPA = Homeland Security Advanced Research Projects Agency; EX = Executive Schedule; NASA = National Aeronautics and Space Administration; NSF = National Science Foundation; ODNI = Office of the Director for National Intelligence; USDA = Department of Agriculture; VA = Department of Veterans Affairs.

Source: IDA Science and Technology Policy Institute, *History of the Critical Position Pay Authority and Options to Support Its Use*, IDA Document D-5159, March 2014, Table 3, p. 18, <https://www.ida.org/idamedia/Corporate/Files/Publications/STPIPubs/2014/ida-d-5159.ashx>.

Appendix C.

Additional Resources Related to CINO

This appendix provides additional resources on topics—including existing communities of practice and further reading on defining the CINO role, CINO in state and local governments, CINO on leadership and transformation—to support the establishment and development of CINO roles in organizations.

Communities of Practice

Federal agencies interested in participating in communities of practice may wish to learn more about or participate in the following groups:

- [Chief Innovation Officers Summit](#) is an annual gathering of multi-sector leaders (Federal and non-Federal) who share methods for developing new ideas and implementation tools.
- [Partnership for Public Service Leadership Training](#) provides (Federal and non-Federal) leadership development programs, including training, courses, and groups focused on building leadership in public service.
- [Office of Personnel Management Center for Leadership Development](#) provides opportunities to connect with other Federal leaders, to build capacity for leadership, and to offer professional development at various Federal levels (e.g., SES, supervisor, or manager).

Further Reading

Resources to Help Agencies Define the CINO Role

Allen, F., “Most Chief Innovation Officers are Just Window Dressing,” *Forbes*, April 2012—Author explains some caveats in the creation of a CINO role.

Bittman, M. “Do You Talk Innovation or Do You Do Innovation?” *Washington Technology*, January 8, 2015—Discussion on CINO roles

Deloitte, “[The New Government Leader: Mobilizing Agile Public Leadership in Disruptive Times](#),” 2013—This report describes six behaviors for successful government leaders, including agile integration, quiet transparency, use of digital media, horizon scanning, rapid prototyping, and rebel rousing.

Di Fiore, A., “A CINO’s Actual Responsibilities,” *Harvard Business Review*, November 26, 2014—On corporate CINO structures.

Hay Group and Partnership for Public Service, “Leading Innovation in Government”—This report defines “innovation leadership” as the practice of cultivating an environment where improvement, adaptation, and invention are encouraged, fostered, and rewarded. Authors describe attributes of innovation leaders and a framework for leadership that includes leading people and teams and navigating relationships, communication, and collaboration across boundaries.

Martin, R., “How Successful Leaders Think,” *Harvard Business Review*, June 2007—Discussion on leadership mindset.

McKinney, P., “Top Five Skills a CINO Needs,” *Ideas to Innovation*, April 28, 2016—Discussion of CINO skillsets.

Platt, R., “Roles and Skills of a Chief Innovation Officer,” slide presentation, Apr 20, 2010—Advice on attractive CINO skillsets.

Wedell-Wedellsborg, T., “What it Really Means to be a Chief Innovation Officer,” *Harvard Business Review*, December 5, 2014—Discussion of what is required of successful corporate CINOs.

Resources on CINOs in State and Local Governments and the Private Sector

Bloomberg Philanthropies, “Transform Your City through Innovation,” 2014—The guide provides an overview of best practices in innovation management from municipalities as categorized in four steps of the innovation delivery model, including investigating the problem, generating new ideas, preparing to deliver, and delivering and adapting.

Mulholland, J., and N. Knell, “[Chief Innovation Officers in State and Local Government \(Interactive Map\)](#),” *Government Technology*, March 28, 2014—The authors provide an interactive geographical map of state and local chief innovation officers throughout the United States.

Raths, D., “[Will the Chief Innovation Officer Transform Government?](#)” *Government Technology*, January 2013—Assessment of CINO role in state government.

Stinson, J., “[Chief Innovation Officers: Do They Deliver?](#)” *Stateline*, February 2015—Further assessment of CINO role in state government.

Thompson, C., “Rise of the Innovation Officer,” *Innovation Enterprise*—White paper summarizing the critical roles played by CINOs in the private sector.

Resources for CINOs on Leadership and Transformation

Deloitte, 2016–2017 Global CIO Survey, —Focuses on CIOs, with relevant commentary on role taxonomy for CINO portfolios.

Bason, C. “[Public Managers as Innovators: In Search of Design Attitude](#),” 2013—Christian Bason, Director of [MindLab](#), a cross-ministerial innovation office in Denmark, writes about the role of public managers as innovators in their organizations and how design-thinking can be used by managers to promote innovation.

- Beeck Center for Social Impact + Innovation and Massive Data Institute (MDI), [“The Architecture of Innovation: Institutionalizing Innovation in Federal Policy Making.”](#) McCourt School of Public Policy, Georgetown University, October 2016—Guidance on structural considerations for CINO roles.
- Daly, P., M.D. Watkins, and C. Reavis. *The First 90 Days in Government: Critical Success Strategies for New Public Managers at All Levels*. 2006. Harvard Business School Publishing.
- Deesing, L., B. Schrier, K. Robinson, D. Robinson, and El. Pittman, [“CIOs Share Their Secrets for Success,”](#) *Government Technology*, August 12, 2013—The authors ask current and former public chief innovation officers to write letters of advice to their former selves describing their recipe for success. The article features these letters.
- Gostick, A., and C. Elton. *The Carrot Principle: How the Best Managers Use Recognition to Engage Their People, Retain Talent, and Accelerate Performance*. 2009. Free Press.
- IBM Center for the Business of Government, “A Leader’s Guide to Transformation: Developing a Playbook for Successful Change Initiatives,” 2011—This report describes five steps to organizational transformation, including developing a compelling game plan, aligning the plan with the organization’s mission, developing a reliable innovation process, strategically initiating transformations, and sustaining the transformation.
- Kotter, J. *Leading Change*. 1996. Harvard Business Review Press.
- Pahlka, J., [“The CIO Problem, Part 2: Innovation,”](#) *Code for America*, May 31, 2016—Insights on challenges for CINO role.

Abbreviations

ABLE	Adolescent Behavioral Learning Experience
ACF	Administration for Children and Families
ARRA	American Recovery and Reinvestment Act
CEO	Chief Evaluation Officer
CEP	Commission on Evidence-Based Policymaking
CLEAR	Clearinghouse for Labor Evaluation and Research
CLI	Children’s Literacy Initiative
CNCS	Corporation for National and Community Service
DHHS	Department of Health and Human Services
DIV	Development Innovation Ventures
DOJ	Department of Justice
DOL	Department of Labor
ED	Department of Education
EIR	Education and Innovation Research
ESSA	Every Student Succeeds Act
FY	fiscal year
GAO	Government Accountability Office
GHHI	Green and Healthy Homes Initiative
HHS	Health and Human Services
HUD	Housing and Urban Development
i3	Investing in Innovation
IES	Institute of Education Sciences
IWG	Interagency Working Group
MBK	My Brother’s Keeper
MRT	Moral Reconation Therapy
NCEE	National Center for Education Evaluation and Regional Assistance
NCLB	No Child Left Behind
NFP	Nurse Family Partnership
OAH	Office of Adolescent Health
OMB	Office of Management and Budget
PAF	Pregnancy Assistance Fund
PART	Program Assessment Rating Tool
PFS	Pay for Success
RCT	randomized control trial
SFA	Success for All
SIF	Social Innovation Fund
SSIR	Social Spending Innovation Research
STEM	science, technology, engineering, and mathematics
TANF	Temporary Assistance for Needy Families

TFA
TPP
USAID
WIOA
WWC

Teach For America
Teen Pregnancy Prevention
U.S. Agency for International Development
Workforce Innovation and Opportunity Act
What Works Clearinghouse

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