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**Deep Dive Case Study - Health and Human Services**

**Outline:**

1. Introduction and agency background
2. Blueprint/outline of agency/department innovation portfolio
3. Organizational culture and context
4. Future directions

**1. INTRODUCTION AND AGENCY BACKGROUND**

In recent years, the U.S. Department of Health and Human Services (HHS) has been an exemplar of how a large department can begin to build a culture of continuous learning and an environment where new ideas are welcomed. While innovative initiatives have occurred across the Department, the IDEA Lab has been the institutional home for much of the Department’s innovation activities. Recognizing that good ideas can come from anywhere, the Lab has worked to both spur internal innovation and source external ideas and talent to bring good ideas to life. Transformational leadership has both driven change from the top while also genuinely empowering those on the front-lines to initiate and enact change. The Department has elevated employee-driven work through a number of new initiatives while also creating structures that foster Department-wide collaboration. HHS’ work to seed a culture of innovation demonstrates the value of experimenting with new approaches, starting small with pilots, and rewarding and recognizing those who step up as collaborators and innovators.

### A. Mission, goals, objectives of the agency

The U.S. Department of Health and Human Services (HHS) is the nation's principal agency for protecting the health of all Americans and providing essential human services. HHS is responsible for almost a quarter of all Federal government expenditures and administers more grant dollars than all other Federal agencies combined. The Department manages programs that cover a broad array of activities that impact health, public health, and human services outcomes throughout the life span. [“[Strategic Plan: Introduction](https://www.hhs.gov/about/strategic-plan/introduction/index.html),” Department of Health and Human Services, 2014.]

### B. Brief recent history of the agency

Established in 1979 from the Department of Health, Education, and Welfare, historical highlights of HHS have included the publication of the sequence for the human genome in 2000 and the creation of the Office of Public Health Emergency Preparedness in 2002. [“[HHS Historical Highlights](https://www.hhs.gov/about/historical-highlights/index.html),” Department of Health and Human Services, 2014.] Innovation initiatives at HHS comes mostly out of IDEALab, whose work is split across several programs that tackle spurring internal innovation, sourcing external talents and solutions, and building communities of practice.

**Recent History of Innovation at HHS:**

*sourced from:*[“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

2009:

* Todd Park appointed Chief Technology Officer (CTO) at HHS

2010:

* First Health Datapalooza convenes at the Institute of Medicine in Washington, D.C.
* HHS releases Open Government Plan 2010 in response to White House’s Open Government Directive
* HHS Innovates Awards program celebrates its first round of innovative solutions

2011:

* Healthdata.gov launches with 30 datasets
* America COMPETES Reauthorization Act of 2010 is signed into law
* First challenge is implemented under HHS Competes to source solutions from the public
* Health Data Leads are established across all HHS Operating Divisions

2012:

* [HHS Innovation Council charter approved](https://www.hhs.gov/idealab/wp-content/uploads/2014/05/Approval-of-the-HHS-Innovation-Council-Charter-091812.pdf)
* Bryan Sivak starts as HHS CTO
* Office of Business Management and Transformation is designated as IDEA Lab partner
* First Entrepreneur-in- Residence is recruited through the HHS Entrepreneur-in-Residence program

2013:

* The HHS IDEA Lab is born; the team gets office space and launches a new website
* The Ignite Accelerator solicits employees’ ideas to improve their work and supports its first round of teams
* HealthCare.gov goes live. Technical problems plagued the site, spurring exploration of Federal IT acquisition processes

2014:

* The HHS Ventures Fund selects first round of investment
* The HHS Buyers Club forms to modernize acquisition methods and completes first solicitation and award

2015:

* Susannah Fox starts as HHS CTO
* The Centers for Disease Control and Prevention and the Health Resources and Services Administration launch internal accelerator programs

2016:

* Invent Health Initiative kicks off with a town hall meeting to explore innovation in medical and assistive technology
* HHS IDEA Lab included in White House Impact Report of top 100 examples of President Obama’s Leadership in Science, Technology, and Innovation

2017:

* HealthData.gov reaches 3,000 datasets openly available to the public

[“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

C. Relevant leadership and positions

*Sourced from:*[“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

Tom Price is the secretary-designate of HHS. The two prior secretaries were Sylvia M. Burwell (2014-2016) and Kathleen Sebelius (2009-2014). The development of the HHS IDEA Lab is attributable to the work of three consecutive Chief Technology Officers at HHS: Todd Park, Bryan Sivak, and Susannah Fox.

Additionally, the Executive Director for Innovation in the Immediate Office of the Secretary at HHS, most recently Gregory Downing, has partnered with the CTO to lead the organizational change management needed to institutionalize business process innovations.

### 2. MAPPING HHS’ INNOVATION ECOSYSTEM

**Defining the innovation landscape at HHS**

Several other noteworthy innovation initiatives have grown within agencies across the Department. The Centers for Disease Control and Prevention, for example, manages an i-Fund to support the design and development of new innovations which show promise for making a substantial impact on public health and their mission delivery. In 2016, CDC launched an internal accelerator to support the growth of early stage ideas. Similarly in 2015, the Health Resources and Services Administration launched a discovery program to support problem exploration and prototype development. The primary hub for innovation at HHS, however, emanates from the IDEA Lab.

The IDEA Lab, established in 2013 by the HHS Secretary, broadly promotes the use of innovation, technology, and open data as a framework for achieving HHS’ mission of enhancing and protecting the health and well-being of the public. The vision of the IDEA Lab is a modern, effective government that is responsive to the needs and challenges of today and tomorrow. IDEA Lab initiatives are intended to “empower internal innovation, tap into external talent and creativity, and build collaborative communities to tackle cross-cutting issues of strategic importance.” [“[About Us](https://www.hhs.gov/idealab/about/),” Department of Health and Human Services Idea Lab, 2016.] The Lab creates a space (both in terms of a physical location and in terms of opportunity) to facilitate the freedom to play, ideate, and experiment in pursuit of improving the health of all Americans.

The components of the IDEA Lab are designed to comprise a structured set of environments to support innovation at different stages along the Innovation pipeline. The Lab has supported and trained hundreds of employees in design thinking and lean startup, and in doing so, identifying and gathering a community of innovators across the Department dedicated to working effectively and smarter. The IDEA Lab also maintains a listserv to provide a space for these individuals and interested Federal employees to connect and share resources.

Former CTO Bryan Sivak describes the three main strategies employed by HHS in the IDEA Lab as follows:

* **Supporting innovators from within:** identifies, celebrating, and encouraging internal innovation by employees
* **Bringing new ideas and concepts from outside the walls of HHS:** increasing the engagement of innovators from outside the HHS to help tackle important challenges faced by the Department in fulfilling its mission
* **Mobilizing communities of practice:** Building communities of practice to work on discrete challenges or ongoing, cross-cutting initiatives that require creative thinking and new solutions

# [Sivak, B., “[Implementing a department-wide innovation strategy: An interview with Bryan Sivak, Chief Technology Officer, U.S. Department of Health and Human Services](http://govinnovator.com/bryan_sivak/)”, GovInnovator Podcast, August 20th, 2014.]

Specific initiatives within these three strategy areas include:

**Supporting innovators from within:**

* **The HHS Ignite Accelerator** is an internal innovation startup program
* **The HHS Ventures Fund** invests in and supports bold ideas to transform Departmental operations
* **The HHS Innovates Awards** identifies and celebrates innovative solutions developed by employees.

**Bringing new ideas and concepts from without:**

* **The HHS Entrepreneurs-in-Residence Program** is designed to recruit outside talent to solve complex problems in health and the delivery of human services.
* **HHS Innovators-in-Residence Program** is designed as a partnership with private, non-profit organizations to explore areas of mutual interest.

**Mobilizing communities of practice:**

* **The HHS Buyers Club** is intended to modernize IT acquisition by testing new methods.
* **The Health Data Initiative** is designed to make available to the public health & social service data gathered by HHS
* **HHS Competes** leverages incentive prize competitions to source external solutions.
* The **Invent Health Initiative** is designed to empowering inventors to create tools for better living and better clinical care.

### [“[The HHS Idea Lab: Where Ideas and Opportunities Generate Impact](https://www.hhs.gov/idealab/),” Department of Health and Human Services Idea Lab, 2016.]

**SUPPORTING INNOVATORS FROM WITHIN**

*Section sourced directly from:* [“[Ignite Accelerator](https://www.hhs.gov/idealab/ignite-accelerator/),” Department of Health and Human Services Idea Lab, 2016.]

**Ignite accelerator.** The HHS Ignite Accelerator is an internal innovation startup program for staff within the Department seeking to improve the way their program, office, or agency works. The program is designed to provide selected teams methodological coaching and technical guidance within a fast-paced, entrepreneurial framework. [“[Ignite Accelerator](https://www.hhs.gov/idealab/ignite-accelerator/),” Department of Health and Human Services Idea Lab, 2016.]

Core Principles of Ignite

Ignite is designed to support the exploration and testing of ideas that promise to modernize government and improve the Department’s ability to carry out its mission. The goal of each Ignite team, during the course of the program, is to validate (or invalidate) the business value of their idea through a series of small but useful tests. The outcome of each Ignite project is usually no more than a low-resolution prototype or a minimally viable product (MVP) that hasgone through “beta-testing” with actual end-users, although some projects may go further.

The Ignite Accelerator is intended for small teams. Most teams come with an idea. However, submissions must come from individuals with nascent ideas. Selected teams receive the following resources:

* Coaching and individualized mentorship
* Access to a larger network of innovators and technical advisors
* On-the-job exposure to design techniques and entrepreneurship methodologies
* Resources to help teams explore their project and test their idea.
* A multi-staged program

[“[Ignite Accelerator](https://www.hhs.gov/idealab/ignite-accelerator/),” Department of Health and Human Services Idea Lab, 2016.]

How It Works:

First, an HHS employee submits an online application that provides background on the area being explored, information on the project idea itself, and some information on the people that might make up the core team. Applicants are selected on the basis of their proposal submission and the pitch to HHS IDEA Lab staff. Selected applicants are admitted into the HHS Ignite program as finalists.

From the pool of finalists, selected teams receive further design and entrepreneurship training and then have 3 months of support to further explore their project and test out their idea with real users/customers. At the end, these teams get to pitch their idea directly to Department and Operating Division Leadership.

At the end of Ignite, teams pitch to Leadership for continued funding and support. It is up to the team to secure this funding and support for the next phases of their project. A handful of teams may find themselves eligible for to pitch for support from the HHS Ventures Fund, also run out of the IDEA Lab.

[“[Ignite Accelerator](https://www.hhs.gov/idealab/ignite-accelerator/),” Department of Health and Human Services Idea Lab, 2016.]

Types of Ignite Projects

Examples of some types of projects that could be supported by Ignite include:

* Simplifying an existing processes
* Modernizing a product or service being delivered
* Testing out new tools and technologies
* Improving internal policies and procedures
* Making something
* Experimenting with a new management style or organizational structure
* Trying something completely new

[“[Ignite Accelerator](https://www.hhs.gov/idealab/ignite-accelerator/),” Department of Health and Human Services Idea Lab, 2016.]

**Ignite Accelerator Example: Reducing Wait Times at the Whiteriver Indian Hospital**

*Sourced directly from:* [“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

The number of emergency room visits the Whiteriver Indian Hospital experiences in a year is four times more than expected for a hospital of its size. As a part of the Indian Health Service (IHS), the Whiteriver Indian Hospital provides health care for Native Americans in the White Mountains of Arizona. In 2014, patients at Whiteriver experienced wait times so long that 25% of patients left without being seen.

A team from IHS applied to the Ignite program to find ways to reduce wait times. After being selected, they learned rigorous entrepreneurial methods and were coached as they tested and iterated their solutions.

The team’s first idea, an electronic kiosk, was found to be inappropriate for their elderly population. They learned that their second idea, a paper-based form, would violate the Emergency Medical Treatment and Active Labor Act. Their third idea was a winner: situating a physician to triage patients at intake. In their test of that new model only 1.25% of patients left without being seen, a near 100% reduction from their original system. At the end of Ignite, the team proved to their Leadership the need for this system and the renovations to support it, creating $6 million in annual revenue for the hospital and a more efficient care experience for the population they serve.

**Ventures Fund**

*Section sourced directly from:* [“[Ventures Fund](https://www.hhs.gov/idealab/ventures-fund/),” Department of Health and Human Services Idea Lab, 2016.]

The HHS Ventures Fund is designed to provide growth-stage funding and support to HHS employees with innovative ideas for how to dramatically improve their Office, Agency, or the Department’s ability to carry out its mission. The Ventures Fund gives Department employees the opportunity to take a proven but still early-stage idea to the next level of implementation.

The HHS Ventures Fund 2016 investing partners include

* Immediate Office of the Secretary, HHS
* Centers for Disease Control and Prevention, Office of the Director
* National Institutes of Health, Office of the Director
* National Institutes of Health, National Cancer Institute
* Food and Drug Administration, Office of the Commissioner
* Centers for Medicare & Medicaid Services, Office of the Administrator

Recipient of HHS Ventures funding may receive:

* Up to a maximum of $100,000 to go towards your project (you pitch for what you want)
* Up to 15 months of support (as defined by the proposal)
* A suite of tools typically not available to staff (e.g. Secure Cloud)
* Guidance and technical support specific to project implementation needs (EPLC, PRA, etc.)

What HHS Ventures Requires

* A time commitment of at least 50%. This is particularly true for the Project Lead. Other team members may be less depending on their role.
* Teams are generally able to operate freely on their own and manage their project through their own milestones. However, regular check-ins and reporting requirements do exist to keep the IDEA Lab staff aware of progress.

Types of projects supported by the Ventures Fund include

* Scaling and/or operationalization of tried and tested innovations.
* Disruptive to internal operations
* “Riskier” projects

[“[Ventures Fund](https://www.hhs.gov/idealab/ventures-fund/),” Department of Health and Human Services Idea Lab, 2016.]

The stated intent of the Ventures Fund is to support projects that cut across the Department or have the very near-term potential of scaling across the Department. Unlike the Ignite Accelerator, the Ventures Fund is not designed for exploring nascent project ideas. All projects applying for Ventures Funding should have been prototyped and tested in some capacity and thus have had sufficient evidence that it’s a good idea worth investing in. During the pitch, leaders of the Ventures Fund will ask applicants to demo a beta product (if it’s a product) or walk “investors” through the early version of the new service or process (if it’s a service or process being proposed).

Projects supported by the Ventures Fund are generally managed and implemented using core principles and methodologies espoused by the IDEA Lab. These include iterative implementation, customer engagement throughout the process, and transparent task-tracking towards major milestones.

[“[Ventures Fund](https://www.hhs.gov/idealab/ventures-fund/),” Department of Health and Human Services Idea Lab, 2016.]

**The HHS Innovates Awards**

S*ection sourced directly from:* [“[Innovates Awards](https://www.hhs.gov/idealab/innovates-awards/),” Department of Health and Human Services Idea Lab, 2016.]

The objective of the HHS Innovates Awards is to identify and celebrate innovative solutions developed by employees. The Awards are part of a larger effort to building a culture of innovation at the Department of Health and Human Services through facilitating the exchange of innovative ideas and showcasing creative approaches developed by HHS employees to solve tough problems. This program is designed to recognize and reward employee-led innovation, and helps to spread promising solutions across the Department and beyond.

As part of the mission of the HHS IDEA Lab to identify, enable and catalyze innovation and experimentation, HHS Innovates celebrates those HHS employees who think differently and take risks. The celebration of those employees who adopt new methodologies, collaborate, and are creative in problem solving is helping to spread culture change and build a network of innovators and experimenters internal to the Department.

Annually, HHS employees are encouraged to submit innovative solutions they have developed or nominate the work of their colleagues. The top innovative solutions are showcased for employee voting and promoted in the media. Meritorious innovators receive recognition. Winning innovators are personally recognized by HHS leadership in an awards ceremony, and have an HHS Innovates certificate included in their performance file. Innovative solutions receive broad exposure across HHS and in the media.

[“[Innovates Awards](https://www.hhs.gov/idealab/innovates-awards/),” Department of Health and Human Services Idea Lab, 2016.]

**Innovate Awards Example: The 100K Genome Project**

*Sourced directly from:* [“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

One in six Americans is sickened by foodborne illness each year, yet many outbreak events are never linked definitively to a food source or agent. The Food and Drug Administration and the National Institutes of Health (NIH) leveraged a public-private partnership to empower the public to help. In 2013, the partnership sequenced the genetic codes (genomes) of 100,000 strains of important food pathogens, such as Salmonella, and made them available in a free and public database at NIH’s National Center for Biotechnology Information. This project was awarded an Innovates Award in March 2013 for its strategic partnership and commitment to open data and innovation. The sequencing and publication of the genomes has empowered the development of tests that identify a bacterium at a much faster rate than current methods permitted.

**BRINGING NEW IDEAS AND CONCEPTS FROM WITHOUT**

**Entrepreneurs-in-Residence Program**

*Section sourced directly from:* [“[Entrepreneurs-in-Residence Program](https://www.hhs.gov/idealab/eir-program/),”Department of Health and Human Services Idea Lab, 2016.]

The Entrepreneur-in-Residence Program recruits outside talent to work on complex challenges for a 13-month period. The Entrepreneurs-in-Residence Program describes itself as matchmakers between internal teams wanting to tackle a critical problem with skilled innovators who are looking to make a meaningful impact and can solve that problem. More than half of EIRs recruited are asked and choose to extend their appointment at HHS. As of January 2017, the program has supported 13 projects, 61 internal HHS intrapraneurs/staff (meaning innovators on the inside) and 16 EIRs who have worked throughout nine of HHS’ Operating and Staff Divisions.

The steps in the program are as follow:

1. **Step 1. Project Identified and Accepted**. An HHS team identifies a challenge that could benefit from external expertise.
2. **Step 2. Call for Entrepreneurs.** The HHS IDEA Lab announces and actively recruits entrepreneurs for the project.
3. **Step 3. Review applications**. Internal and IDEA Lab staff review applications.
4. **Step 4. Interviews.** Selected awesome candidates are invited to interview.
5. **Step 5. Final decision and onboard new EIR.** New Entrepreneur-in-Residence is invited to join HHS for a tour of duty.

[“[Entrepreneurs-in-Residence Program](https://www.hhs.gov/idealab/eir-program/),”Department of Health and Human Services Idea Lab, 2016.]

**Entrepreneurs-in-Residence Program Example: Creating an Electronic Tracking System for the Organ Transplantation System**

*Sourced directly from:* [“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

As of 2012, the organ procurement and transplantation process in the U.S. was entirely paper-based—one organ procurement required 30-70 hand-written labels and visual checks. As the agency responsible for increasing transplants and associated patient safety, the Health Resources and Services Administration (HRSA) knew the system needed to be modernized, but they needed additional expertise and a change agent to set them on the right path. HRSA teamed up with the EIR Program to recruit an entrepreneur and logistics expert from the United Parcel Service. After four months at HRSA, the Entrepreneur-in-Residence (EIR) and the team developed and deployed a prototype of a tablet, scanner, and hand-held printer in five states at 194 organ recoveries. After using the prototype, staff reported increased safety and efficiency and were thrilled to continue using and improving on the original prototype. The EIR was asked to stay an additional two years. After iterative testing and scaling, his solution—called TransNet—was implemented nationwide as the electronic system for tracking the nation’s organ transplantation system.

**Entrepreneurs-in-Residence Program Example: Applying Lean Thinking to Improving Efficiency at CMS**

*Sourced directly from:* [“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

In 2010, there was a growing desire to leverage data in electronic health records (EHRs) to use a tool called electronic clinical quality measures (eCQM) to track health care quality. The creation of a single electronic clinical quality measure, however, was a 3 to 5-year process involving measure developers, contractors, specialty societies, the National Quality Forum, several Federal agencies, providers, and patients. The Centers for Medicare and Medicaid Services (CMS) needed an entrepreneur to make the complicated yet important process more effective and efficient.

Teaming up with the EIR program, CMS recruited an entrepreneur classically trained in Chemical Engineering and who is an expert in Lean Thinking, a way of analyzing, organizing, and streamlining complex processes. After training over 150 CMS staff and other stakeholders in Lean Thinking, the Entrepreneur-in-Residence (EIR), Office of the National Coordinator for Health Information Technology (ONC), and CMS reduced the eCQM development time from 3-5 years to 1 year. The EIR’s work inspired interest in applying Lean to different areas of work, and an additional project that she spearheaded saved an estimated $650,000 per year by eliminating 8,700 hours in staff and contractor time with increased customer satisfaction.

The work didn’t end there. The EIR was asked to extend her appointment at CMS to continue spurring agency-wide culture change using Lean Thinking. With the support of the CMS Leadership, she teamed up with an employee from ONC who she trained - to start an office dedicated to Lean Culture Transformation at CMS.

**Innovator-in-Residence**

*Section sourced directly from:* [“[Innovator-in-Residence Program](https://www.hhs.gov/idealab/iir-program/),” Department of Health and Human Services Idea Lab, 2016.]

The Innovator-in-Residence Program brings new ideas and expertise into the Department of Health and Human Services (HHS) to tackle a critical problem of shared interest between the Department and not-for-profit organizations. Through the program, not-for-profit organizations can sponsor a paid fellowship to be filled by an individual with a background in entrepreneurship and innovation.

Innovators-in-Residence leverage the resources and expertise of both organizations—HHS and the sponsoring organization—during their appointment to work on a critical problem of common interest to HHS and the partner organization.

How It Works

At the outset, the IDEA Lab works with the IIR, his/her supervisor (the sponsor), and designated HHS mentors to develop a project concept and establish project goals that are mutually agreed upon. Innovators-in-Residence are employees of the sponsor organization and participate in government activities through the Intergovernmental Personnel Act (IPA). The IPA enables the exchange of talent between government and organizations for a wide array of practices. If an organization has not previously participated in an IPA employee exchange with HHS, an application is submitted and reviewed for approval before the project is started.

The application process is designed as follows:

1. **Step 1:** Sponsoring organization proposes to the HHS IDEA Lab a common area of interest in which the Innovator-In-Residence would focus.
2. **Step 2:** HHS and the sponsoring organization finalize an agreement.
3. **Step 3:** The HHS IDEA Lab and the sponsoring organization solicit applications for the position.
4. **Step 4**: Applicants are reviewed by the HHS IDEA Lab and sponsoring organization. Together, the HHS IDEA Lab and sponsoring organization make a final selection.

[“[Innovator-in-Residence Program](https://www.hhs.gov/idealab/iir-program/),” Department of Health and Human Services Idea Lab, 2016.]

**MOBILIZING COMMUNITIES OF PRACTICE**

**HHS Buyers Club**

*Section sourced directly from:* [“[Buyers Club](http://www.hhs.gov/idealab/buyers-club/),” Department of Health and Human Services Idea Lab, 2016.]

The HHS Buyers Club is an HHS IDEA Lab sponsored project focused on addressing a critical problem in government: modernizing Federal acquisition of information technology (IT) and related services. Given the increased role of digital services throughout government, there are many opportunities to improve existing acquisition methods used to support government services, directly benefiting the public.

Purpose of HHS Buyers Club

The design of the HHS Buyers Club is based on the premise that government acquisition and procurement methods are flawed. It has been widely recognized that government access to and use of technologies that support data and information management are lagging behind the private sector. According to the 2013 “[Chaos Manifesto](http://www.immagic.com/eLibrary/ARCHIVES/GENERAL/GENREF/S130301C.pdf)” from the Standish Group, all IT projects in excess of $10 million were found to be challenged or failed, 52% and 48%, respectively. Innovative strategies to leverage Federal acquisitions processes are needed to seek both better value and outcomes for the services HHS provides the public.

Current Federal acquisitions approaches reflect unnecessary operational and cultural barriers to success (planning, evaluation, award, and implementation), including but not limited to the lack of true end user and stakeholder engagement from cradle to grave in a manner that maximizes value while minimizing spend. The Buyers Club is not implementing new regulations or any new statutes but rather emphasizing new strategies allowed under the FAR or other approved legislation. Acquisition cycles are longer than IT development cycles, creating an unnecessary, lengthy, and outdated way of performing mission needs. Acquisitions require agility, both in terms of planning and implementation.

The Buyers Club tests new methods for IT acquisition. This can include: guidance and support during acquisition planning, evaluation, award and implementation; tools for contracting officers and program people can use to guide decision processes during acquisitions; education of stakeholders; and documentation of findings in case studies.

[“[Buyers Club](http://www.hhs.gov/idealab/buyers-club/),” Department of Health and Human Services Idea Lab, 2016.]

**HHS Buyers Club Example: Rapid and Results-Oriented Website Acquisition**

*Sourced directly from:* [“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

An office at HHS, the Assistant Secretary for Planning and Evaluation (ASPE), needed to redesign their website with the help of a contractor. The original plan was for ASPE to submit a request for proposals (RFP), asking for 28-page written proposals and 16 weeks later, after extensive review, a contractor would be selected.

ASPE chose a different path for quicker, better results. With guidance from HHS Buyers Club staff, they decided to use a Two-Stage Down Select Process. This means they shortened the initial narrative response to 10 pages, lowering the burden for small businesses to participate. After receiving 24 submissions, they down-selected 5 contractors and paid them to provide actual design and coding prototypes with a short turn-around.

After reviewing the prototypes, a record eight weeks after the RFP was publicly released, ASPE selected Akira Technologies to win the award, confident of Akira’s performance capability as demonstrated through the prototype.

**HHS Competes**

*sourced from:*[“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

HHS Competes is an open innovation program to implement the COMPETES Act and other legal authorities. The program enables HHS and its Divisions to source solutions to tough problems beyond the typical contractor or grantee, to talented individuals and small companies all across the country. HHS Competes works with agencies directly, providing guidance to develop strategies and execute prizes, crowdsourcing, citizen science, and innovative partnerships.

*sourced from:*https://www.hhs.gov/idealab/competes/

The premise of HHS Competes is that traditional government sourcing (e.g. grants and contracts) alone cannot make us an innovative and effective organization.

Specifically:

* Traditional ways of government sourcing can be slow and overly complicated.
* Traditional ways of government sourcing usually reward those who understand contracting best, not necessarily the most talented or qualified.
* Many of today’s innovators have never nor are they currently seeking contracts with or grants from the U.S. government.
* Traditional ways of government sourcing often require choosing winners before any results are achieved.
* Not all HHS Agencies and programs are aware of the flexibilities of the COMPETES Act prize authority to source solutions from all American innovators.

**HHS Competes Example: Activating a Generation of Biomedical Engineering Students Solving Real Health Problems**

*Sourced directly from:* [“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

The availability of advanced tools and technology alone doesn’t guarantee the development of new solutions to the challenges the nation faces to improve health. To spur a new generation of biomedical design and innovation, the National Institute of Biomedical Imaging and Bioengineering at the National Institutes of Health runs the Design by Biomedical Undergraduate Teams (DEBUT) Challenge geared toward biomedical engineering students. In its fifth year, with $65,000 in prizes, it has become a prestigious competition, with at least 10 university departments designing courses around the challenge. It has also led to the formation of several startups, and a new partnership that will now provide mentorship to start businesses. In 2016, there were 72 entries from 32 universities in 17 states. Projects ranged from better diagnosing tuberculosis in children to designing a safer alternative to catheter replacements.

**HHS Competes Example: Sourcing Creative Uses of Technology to Improve Early Childhood Education Outcomes**

*Sourced directly from:* [“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

By age three, children from low-income families are hearing 30 million fewer words than those from higher-income families. That is a staggering data point, and an issue known as the “word gap.” The word gap has serious implications leading to differences in: vocabulary size, school readiness, long-term educational and health outcomes, earnings, and family stability even decades later. The Maternal and Child Health Bureau at the Health Resources and Services Administration decided to launch a $300,000 three-phased prize competition to see how technology could be utilized to address this challenge. The challenge was unique in that it sought bold and innovative ideas and accelerated them through a process to prototype and pilot them in real settings.

Though the challenge is not yet complete, it has begun to yield measurable results. Phase 1 solutions have ranged from wearable devices that count words, to apps that grow with the child and their development stage, to location-based apps that prompt parents with clues and tips adjusted to where they are physically standing and walking. Those teams that have not advanced to the next phase plan to continue working on their solutions thanks to the feedback and support they have received through the challenge. One team hopes to use part of their prize money to establish a scholarship fund that builds awareness for the importance of early language development.

**Health Data Initiative: Liberating data for health care and social services transformation**

*Section sourced directly from:* [“[Health Data Initiative](https://www.hhs.gov/idealab/health-data-initiative/),” Department of Health and Human Services Idea Lab, 2016.]

The Health Data Initiative (HDI) is a movement established in 2010 within HHS operating and staff divisions to make health data openly available, disseminate the data broadly across the health and human services ecosystem, and continuously educate internal and external participants about the value of data. The mission of the initiative is to improve health, health care, and the delivery of human services by harnessing the power of data and fostering a culture of innovative uses of data in public and private sector institutions, communities, research groups and policy making arenas.

One goal of the Health Data Initiative is to harness the power of health data to create additional value for the nation with an ongoing goal of unleashing the power of private-sector innovators and entrepreneurs to utilize HHS data resources in the creation of applications, products, and services that positively impact health and health care. In addition, the HDI is helping to catalyze the emergence of a decentralized, self-propelled “ecosystem” of innovators across America who leverage HHS data. That ecosystem includes organizations upon which the HDI will rely on for feedback and intelligence that facilitate the democratization of health data and/or advocate for the innovative and responsible use of health data.

The default setting for data at HHS has changed from closed to open. This has resulted in the launch of an all new HealthData.gov in 2012, the liberation of over 2,000 datasets to date, and more entrepreneurs solving health care problems than ever before. In October 2013, the Health Data Initiative released the first-ever open data strategy and execution plan, which details five data-driven goals for the initiative.

[“[Health Data Initiative](https://www.hhs.gov/idealab/health-data-initiative/),” Department of Health and Human Services Idea Lab, 2016.]

**Health Data Initiative Example: Using Data to Reduce Fraud in the Medicare System**

*Sourced directly from:* [“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

In June 2016, HHS and the Department of Justice announced an unprecedented nationwide sweep led by the Medicare Fraud Strike Force in 36 Federal districts, resulting in criminal and civil charges against 301 individuals, including 61 doctors, nurses and other licensed medical professionals, for their alleged participation in health care fraud schemes involving approximately $900 million in false billings. This coordinated takedown is the largest in history, both in terms of the number of defendants charged and loss amount. The HHS Office of the Inspector General (OIG), using authority provided in the Affordable Care Act, was able to identify the individuals using data released by the Centers for Medicare & Medicaid Services, resulting in the suspension of payment to a number of providers.

**Health Data Initiative Example: Providing Consumers with Better Information about Healthcare Options**

*Sourced directly from:* [“[Innovation as a Problem Solving Tool in Government](https://www.hhs.gov/idealab/wp-content/uploads/2017/01/Innovation-as-a-Problem-Solving-Tool-in-Government_final.pdf),” Department of Health and Human Services Idea Lab, 2016.]

ProPublica, a non-profit journalism site, uses HHS data for better reporting as well as for developing data-driven decision making tools for consumers. They have created and updated tools that let people examine and compare their doctors’ prescribing patterns within Medicare’s drug program to others in the same specialty and state; review the services their doctors perform in Medicare; and find the payments the doctors have received from drug and medical device companies.

One example of a tool created by ProPublica in 2013 is Prescriber Checkup. Recently, they added content from Iodine, a start-up company focused on drug information, as part of a unique collaboration to enrich the existing resources available to consumers. As a result, consumers can get both information about their doctor and information about the drug itself.

**Invent Health Initiative**

*Section Sourced directly from:* [“[Invent Health Initiative](https://www.hhs.gov/idealab/invent-health-initiative/),” Department of Health and Human Services Idea Lab, 2016.]

The Invent Health initiative seeks to empower inventors both inside and outside government to create tools for better living and better clinical care. When HHS employs the term “inventors” in this context, the Department is referring to anyone who designs, builds, develops creative physical solutions (objects, wearables, devices) with an eye toward improving the health of themselves and others.

Small-scale inventors are creating solutions to home health and clinical care challenges to help people live more independently, in better health, and with greater dignity. (See the Examples section.)

Yet many of these innovators lack access to the tools and information that would help them explore, test, and take their ideas to scale. Government plays a vital role in this ecosystem. HHS has also articulated the aspiration that it can provide data and resources to help spark interest in high-priority areas that would benefit from fresh perspectives.

Invent Health is also intended to shine a spotlight on communities of innovators working with and inside government. Indeed, HHS is already engaged in work related to hardware innovation. For example, the U.S. Food and Drug Administration recently hosted a challenge competition in food safety that yielded five hardware innovations aimed at rapid detection of Salmonella. Also, the HHS Office of the Assistant Secretary for Preparedness and Response sponsored a challenge competition to aid first responders who need to locate and prioritize people with electricity-dependent durable medical equipment who have lost power during natural disasters. And, at the National Institutes of Health, a team created the 3D Print Exchange to support networks of inventors who are creating tools for biomedical research. This platform also enables the sharing of designs for on-demand, low-cost prosthetics and assistive devices.

By facilitating a series of structured engagements with stakeholders, Invent Health intends to identify key areas to help catalyze further innovation and help all of the communities it serves to better understand how the maker movement will affect our work at HHS.

[“[Invent Health Initiative](https://www.hhs.gov/idealab/invent-health-initiative/),” Department of Health and Human Services Idea Lab, 2016.]

**HHS’ Innovation Council**

Chartered in 2012, the HHS Innovation Council creates and promotes a culture of innovation across HHS and coordinates the Department's innovation efforts. The Council represents interests across the Department in addressing broad community issues and breaking down impediments to innovation The Council serves as the convening body to spark and help institutionalize innovation-enhancing activities across the Department. The Council membership is comprised of HHS's CTO, the Assistant Secretary of Administration, one member from each operating or staff division, and two HHS employees (non-voting). Most Council meetings are also open for anyone in the Department to attend, creating an easy mechanism for leadership to identify interested individuals that may otherwise be hidden towards the bottom of the bureaucracy. [Holman, R., personal communication with Policy Design Lab, January 8, 2017.] In fact, Council meetings have attracted large employee turnout from across the Department and it is notable that over 1,000 HHS employees signed up to track the activities of the HHS Innovation Council via Yammer, a social networking platform. [Koyani, S., personal communication with Policy Design Lab, January 4, 2017.]

**3. ORGANIZATIONAL CULTURE AND CONTEXT**

**Key learning insights:**

* Motivating the process of change
* Building a culture of learning and discovery
* Empowering those on the frontlines
* Starting small with pilots, and capitalizing on quick wins
* Institutionalizing change with employee-driven initiatives
* Driving change from the top
* Creating structures to foster Department-wide collaboration

**Motivating the process of change**

Early on in his tenure, former DHHS CTO Bryan Sivak saw that many long-term public servants felt stifled by the compliance-driven, risk-averse culture of government. He shared that while most private companies will approach a problem constructively with a solution-searching attitude, many government organizations face challenges with attitudes of reservation or objection; it’s not uncommon for challenges to be met with a list of reasons why the problem is impossible to overcome. [Sivak, B., interview with Science Technology Policy Institute, January 29, 2015.] This atmosphere is challenging for many career staff, many of whom joined government from intrinsic motivations to make a direct impact and grow their skillsets. [ Sivak, B., interview with Science Technology Policy Institute, January 29, 2015.] The goal of launching the IDEA Lab and related innovative initiatives at HHS was to help empower the creative problem-solvers in the Department get their ideas heard and tested – and in doing so, “reignite the fire” that brought them to government. [Sivak, B., “[Implementing a department-wide innovation strategy: An interview with Bryan Sivak, Chief Technology Officer, U.S. Department of Health and Human Services](http://govinnovator.com/bryan_sivak/)”, GovInnovator Podcast, August 20th, 2014.]

**Building a culture of learning and discovery**

Culture change doesn’t happen overnight; it’s a difficult, lengthy effort, explains Sivak. Any attempt to drive cultural change has to contend with a complex communications and community-building challenge, agrees CTO Susannah Fox. [Fox, S., in-person interview with Policy Design Lab, August 5h, 2016.] For any new innovative tool, how to actually implement a specific mechanism or authority is often not widely known by program offices, and often, potential benefits and drawbacks are also not clearly understood. With over 90,000 employees across 11 largely independent divisions, HHS responds to the challenge in three ways:

1. **Improved internal communications,** which include biweekly newsletters that transmit valuable how-to knowledge and news to an active listserv community
2. **Simplification of process,** which include documentation use cases and creating simplified guides to help offices deploy new methods
3. **Community engagement** among Divisions, which include site visits, presentations, and the cultivation of an active network of mentors and experts

**[“HHS Report on Prize Competition Activities Conducted in Fiscal year 2015,”]**

HHS has also emphasized genuine support for staff-driven innovation; employees are empowered to co-create a culture of learning and discovery. For instance, [a Lightning Talk](https://www.youtube.com/watch?v=-yWM8d-Ijis) at the 2016 HHS Innovation Day evaluated how to help HHS’ existing learning management system become more responsive to users’ actual needs. Using actual user feedback to pinpoint design priorities, they iterated prototypes for new ways that the Learning Portal could more effectively transmit knowledge and offer required trainings. This particular Lightning Talk was an exercise, but it exemplifies how the Department has welcomed and encouraged employees to lead with their own change-oriented mindset and innovative problem-solving approaches.

**[Listen:** [Bryan Sivak offers advice about creating culture change [2:30]](http://govinnovator.com/wp-content/uploads/2014/08/Bryan-Sivak-advice.mp3)]

**Empowering those on the frontline to raise their hand and share ideas**

"We have this radical notion that good ideas can come from anywhere," says CTO Susannah Fox. The IDEA Lab is a response to the realities of a large, hierarchical organization: "If somebody three layers down has a fantastic idea, how likely - and how empowered, -- is that person to raise their hand?" [Fox, S., in-person interview with Policy Design Lab, August 5h, 2016.]

IDEA Lab initiatives are geared around building a pipeline for innovation by empowering career staff to speak up, share ideas, and receive resource support to actualize them, whether that entails small venture funding, training, or even bringing in outside talent. “What the IDEA Lab does is provide literally a physical place for people to come, and sometimes even close my door to whisper, ‘I have an idea,’” former CTO Susannah Fox explains. [Fox, S., in-person interview with Policy Design Lab, August 5, 2016.]

(Similarly, the Entrepreneur-In-Residence program, she adds, “grafts an entrepreneur onto a team that has a great idea, but just needs that skillset to come in and empower them. “) [Fox, S., in-person interview with Policy Design Lab, August 5, 2016.]

**Starting small with pilots, and capitalizing on quick wins**

The IDEA Lab uses a seeding model; employees with innovative ideas can receive a small sum of seeding money to explore their idea. If the activity shows signs of success, the results are used as evidence to receive larger funding from the Department. This lean, evidence-based approach – starting small with pilots and iterating based on results – encourages a culture of experimentation, and lets good ideas “bubble up” from unexpected places.

**Institutionalizing change through employee-driven initiatives**

Recognized the pattern of how adoption is diffused through a large organization [crosslink to Adoption Curve content in V8], HHS leadership has focused its internal efforts on the early adopters.

Acknowledging their ideas and providing the resources to help achieve their goals help to generate early wins. Having small successes to point to builds further buy-in across the organization. HHS leadership is explicit that the central support provided for innovative tools is ultimately driven by the demand of the offices that recognize the value of a particular tool. Attempting to drive change by imposing edicts from the top is not an effective way to genuinely transform ways of working; instead, uptake is driven by HHS offices and divisions that genuinely embracing new approaches.

**[Read more:** [HHS Innovation Day Tries to ‘Hack the Red Tape’http://fedscoop.com/hhs-innovation-day-tries-to-hack-the-red-tape](http://fedscoop.com/hhs-innovation-day-tries-to-hack-the-red-tape)]

**Driving change from the top**

Leadership has been integral to driving the culture change by setting the tone and reinforcing an environment for creativity and experimentation. “Be brave enough to bring your ideas forward,” Susannah Fox charges. “Creative thinking is a muscle we must exercise. Progress happens outside our comfort zone.”[Fox, S., “[HHS Innovation Day: Innovation is a Force for Good](https://www.hhs.gov/blog/2016/07/27/hhs-innovation-day-innovation-force-good.html),” Department of Health and Human Services Blog, July 27th, 2016.]

But while it’s easy to convey those messages, it’s essential that leadership take actions to create an environment that is open and receptive to new ideas. “I literally have had people tell me great idea, and I say, ‘That’s a great idea – you should share it with your boss!,’” recounts Fox. “And they say, “No, no, I can’t. It’s above my level; that’s why I’m bringing it to you; *you’re allowed* to have an idea like that.” [Fox, S., in-person interview with Policy Design Lab, August 5th, 2016.] Driving culture change requires leadership to inspire confidence in employees that it’s OK to speak up, and it also has to ignite within management a similar receptivity.

**Creating structures to foster Department-wide collaboration**

HHS created an Innovation Council to facilitate greater interaction and communication across the operating divisions in the Department. The council offered touch points of contact across the Department to support collaborative innovative activities and help HHS to cooperatively identify and remove systemic barriers to innovation. [Kalil, T., in-person interview with Policy Design Lab, Washington, DC, December 6th, 2016]

The Council has played a central role in advancing HHS’s innovation agenda. During its first three years of existence, the Council enabled many important advances, including facilitating a change in the social media policy from a confined approach to one that enables uses of social networking platforms by HHS operating divisions; development of new solution-generating pathways, such as prize competitions, that use open innovation practices to solve key challenges; creative uses of hiring authorities, such as Schedule A, to leverage outside expertise; and the creation of innovation programs like the HHS Innovates Awards Program, the HHS Ignite Accelerator, and the HHS Ventures Fund.  [Koyani, S., personal communication with Policy Design Lab, January 4th, 2017.]

The HHS Innovation Council encouraged greater participation and engagement from various agencies across the department, but why it worked was because of active leadership. The council wasn’t simply another meeting; leadership made it meaningful and relevant to attendees, and allowed them a platform to engage, which increased buy-in. The membership composition of the Council was also important for maximizing its impact. [Holman, R., personal communication with Policy Design Lab, January 8, 2017.] HHS’ Innovation Council was effective because it broke down standard hierarchies and have both senior leadership as well as staff-level involvement. [Holman, R., personal communication with Policy Design Lab, January 8th, 2017.]

**4. FUTURE DIRECTIONS:**

Guided by a customer-centric approach to understand and directly respond to the barriers encountered by different offices, HHS is continuing to expand the use of innovative work across the Department, with a particular focus on:

* Advancing the growth of innovation initiatives across HHS
* Simplifying the prize and challenge execution process, and increasing the participation among HHS divisions in the use of prize competition authority
* Facilitate the responsible use of emerging technologies for to foster collaboration and problem solving
* Establishing new mechanisms and procedures for HHS employees to innovate