Hiring a Chief Innovation Officer

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# Overview

Whether leadership is tasked with confronting emerging, novel challenges or improving the efficiency of decades-old service delivery processes, Departments and agencies can substantially benefit from the appointment of a Chief Innovation Officer (CINO) to be a catalyst for change. A CINO serves as a beacon for innovation, working to harness, foster, execute, and manage innovative ideas. In a 21st century agency, the role of CINO is no longer a luxury; finding and appointing effective CINOs is an essential priority for any agency focused on reaping the benefits of innovative practices.

CINOs can be valuable assets for actualizing an agency’s priorities, from leading agency-wide initiatives; addressing employee engagement and culture change; tapping employee ideas in innovative ways; and in some contexts, leading efforts to change core underlying processes and improve performance and efficiency. Appointing a CINO returns persistent, high-value benefits for agency leadership: For those responsible for the broad swath of an organization’s management, chronically overloaded schedules and competing critical priorities come with territory. Appointing a person whose top priority is to focus on innovation and relentlessly drive it forward will tremendously amplify any senior leadership’s capacity for realizing an agency’s mission.

In times of tight budgetary constraints, chief innovation officers act as catalysts for transforming an agency’s operations. “[CINO’s] look across the board and figure out how to do things better, faster, and tie it into the overall management structure,” said Bryan Sivak, former CTO and entrepreneur in residence at the Department of Health and Human Services. [[Pew]](http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/2/06/chief-innovation-officers-do-they-deliver)

CINOs are force multipliers. These innovators teach and enable others, and they cast a spotlight on staff doing or wanting to do innovative work. One CINO described his role as an evangelizer for innovative tools; he empowers career employees to effect change by learning their struggle points and together working through them.

The role is inherently flexible with sometimes ambiguous boundaries; to use a football metaphor, CINOs can be a bit like a “free safety” position, with their portfolios defined around a Department or agency’s priority needs. In broad terms, CINOs can:

* Reframe problems in order to change thinking patterns;
* Connect people and break down silos;
* Celebrate innovative work within an agency, which encourages more of it.

## Why Create a Chief Innovation Officer Role?

A Chief Innovation Officer can help disrupt traditional ways-of-doing and institute more effective approaches. In doing so, CINOs nurture the entire ecosystem of innovation. They’re positioned to take on difficult organizational management challenges like information silos, closed process systems, or simple resistance to change. They’re a catalytic force for organizational breakthroughs.

Appointing a CINO strongly signals a Department’s commitment to innovation and provides an actual mechanism for execution. We know that it’s not enough to talk about innovation; it’s essential to commit to actually doing it. To explicitly and seriously embrace innovation, an organization needs to put it in the context where it returns the highest value. A senior point person is essential. “Innovation can't be an ’other duty as assigned,’ or an add-on -- it needs to be somebody's job,” argues Chris Gerdes, Chief Innovation Officer for the Department of Transportation. Appointing a CINO to senior level leadership demonstrates that commitment and also makes it easier for new approaches to be embedded within core processes. CINOs also help to “de-risk” innovation, using smart risk management and guiding Departments through the transition between old and new processes.

## How: Pathways for institutionalizing innovation leadership

There’s no single playbook for how to define a CINO role; senior leaders have created and scoped this role in a variety of ways that best address their agency’s needs. In all cases, though, it’s important to have a clear understanding of a CINO’s mission, role, and authority within an agency, in order to attract the most qualified candidates and to enable them to succeed. In some instances, it may be more appropriate to promote operational innovation by designating an innovation “home” in key functional roles such as HR, legal, and acquisition. [[Crosslink operational innovation]] In other contexts where the top priorities involve technology integration and deployment, a Chief Technology Officer (CTO) may also be a suitable leadership “home” for an innovation portfolio. In other instances, agencies have had Chief Information Officers functioning as the lead designation for innovative activities. Each Department and agency may find that different CxO arrangements best fit their organizational structure.

For CINOs or any leadership position tasked with overseeing innovation, the position must be imbued with clear authority and direction in order to fully realize their potential impact. According to past CINOs and CTOs, the most effective approach for senior leadership is a balance between explicit and visible leadership commitment with a degree of hands-off management and implicit trust.

## Decoding Chief “X” Officers in Government

CIO, CTO, and now CINO: The current C”x”O soup of acronyms can create confusion. Because this is a recent addition to the government, these acronyms are not fully standardized. However, the distinctions between these roles are clear:

* **CIO (Chief Information Officer):** The individual tasked with managing internal business operations like human resources and procurement systems.
* **CTO (Chief Technology Officer):** The individual--preferably with a deep technology background--overseeing deployment of technologies and also sourcing new technological solutions to address the organization’s mission.
* **CINO (Chief Innovation Officer):** The individual specifically responsible for driving and directing innovation efforts within an organization.For example, an agency may wish to hire or designate a Chief Innovation Officer to lead a reorganization to increase organizational efficiency and promote internal mobility, to oversee the re-engineering of business processes, to develop new policies, and/or to strengthen engagement with stakeholders and the public. A broader vision for this position opens new possibilities for organizing and leading change.

While the CINO role is often ambiguous, Jen Pahlka, founder of Code for America, cautions that “There is one definition of the [CINO] role that we need to watch out for. Increasingly, [CINOs] are being appointed with “fix the website(s)” as one of their many mandates […] There is no inherent reason someone qualified to be a Chief Innovation Officer (however defined) is not competent to lead digital services. But there is a huge danger in using the word “innovation” to describe the practices that result in websites that work.” If leadership is looking to *modernize* its digital tools and services, then recruiting for a CTO or CIO may better address that need.

At times, the distinction between leadership roles is less clear. “There are cases where organizations have both of those be the same person because there is some overlap in skillset,” notes Ann Mei Chang, Executive Director and Chief Innovation Officer at the Global Development Lab at USAID. The challenge is to understand innovation as a related but distinct task from digital services or information technology priorities. “Innovation often gets conflated with technology, but I think it’s very different,” Chang explains. “It’s dangerous when we conflate them, because then we think that innovation requires technology. And as we’ve experienced, in many cases, innovation doesn’t require any technology at all. [….] Innovation, to me, is more about changing the way we do business, being more agile, being more data driven, being more open - which may or may not have technology factor into it.”

# Benefits to Creating a Chief Innovation Officer

The benefits of a CINO depend on getting the details right. If leadership recognizes the value that this role can bring and scope the position, with very explicit goals in mind, the result is tangential thinking and different, impactful solutions that would not have otherwise occurred. This result hinges entirely on a CINO position being filled by the right person, with the right access, right resources, and right authority.

One of the biggest impacts of hiring a CINO is that career employees can be more empowered and supported to take initiative. [A 2012 Accenture survey](http://info.theinnovationenterprise.com/rs/innovationenterprise/images/Rise-innovation-officer.pdf) on the impact of corporate CINOs found that among surveyed employees, more than a quarter had avoided pursuing an idea due to a fear of a negative impact. For an agency culture to become more open to innovation, a process must be in place to reward initiative and those who attempt to do something new.

## Evolution of CINO role

While the term "chief innovation officer" is relatively new (it was first coined and described in 1998), the role has rapidly become standard practice in the corporate world and even increasingly in state and local government. The reason? Organizations have seen the tremendous benefits gained by creating an empowered focal point for that helps to bring new, innovative ideas to fruition. [The same 2012 survey](http://info.theinnovationenterprise.com/rs/innovationenterprise/images/Rise-innovation-officer.pdf) found that 60% of respondents employed a Chief Innovation Officer, with the trend continuing to rise.

There are unquestionable core differences between private and public sector objectives. When it comes to adopting and adapting to innovation, however, insights from the corporate sphere can provide strongly relevant takeaways for senior leadership in government. Where corporate CINOs typically identify and pursue new markets, new services, and new ways of working, federal CINOs identify and pursue new ways of problem-solving, new service delivery mechanisms, and new ways of improving the work performed for the American people. In both cases, CINOs allow for institutionalization of innovation to occur smoothly, using their expertise to create pathways in which innovations are sustainably implemented and effectively communicated. Chief innovation officers can also provide key strategic insight, as they are in a prime position to rapidly evaluate new ideas and decide whether or not they deserve support.

The value of this role has also been increasingly recognized in state and local governments, where CINOs have been tapped to tackle a range of challenges, from fixing potholes to alleviating homelessness and violent crime, , and bolstering economic development. [A recent Pew report](http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/2/06/chief-innovation-officers-do-they-deliver) finds that multiple states, including Colorado and Massachusetts, have Chief Innovation Officers – as do more than two dozen cities. “It is [also] still common for chief information officers (CIOs) to essentially act as CINOs,” according to Doug Robinson, executive director of the National Association of State Chief Information Officers (NASCIO). A NASCIO [survey of state CIOs](http://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2015/2/06/chief-innovation-officers-do-they-deliver) in fall 2015 found that two-thirds saw sparking innovation government operations as a critical part of their role.

# How to Create a Chief Innovation Officer Role

A Department or agency should strongly consider deploying a CINO when there is a priority need to:

* 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;
* Explain and assist colleagues in overcoming these barriers.

## What is the chief innovation officer role?

The role of a CINO is *not* to innovate. The chief function of CINOs is to provide recognition and support (time, funding, training, top cover) for career employees with innovative ideas. Despite working in departments with very different operating contexts, CINOs interviewed for this Toolkit were remarkably unanimous in their perceptions of the role:

* “The role of an innovative officer is to be a teacher and teach people how to innovate. The chief innovator helps guide discussions towards perspectives that understand the impacts of their innovative activity, as well as the how to best achieve that goal.” - Patrick Littlefield, Department of Veterans’ Affairs
* “Innovation does not come from one person. What a CINO can do is create the right conditions to cultivate innovation. This begins by creating a space for multidisciplinary teams to interact.” - Bryan Sivak, Department of Health and Human Services
* "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." - Chris Gerdes, Department of Transportation
* “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.” - Jen Pahlka, founding member of United States Digital Services and founder of Code for America [[Source](https://medium.com/code-for-america/the-cio-problem-part-2-innovation-af24ebc038e5%23.uzhh54ym5)]

"There’s something very important about being part of the Office of the Secretary in such a hierarchal organization," Susannah Fox, CTO at HHS, explains. It enables her to play an ambassadorial role and bridge internal and external sources of innovative ideas.

# Success Stories

Each CINO’s experience is different; whether the key priority is culture change or instituting new processes for agency work, the following narratives help to illustrate the realities of pushing change and innovation within agencies.

Case Study Profiles:

* [Bryan Sivak – former HHS CTO](#_qn0der422qin)
* [Chris Gerdes – DOT CINO](#_vcrdi327rjju)
* [Ann Mai Chang – USAID](#_1oc8iep2temp)
* [Matt Dunne – DOE (EERE/ARPA-E)](#_9ymnu7cjl8ra)

## Bryan Sivak – former Chief Technology Officer, Department of Health and Human Services (HHS)

### Background and Scope of Role

Bryan came to HHS in 2012 having served as the Chief Innovation Officer for the State of Maryland, CTO of the District of Columbia, and a founder of software companies InQuira and Electric Knowledge.

### Key Accomplishments

Sivak carried on the work begun by predecessor Todd Park, particularly with the HHS IdeaLab and HHS Ignite. IdeaLab – which works to create a space for employees to pilot, test, and grow innovative ideas from within the department – is aimed at addressing the problems and challenges of internal processes in government. [[crosslink Labs content]] The HHS Ignite Accelerator similarly functions as a way for staff to infuse startup approaches to their problem-solving and improve programs. Innovative ideas are crowdsourced Department staff, and the promising ideas are then funded for pilots through awards. Another key initiative is the entrepreneur-in-residence program, which brings external talent into HHS for a tour-of-duty. [[crosslink tour of duty content EIR case study]]

### How He Led Innovation

Sivak, in part, saw his role as to help “reignite the flame” that initially brought people to work for the government. His goal was to help empower them to instill change and to make them feel valued and freedom again “Many who have been in government for a while feel that they are ‘stuck in a box with the lid closing,’” he observed. This stems from a culture of “no” in some agencies, where most 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 values (a sense of value, freedom, and skill development). Bryan emphasized changing agency culture and processes concurrently, with the following measures:

* **Realigning incentives.** Organizations needs to be realigned to spark innovation, he argues, as the current incentive system encourages people to follow processes. Straying from the process in an attempt to innovate risks reprimand for not following orders. This can oddly divorce outcomes from accountability; after all, if the project fails, but the individual in charge followed the predetermined procedure, they can disavow responsibility.
* **Help employees feel valued for creativity and performance.** Give credit to high-performing and/or creative employees. Instead of taking credit for the work of their employees, managers should defer successes to them. This incentivizes employees for going above and beyond, and also reflects well on the manager who oversaw their work.

### Why a CINO is Essential

An agency’s agenda can get muddled when external crises take precedence (for example, both Ebola and elements of Latin American migration crisis suddenly sprang to the top of HHS’ priorities). Leadership must respond and deal with these items, which underscores the value of having a senior point person tasked with innovation. Making sure innovation has its own seat at the table helps to spur creative thinking and different solutions, argues Sivak. But it can only work if senior leadership has fundamentally invested in the role and imbued it with authority.

**Read more:** [[Crosslink HHS deep dive]]

**Read More:**[Q&A with HHS CTO Bryan Sivak: Disrupting Government Culture](http://www.healthcareitnews.com/news/qa-hhs-cto-bryan-sivak-disrupting-government-culture)

**Listen:**[Implementing a department-wide innovation strategy](http://govinnovator.com/bryan_sivak/): GovInnovator interview of Bryan Sivak

## Chris Gerdes – Chief Innovation Officer, Department of Transportation (DOT)

### Background and Scope of Role

Appointed as the CINO for the Department of Transportation in 20XX, Dr. Chris Gerdes is a professor of Mechanical Engineering at Stanford University as well as the Director of the Center for Automotive Research at Stanford.

Chris understands his role as Chief Innovation Officer as having three primary objectives:

1. Fostering the department’s culture of innovation
2. Reducing the internal barriers to innovation
3. Looking for other ways the department can further support outside innovation

He sees himself as an evangelist for popularizing innovative tools. His day-to-day work focuses on empowering career 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.”

### How He Led Innovation

Gerdes’ experience provides an interesting contrast to several other CINO positions, underscoring that there is no one-size-fits-all prescription. Each appointment needs to be tailored to a department or agency. He lacks his own budget and staff, and sees himself as somewhat outside of the organizational structure – but is adamant that this has helped him be more effective. Because his role is not strongly defined within the organizational hierarchy, he has leeway to go up and down the organization and relies on strongly motivated volunteers to diffuse a more innovation-minded culture. He even sees an upside to not having a budget, noting, “You’re not tracking it, you’re busy creating value.”

For Dr. Gerdes, just 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 demand, there hadn’t been time to celebrate people who were doing things in different ways. When Monday morning meetings began acknowledging and celebrating that new approaches were important and were succeeding, he received very positive feedback that it was changing the narrative.

Two phrases were essential tools for getting things done: “What if?” and “Yes, and.” Chris 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. Start envisioning ideal outcomes, and then add the constraints back in. Frequently, perceived constraints are not the same thing as actual constraints. One of the most commonly barriers is the *perception* of legal constraints (whether or not they exist in practice). Saying, “Oh, you need to talk to 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 counsel,’’’ Chris said. He stressed that in his experience, counsel was actually thrilled be engaged and take part in problem-solving conversations.

The concept of “Yes, and” was also brought to bear on perceived obstacles. 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 the great idea.

### Ingredients for CINO Success

Chris’ comfort with pedagogy and background in improvisation have been crucial tools in his work. For any CINO, though, he says it’s 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 supposed to, ‘Let me just talk in bullet points,’” Gerdes says: “We are made up of a lot of different agencies here in the Department of Transportation and some of them are much more mature in their thinking than others. The FAA, for instance, their idea generation is pretty good. But what they’re struggling with is, “Now, how do we actually take that first step?” […] Whereas some of the other agencies, the Maritime Administration and Automation, for instance, they’re asking, ‘How do we start to think of ideas? How do we think about possible things that we can do?’”

### Why a CINO is Essential

Innovation can't be an add-on; it has to be core to an agency’s mission, argues Gerdes: “It can't be an "other duty as assigned," or an add-on -- it needs to be somebody's job.” At the same time, he observes, there are numerous people with different titles related to innovation here across DOT. His goal is not to consolidate innovation solely under him, but rather act as a connector and enabler, offering to build a network across stovepiped portfolios and sending the message that he is a resource to help others do their job.

But Gerdes’ “outsider status” has allowed him to push breakthroughs in ways of thinking. “People here are so smart, so dedicated,” he says. “[But] they do get locked into patterns of the ways that 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.’” Actually, Chris says, “I didn’t do much. [They] were [already] thinking that way. I just pointed [something] out.”

**Read more:**  [Where Does USDOT Fit in with Innovation?](https://www.transportation.gov/fastlane/innovation-month-here-where-does-usdot-fit) Blog post by Chris Gerdes

**Listen:**  [HHS, DoT making the buzz around innovation a reality](http://federalnewsradio.com/ask-the-cio/2016/07/hhs-dot-making-buzz-around-innovation-reality/) (July 2016 interview)

**Watch:** [Culture of Innovation](https://connectdot.connectsolutions.com/p6e3ao619f2/?launcher=false&fcsContent=true&pbMode=normal) (1 hour webinar led by Dr. Gerdes)

## Ann Mei Chang – CINO and Executive Director, U.S. Agency for International Development (USAID) Global Development Lab

### Background and Scope of Role

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 20x growth of Google's mobile business in just three years, and delivered over $1 billion in annualized revenues.

Ann Mei was recruited as the first Executive Director for the Global Development Lab (the Lab). The title of Chief Innovation Officer came later when the office became vacant. The Lab was established in April 2014. Its mission is to apply science, technology, innovation, and partnership to accelerate development impact through two primary pathways:

1. Using open and directed innovation to produce breakthrough development innovations that are sourced, tested, and scaled solutions with proven impact; and
2. Catalyzing 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.

### Key Accomplishments

In a short period of time, the Global Development Lab has begun to transform the Agency’s work – through building internal capacity for science, technology, and innovation while deepening the impact of partnerships. In 2014 alone, the Lab leveraged $1 in private funds for every taxpayer dollar spent. From a USAID investment of $8.7 million, over $48 million was leveraged through six partnerships, including from impact investors, high net-worth individuals, and other donors — to support the growth and acceleration of early stage enterprises in developing countries. That same year, the Lab received over 3,700 applications and invested in 362 new solutions to food security, health, climate change, energy, and economic growth challenges that improved the lives of 13.7 million people. USAID’s Grand Challenges for Development received 2,058 applications and funded 86 solutions — a third coming from developing countries. [[Lab Year in Review](https://www.usaid.gov/sites/default/files/documents/15396/LYR_final_Web_1112.pdf)]

### How She Leads Innovation

Ann Mei describes the Global Development Lab’s role as leading a three-stage innovation process: Disrupt, develop, and mainstream. Disruption is sourcing new ideas for innovations for tools or approaches that could be transformative. The goal is to test as many things as possible, as quickly as possible, to figure out which are useful. Failure is common and expected at this point. At the develop stage, a subset of early stage successes are identified, and the Lab works with missions and the rest of USAID to apply them to the agency’s most pressing problems – commonly by embedding elements in existing programs. In this stage, the goal is to gather evidence that the innovation can have positive impact on the agency priority. Idea iteration and refinement continues, and eventually the successful and validated concepts are mainstreamed into standard best practices. Chang notes that some innovation teams focus too heavily on the “disrupt” phase; the Lab emphasizes the whole life cycle, to ensure that impactful innovations are integrated into the agency.

Chang believes that “up and coming” new things tend to get over-emphasized when considering innovation: “That’s the flashy part, but not the substance part. It’s much more about culture change, the systems change, and incentive change.” Instead, she says, “What we’re trying to do at the Lab, in this particular space, is really look at how do we change the culture -- the culture of the agency, the systems, the incentives and the mechanisms -- so that we can be more agile, and open, and adoptive and data driven with the result being more cost-effective and sustainable solutions.”

“Often,” Ann Mei observes, “We think of innovation as the *thing* we’re trying to do -- and so we have these hackathons, or this contest, so we can innovate and come up with something that no one has thought it before. But I come from the stance that most of the good ideas that can 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 and help them thrive and become mainstream so that they can have the impact that they can?”

### Why a CINO is Essential

If the agency’s top priority is delivering stronger results for the dollar, Chang argues, innovation is absolutely key to continue to move the needle: “Otherwise, most organizations have a tendency to stick with the lower risk, the incentives are all just stick with the tried-and-true stuff that you won’t get in trouble to do.”

Agency leadership faces so many different pressures, it’s key to have an innovation leader focused on building momentum for innovation and constantly trying to bend the curve in its direction. Even better yet to have a separate innovation team, as USAID does – because it generates more critical mass, bringing together best practices, and helping to evangelize across the organization. “It’s much harder,” she observes, “When people are trying to work in isolation to push the boulder up a hill rather than trying to build it up together with a little bit of critical mass.”

## Matthew Dunne, various roles, Department of Energy (DoE)

### Background and Scope of Role

While not specifically a Chief Innovation Officer, Matthew Dunne played two key innovation leadership roles at the Department of Energy. He was hired from the private sector, with a background in big law firm work doing international business litigation and counseling. He first served as the Acting Chief Counsel for then-nascent ARPA-E (Advanced Research Projects Agency for Energy) from 2010 to 2012. His transformative work in launching ARPA-E and codifying effective processes was recognized both internally by DOE and externally by industry, leading to his recruitment by the Assistant Secretary at Energy Efficient and Renewable Energy (EERE) to lead a comprehensive transformation of EERE.

### Key Accomplishments

He helped successfully launch ARPA-E, functioning (with support of agency leadership) as the acting COO for a startup. There’s no handbook on how to launch an agency, but Matthew oversaw the creation of its organizational structure.

When Dunne came on board, ARPA-E had a small staff and had only been in existence for less than a year; there was no regular annual appropriation, but instead $400 million had been allocated through the Recovery Act. All agency resources were focused on launching the first funding solicitation, and then winnowing approximately 3700 applications to about 30 or so projects that received funding.

As a result of Dunne’s process institution and document template creation, EERE was able to achieve contracting for most awards at a speed of roughly 60 days, which received critical positive reception in industry.

At EERE, Dunne was tasked with transforming agency culture. A lack of up-to-date manuals or documentation had created wide variation in processes within the agency, especially across different field offices. Overseeing the largest voluntary reorganization in EERE's history, Dunne consolidated multiple offices and established clear lines of authority with clear reporting chains. Hundreds of employees were classified with common titles and common job descriptions. The harmonization of the agency reaffirmed its common mission and brought a more coherent set of processes to its work.

### How He Led Innovation

Dunne’s time at ARPA-E focused on business process creation and from-scratch documentation.

*“I had to just dive into 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,” Dunne said. “Multiple responsibilities were outside the legal realm such as NEPA Compliance Officer, audit liaison, record official, unsolicited proposal coordinator. I just put a lot of hats on my own head. The idea was not to accumulate power, but instead 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 time, frankly, 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.”*

Stepping into EERE, Dunne’s tasking, from the Assistant Secretary, “was to change as much as possible, with a preference towards changing everything as quickly as possible." Managing culture change became an integral of Dunne’s portfolio. Sensing disconnects between executive leadership and staff and between DC headquarters and regional field offices in West Virginia and Colorado, he undertook a comprehensive listening tour with the Assistant Secretary. The listening tour took over 20 sessions; he met with over 800 federal employees and contractors on Colorado, West Virginia and DC. It sourced tremendous insights for how the agency could be functioning more effectively and, crucially, it also built trust and support with career staff.

### Ingredients for CINO Success

Being directly empowered by the Assistant Secretary was critical to his success in transforming the agency. But beyond support from the very top leadership, career SES support is essential, and ideally, a consensus will exist among SES leadership that there are discrete areas for agency improvement. Political appointments inherently have shorter tenures; without career staff buy-in, you'll lose the war even if winning a battle. For instance, to grow a culture of innovation, it’s vital that that SES specifically authorize employees to invest time in deep participation with communities of practice. It’s also critical that political appointees receive extended support and training on government procedures to facilitate effective implementation.

### Biggest Challenges

The thorniest obstacles for culture change pertain to the difficulty in helping to shift HR, IT, legal, and contracting from a culture of compliance and towards the culture of performance. A culture of compliance is characterized by an emphasis on stringent rules and punitive measures. “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 the 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 (but legal) approaches.

For instance, Dunne explains, the FAR (Federal Acquisition Regulations) in actuality 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, “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 their full understanding of what the customer is trying to achieve then you give that customer five different options of how to achieve that.”

“I would tell my customers at ARPA-E or EERE […], “Look, treat me as a travel agent. You explain to me that you want to go to San Francisco, and maybe you want to have a non-stop, but you have to be pathway agnostic; you can’t ask for a non-stop. 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 on a red-eye, if I’m going to fly you to 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.”

### Why a CINO is Essential

Dunne argues that a CINO or equivalent role is essential, given the existing capacity constraints on both human and financial resources. Many staff find themselves piled with multiple responsibilities on top of their normal duties. Without someone dedicated full-time to working on innovation and pushing it, he believes, it’s difficult to realize effective change.

A CINO can be key for breaking down organizational silos, particularly where agency areas are highly segmented with little interaction. Bell Labs was so successful, Dunne says, because everyone ate lunch together in the same cafeteria. Studies have documented that this small detail – the 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 says. “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 ways and what you envision.”

**Read More**: [The Quiet Clean Energy Innovation Revolution at the Department of Energy](http://www.forbes.com/sites/matthewstepp/2013/01/07/the-quiet-clean-energy-innovation-revolution-at-the-department-of-energy/%234f48649a6c98)

# Challenges and Lessons Learned

Key ingredients for successful CINO roles include:

* [Strong support from leadership to embed CINOs within agency structure](#_dp0j05jnmn4b)
* [Clear role definition, empowered with authority and connected to the mission](#_in0nl0l990nn)
* [Flexibility can be both a feature and a bug](#_f3fh49nhjc83)
* [Managing risks of personality-driven change](#_spfrxb257cpi)
* [Realistic expectations for cultural change management](#_dd6eflirxzw4)

## Strong support from leadership to embed CINOs within agency structure

The role of chief innovation officer cannot be created and then abandoned to succeed on its own; a critical lesson from past CINOs is that support is needed from the top of the organization. Otherwise, agencies run the risk of creating an island of innovation that no one listens to or takes seriously. Clear expectations and firm support from the leadership is essential for the innovation officer to work credibly with other parts of an organization, notes Bryan Sivak (HHS).Without explicit and visible support, CINOs run the risk of being “[window dressing.”](http://www.forbes.com/sites/frederickallen/2012/04/03/most-chief-innovation-officers-are-just-window-dressing)

Leadership and the CINO him/herself also need to understand and look for a supportive context, including bringing in outside voices to mediate and support innovation in discussions with general counsel and contracting officers. Staff from the Office of Science and Technology Policy are available to support in this capacity.

## Clear role definition, empowered with authority and connected to the mission

“When a government leader creates a role like a [CINO] and defines it too broadly,” Jen Pahlka comments, “It’s 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. Too much structure and overly prescriptive solutions seem to be the problem, so 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. In creating a CINO role, senior leadership needs to ensure the position has a direct connection between responsibilities and actual authority to execute on strategy and innovation. It’s also essential that innovation champions have metrics and measurements for tracking success that are also in alignment with agency priorities.

## Flexibility can be both a feature and a bug

While the CINO role requires flexibility, there can be too much ambiguity. This is complicated by the fact that no fully standard definition exists for what a CINO should actually do in either the public or private sector. One former CINO reports that reputation as an innovator preceded him, leading some in his agency to look to him to be the main idea generator – but it’s broadly agreed by CINOs that this is *not* the responsibility of the chief innovation officer.

In another agency, an informant notes, “The role of CINO has morphed a lot. The title is a misnomer, because people tried to develop a set of authorities, but connections need to be made so that it is not an enigma. […] Defining the role and how it has accrued to the rest of the organization would be meaningful.”

## Managing risks of personality-driven change, or, ensuring sustainability with turnover

As with many leadership positions, the personality of an individual CINO indelibly shapes their portfolio. But where success is too reliant on a particular personality, progress may stall or end when the individual leaves. The challenge for both CINOs 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.

## Realistic expectations for cultural change management

Successfully building an innovation culture remains [one of the CINO’s main challenges.](http://www.innovationmanagement.se/2015/12/01/3-key-challenges-for-the-cino/) Change management in government takes time – often, more time than in the private sector. 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 5 minute change is a bit more complicated – and extreme frustration can ensue. “There's a sweet spot between wanting to see change and wanting to see change occur in a reasonable time frame, but not being so impatient that you lose your ship,” observes Tom Kalil, deputy director at the Office of Science and Technology Policy.

On the other hand, senior leadership can bring their own unrealistic expectations on the timeline for innovation management. Clayton Christensen’s concept of “[the ticking clock”](https://hbr.org/2013/03/the-case-for-stealth-innovation) (the deadline for creating results) is described in Scott Anthony’s *Little Black Book of Innovation*: “You never know quite how fast the clock is ticking,” Anthony writes, “or when the alarm is set, but you can be darn sure that at some point, it will ring….If that moment comes and all you have is potential, you’d better start polishing your résumé.”

# How to Create a CINO Role

Here’s a few items that can help Departments or agencies hire a Chief Innovation Officer:

* Checklist for defining CINO role
* Traits of effective CINOs
* Key lessons learned for setting up a CINO to succeed
* Guidance and various pathways for hiring

## Checklist for defining a CINO role

1. **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.
2. **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. (Dr. Chris Gerdes at DOT created his own.) [[pending]]
3. **…But 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](https://hbr.org/2013/05/why-the-lean-start-up-changes-everything) 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.” [Harvard Business Review]

## Traits of effective CINOs

Chief Innovation Officers are not cookie-cutter positions; each department and operating agency has its own context. The specialty skills that your individual CINO candidates bring should align with the high-priority needs of the agency. If technological change is at the top of your agenda, prioritize candidates who bring product design and development experience with a background in high-tech centers (Silicon Valley, New York, etc.) If the overriding concern is to suffuse innovation culture within the organization, then prioritize a candidate with a strong sense of empathy, and thoughtfully consider where they would be best positioned in the organizational structure to work within the agency culture.

Broadly speaking, here are the key traits of an effective CINO candidate:

* Background: Often sourced from outside of government
* Diverse range of key skills can include:
  + Standard behavioral or managerial skillset;
  + Strategy tools and skills;
  + Change agent skills, or, an understanding of the process of change management;
  + “Creative and innovative” skill set, with a unique mindset and outsider mentality;
  + Knowledge in systematic innovation methods (i.e. analogous thinking skills) and integrative thinking skills (salience, causality, sequencing, resolution);
  + Ability to focus on problem-solving as well as problem-*finding.*

*[Sources:* [*“Roles and Skills of CIO” - Intel innov mgr slideshare*](http://www.slideshare.net/rplatt/roles-and-skills-of-a-chief-innovation-officer-final)  *+* [*2007 HBR article “How successful leaders think*](https://hbr.org/2007/06/how-successful-leaders-think)*”]*

According a [Harvard Business Review’s assessment of chief innovation officers](https://hbr.org/2014/12/what-it-really-means-to-be-a-chief-innovation-officer), the most successful innovation leaders do two things:

1. They measure their actual impact, even though identifying accurate metrics can be difficult;
2. They do not prematurely settle on identifying those metrics; they begin with flexibility in their role and take the needed time (often a year or longer) to define success metrics -- which often need to go beyond process measures.

Personal leadership style also matters. The role demands passionate belief in the mission, optimism, and perseverance: A shared characteristic among HHS’ recent CTOs has been an “unfair advantage of total joy and belief that we’re on the path," Susannah Fox explains. “My favorite definition of an entrepreneur is someone who goes towards a goal without regard for the resources they currently control.” She laughs: “Boy, does that describe this job. You're given no money and a very small staff, and being asked to tackle 18 different agendas at the same time. You have to have an inner drive that no one can extinguish."

## Lessons learned for Setting a CINO up to Succeed

The following are vital insights sourced from current and former CINOs and senior agency leadership who have seen the CINO position both flourish and fail depending on agency implementation:

* **Use a buddy system.** If bringing in an external candidate to lead innovation, strongly consider pairing them with SES staff who can help them navigate the learning curve of getting things done in the government. Make sure this “buddy” has strong credibility within the organization, and have them “joined at the hip” with your CINO.
* **Physical proximity and face time matters.** A minor but essential element reported by several CINOs was proximity. Simply having their office located near a deputy or assistant secretary was important to being integrated into the agency’s work. The true, practical metric for senior leadership support is not an expression of commitment to innovation, but whether or not the CINO can easily get on leadership’s calendar.
* **Bring in outside support**. Agencies with a strong track record of success in mainstreaming innovation with the use of Chief Innovation Officers have used senior leadership in other agencies (e.g. OSTP) to help mediate and support CINOs as they discuss potential changes with general counsel and contracting officers.

# Future States

## Questions to ask CINO candidates

A strong shared vision between leadership and CINO candidates is ideal. Ask your candidates to take an active role in a conversation in co-creating the position’s responsibilities. Additionally, consider asking the following questions:

* “How do you plan to take on entrenched interests to drive core innovations as opposed to innovation around the edges?” [Source]
* “Innovation can be fuzzy, unpredictable, and prone to failure. What are realistic goals and metrics for success for this agency in the next 12 months?”
* “How can we change the culture in the next five years so that innovation is expected, and not mandated from the top?” [[Source](http://www.game-changer.net/2015/01/09/will-chief-innovation-officers-still-exist-five-years/)]
* “How prepared are you for the humbling realities of introducing change in the government?”

# Relevant Policies

## Intergovernmental Personnel Act (IPA)

IPA is a powerful but commonly misunderstood policy. Under the IPA, personnel from other Federal agencies, state and local governments, colleges and universities, Indian tribal governments, Federally funded research and development centers (e.g., national laboratories), and other eligible organizations can be recruited to serve in a temporary position. The initial term can be up to two years, but it can be extended for another two years. The assignment may be reimbursable (e.g., the host agency reimburses all salary costs, travel, and administrative costs) or non-reimbursable.

Office of Personnel Management (OPM) offers the following guidance:

# Additional Resources

**Contact**

Department leadership interested in a dialogue about how a CINO can help achieve agency priorities can contact [NAME], [TITLE] for OSTP at [EMAIL].

**Further reading:**

**To inform priorities in the search process:**

[“How Successful Leaders Think”](https://hbr.org/2007/06/how-successful-leaders-think) (HBR, 2007)

[“Top Five Skills a CINO Needs”](http://philmckinney.com/the-top-5-skills-a-chief-innovation-officer-needs/) (Phil McKinney)

[Roles and Skills of a Chief Innovation Officer](http://www.slideshare.net/rplatt/roles-and-skills-of-a-chief-innovation-officer-final) (Richard Platt, former Intel Corporate Innovation Program)

**For more background on the CINO role in state/local governments and the private sector:**

[“Will the Chief Innovation Officer Transform Government?”](http://www.govtech.com/e-government/Will-the-Chief-Innovation-Officer-Transform-Government.html) (GovTech, 2013)

[“Chief Innovation Officers: Do they deliver?”](https://washingtontechnology.com/articles/2015/01/08/insights-bittmann-finding-innovation.aspx) (Pew Charitable Trusts, 2015)

**Read further:**

“[The CIO Problem Part II: Innovation](https://medium.com/code-for-america/the-cio-problem-part-2-innovation-af24ebc038e5%23.uzhh54ym5)” (Jen Pahlka, May 2016) – insights on challenges for CINO role

[“A CINO’s Actual Responsibilities”](https://hbr.org/2014/11/a-chief-innovation-officers-actual-responsibilities) (HBR, 2014) – on corporate CINO structure

[“What it Really Means to be a Chief Innovation Officer”](https://hbr.org/2014/12/what-it-really-means-to-be-a-chief-innovation-officer) (HBR, 2014)

[“Rise of the Innovation Officer”](http://info.theinnovationenterprise.com/rs/innovationenterprise/images/Rise-innovation-officer.pdf) (Innovation Enterprise) - 11 page white paper summarizing the critical roles played by CINOs in the private sector

[“Finding Innovation”](https://washingtontechnology.com/articles/2015/01/08/insights-bittmann-finding-innovation.aspx) (Washington Technology, 2015) - Some useful discussion on CINO roles

[2015 Global CIO Survey, Deloitte.](http://www2.deloitte.com/uk/en/pages/technology/articles/cio-survey.html) – Though focused on CIOs, their insights on role taxonomy is relevant for CINO portfolios as well

**Additional References:**

[*Fourth Generation R&D*](https://en.wikipedia.org/w/index.php?title=Fourth_Generation_R%2526D&action=edit&redlink=1), Miller, W. and Morris, L. Fourth Generation R&D - Managing Knowledge, Technology, and Innovation, Wiley, 1998. [first time “Chief Innovation Officer” used]