

# INNOVATION AS A PROBLEM SOLVING TOOL IN GOVERNMENT

**2016**

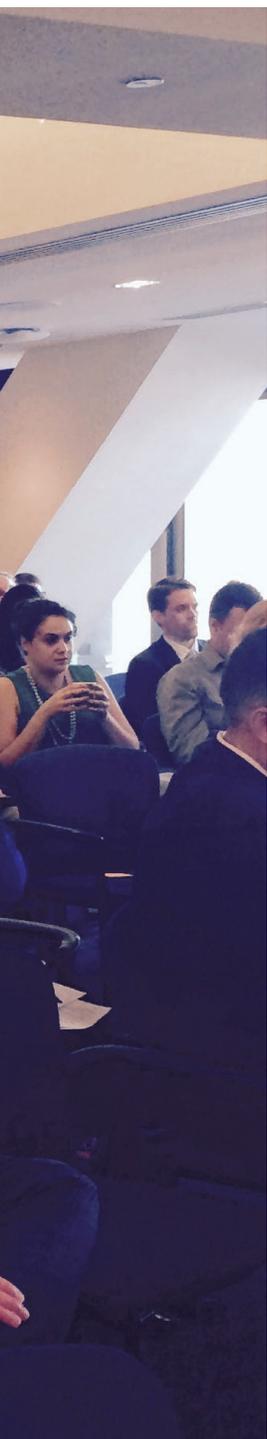
OFFICE OF THE CHIEF TECHNOLOGY OFFICER,  
U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES (HHS)



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*Produced by: Malini Sekhar & Kate Appel*



# A NOTE FROM THE HHS CHIEF TECHNOLOGY OFFICER

The U.S. Department of Health and Human Services (HHS) faces an increasingly complex mission that involves efficiently delivering services to the public amidst rapid technological change. Developing the best solutions calls for better engaging our workforce in thinking of new ways to tackle problems.

The Office of the Chief Technology Officer (OCTO) is a ready-made solution-finding team for this task. We have worked with and supported leaders across all Operating and Staff Divisions as well as frontline staff to improve operations. **As a result, we have established ourselves as a trusted, well-connected, problem-solving resource.**

The CTO is charged with promoting innovation and open data across the Department. Our approach to the challenge of creating a culture of innovation is to help HHS employees and leaders shine a spotlight on a problem, and then invite people from the private sector to contribute their expertise. HHS employees also use our programs to test and develop their ideas in an entrepreneurial environment.

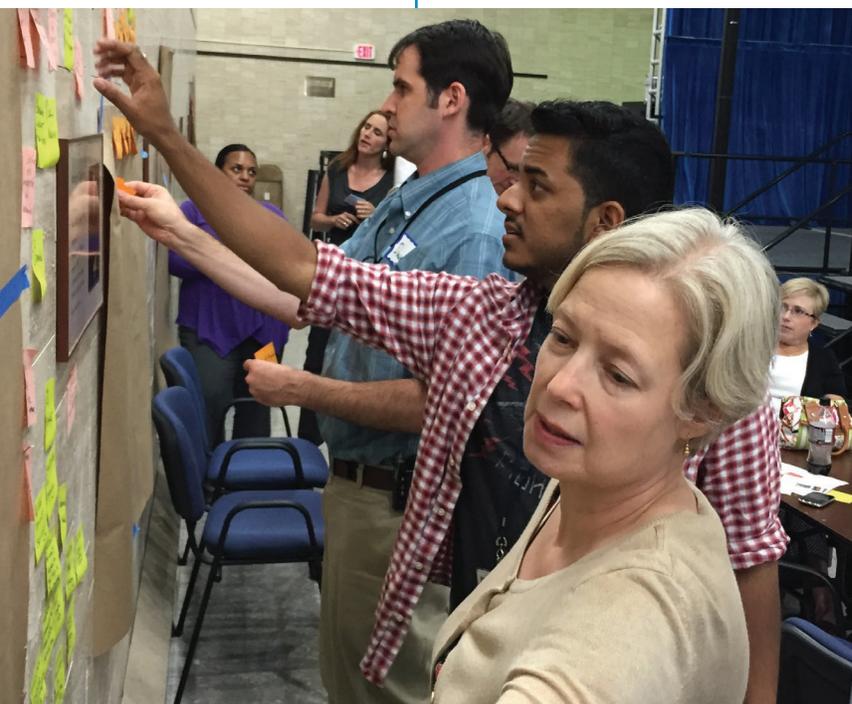
In this document, you will find examples of how HHS has pursued improvement and internal innovation within the Office of the CTO. We have made significant progress in helping teams and individuals address important challenges. But there's much more that can be done. As you read about each program, I invite you to consider how innovation and entrepreneurship might continue to help improve our performance and better deliver on our mission.

SUSANNAH FOX

# OVERVIEW

## How might the Department use technology, data, and innovation to work smarter and more effectively?

The pace of technological change is having an impact on almost every sector of our society. As the principal agency charged with providing essential human services and protecting the health of all Americans, the U.S. Department of Health and Human Services (HHS) touches the lives of the public - from birth to death - in a way that distinguishes itself from other federal organizations. The Department is comprised of 90,000 or so federal employees across 11 distinct operating divisions, 16 staff divisions, and 10 regional offices who are tasked with delivering on this ambitious mission. So the question becomes - how can we as an organization better respond in real-time to solve problems? How can we harness the power of technology and innovation to deliver on our mission?



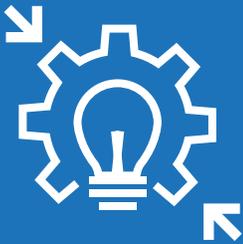
THE HHS IDEA (INNOVATION, DESIGN, ENTREPRENEURSHIP, ACTION) LAB WAS ESTABLISHED IN 2013 TO PROMOTE INNOVATION AS A TOOL FOR MAKING THE DEPARTMENT WORK BETTER.

## WHAT WE DO

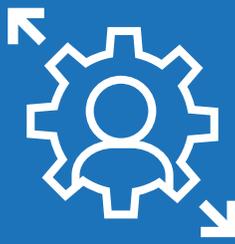
We help explore, incubate, and test solutions that will generate change. The IDEA Lab offers space (a physical location, opportunities, and leadership support) that allow individuals within and outside our walls the freedom to play, ideate, and experiment in pursuit of advancing the Department's mission. With a small but mighty team under the leadership of the Chief Technology Officer, the IDEA Lab has become a Department-wide go-to resource to solve problems in a way that reduces risk and is both time- and cost-efficient. We have also been helping to lead the charge in federal government as a key internal champion of innovation.

## HOW WE DO IT

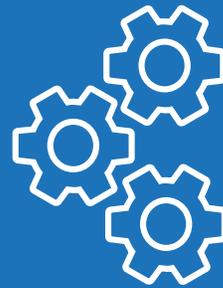
We stimulate new problem-solving approaches by running experiments and initiatives that are constantly evolving and iterating. Our approach is rooted in three key areas:



**Empowering  
Internal  
Innovation**



**Leveraging  
External Talent**



**Strategy &  
Collaboration**

**OUR EFFORTS HAVE**



Trained 100+ on lean & design-centered thinking methodologies



Liberated nearly 3,000 health data resources



Tested & applied new ways to recruit top talent



Supported projects ranging from: improving ER services to redesigning the organ tracking system



**EXAMPLE:  
HHS INNOVATION DAY  
DEMONSTRATES THE  
APPETITE FOR NEW  
TRAINING & TOOLS**

On July 14, 2016, the IDEA Lab hosted HHS Innovation Day, a first-hand look at how new approaches and creative thinking can improve the Department. The day consisted of a training session, discussions, and lightning talks around the practice of innovation. The morning event was standing-room only. More than 1,300 individuals watched the livestream and #HHSInnovationDay trended regionally on Twitter.

# VISUAL HISTORY OF THE HHS IDEA LAB

## 2009



- HHS participates in White House Innovation and Information Policy Working Group
- Todd Park starts as the first HHS Chief Technology Officer (CTO)

## 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
- Big Cat, our fearless mascot, arrives

## 2010



- HHS Innovation Council forms, develops Charter, and identifies barriers to innovation
- 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

## 2012



- 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

## 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

## 2014

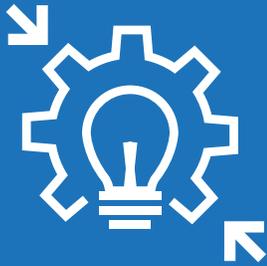


- The HHS Ventures Fund selects first round of investment
- The HHS Buyers Club forms to modernize acquisition methods and completes first solicitation and award

## 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
- HealthData.gov reaches 2,500 datasets openly available to the public



# Empowering Internal Innovators

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# IGNITE ACCELERATOR

Empowering front line HHS staff to test new ideas

## **CHALLENGE**

HHS needs to harness the creativity of front line staff, but staff are discouraged from testing new approaches in hierarchical and risk-averse environments.

**APPROACH**

In 2013, with the intention of spurring innovation at HHS, the HHS Ignite Accelerator (Ignite) was launched. It has evolved into a program that provides a safe space and structured mentoring for HHS employees to test and validate their ideas in a supportive, start-up environment, thereby mitigating the risk of investing significantly in unvalidated problems or untested solutions.

In partnership with the University of Maryland Academy for Innovation and Entrepreneurship, Ignite provides selected teams with training in entrepreneurial methods (i.e. lean startup and design thinking); mentorship as they test ideas; and the opportunity to present their findings to HHS leadership and the public.



**BY THE NUMBERS**

**338**

Applicants

**4**

Boot Camp Trainings

**71**

HHS Teams Selected and Supported

**2**

Innovation Programs Launched across HHS Operating Divisions (CDC, HRSA)

**15**

Ignite innovation Coaches from across HHS and the federal government



## EXAMPLE:

### **IMPROVING EMERGENCY CARE SERVICE FOR NATIVE AMERICANS**

40,000. That's how many emergency room visits the Whiteriver Indian Hospital experiences in a year — 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.

**EXAMPLE:**  
**FRONT LINE INNOVATION SPARKS  
LOCALLY AT HRSA**

It started with a team in a leadership development program posed with a challenge — create a way to reward employee engagement, creativity, and innovation at the Health Resources and Services Administration (HRSA). Curious to explore existing opportunities and resources, the team decided to develop their own version of the Ignite program for HRSA employees.

With steadfast support from senior leadership at HRSA and Ignite staff, the HRSA IdeaSpring was launched in October 2015 as a 2½ month program to facilitate problem definition and prototype development. After putting a call out for project ideas, 23 applications were received and seven teams selected. IDEA Lab staff enthusiastically served as advisors to the teams selected into the program by: having regular check-ins; sharing lessons learned; providing on-site training to selected teams; and serving as judges during their final demonstration day. After a successful pilot, HRSA Learning Institute has adopted the IdeaSpring as one of its innovation programs and has launched a second round.



# VENTURES FUND

Investing in and scaling internal innovations that dramatically improve HHS's capabilities

## **CHALLENGE**

Limited opportunities exist to take proven, early-stage solutions to the next level of implementation.

**APPROACH**

The Ventures Fund was created in 2013 to fill a critical void in the Department's innovation pipeline. By providing money, cross-agency political support, training in thinking like a start-up, and exposure, the Ventures Fund supports solutions with near-term potential to deploy. Teams can apply for up to \$100,000 and 15 months of support for their project. Investing partners include: the Immediate Office of the Secretary; Centers for Disease Control and Prevention; National Institutes of Health; National Cancer Institute; the Food and Drug Administration; and the Centers for Medicare and Medicaid Services.

**BY THE NUMBERS**

**3**

Rounds

**11**

Projects Supported

**GROWTH**

**9 Applications from  
6 Operating Divisions**



**27 Applications from  
8 Operating Divisions**

**\$150K from 2 Funders**



**\$408K + from  
6 Funders**

**EXAMPLE:**

**DATA-DRIVEN APPROACH TO PUBLIC HEALTH EMERGENCY INVESTMENTS**

The country faces a multitude of threats to national health security ranging from terrorism to natural disasters and invests in national health security to mitigate consequences from these incidents. A team supported by Ventures developed a systematic, risk-based economic framework for assessing the relative probability of these incidents, the magnitude of the consequences, and the effect of mitigation strategies.

The project brought economic evidence to decision making, thereby enabling policy makers to invest in projects with higher return on investment, providing more effective stewardship of resources, and creating a more sustainable and effective public health emergency response enterprise. The team is now collaborating with the HHS Biomedical Advanced Research and Development Authority (BARDA) to develop economic models for all products in the BARDA burn portfolio.





Photo Credit: KT Crabb Photography & Limbitless Solutions



## EXAMPLE: USING 3D PRINTING TO SHAPE MEDICAL RESEARCH & SAVE MONEY

High-quality, informative 3D-printable biomedical models can inspire new discoveries that transform science and healthcare. Supported during the first round of Ventures, the NIH 3D Print Exchange is an online portal to open-source data and tools for discovering, creating, and sharing 3D-printable models related to biomedical science.

Since the public launch in 2014, the Exchange has grown to 40,000 3D-printable files, 2,500 pages of published models, over 4,600 registered users, and 7,500 unique users per month visiting the site. Features like the Heart library - a curated digital collection of human anatomic hearts - is helping doctors and patients better understand congenital heart disease. The platform also houses a central repository for 3D printed prosthetic devices. The models help physicians, 3D print enthusiasts, families, and amputees to create, innovate, re-design and share 3D-printable prosthetics.



3D printing is a potential game changer for medical research. At NIH, we have seen an incredible return on investment; pennies' worth of plastic have helped investigators address important scientific questions while saving time and money. We hope that the 3D Print Exchange will expand interest and participation in this new and exciting field among scientists, educators and students.

**FRANCIS S. COLLINS, M.D., PH.D**  
DIRECTOR, NIH

# INNOVATES AWARDS

Celebrating trailblazers from  
across the Department

## **CHALLENGE**

The HHS workforce delivers on our mission in creative ways, but there isn't sufficient exposure or recognition of their innovative solutions.

**APPROACH**

In 2010, the HHS Innovates Awards were established in an effort to build a culture of innovation at the Department. The HHS Innovates Awards (Innovates) provide recognition from peers, leadership, and the public to celebrate solutions at HHS that are impactful, novel, and scalable, as well as the teams that create them. By calling attention to promising solutions, and sharing them widely across HHS and the public, Innovates has helped to spread and scale solutions that are helping HHS to better deliver on its mission of providing health and human services to the American people. Having served its purpose of highlighting and encouraging a culture of innovation, the last round of Innovates took place in 2015.

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**BY THE NUMBERS**

**8**

Rounds of Rewards

**~50%**

of recognized teams partnered with organizations outside of government

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**500+**

HHS-developed innovations nominated

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**60,000+**

votes cast by HHS employees during the voting phases

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**48**

teams and

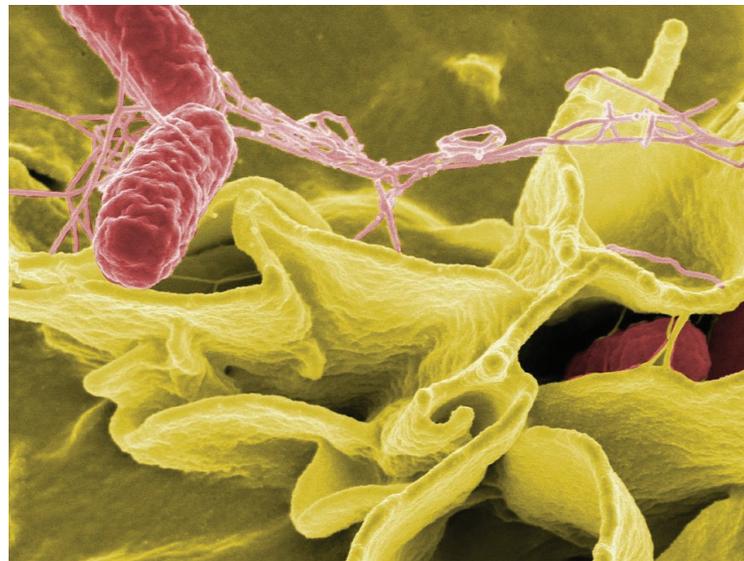
**466**

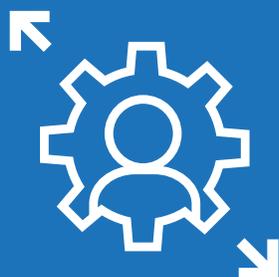
HHS employees recognized

EXAMPLE:

## CELEBRATING GROUNDBREAKING SCIENTIFIC COLLABORATION & RESEARCH

The **100K Genome Project** - 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.





# Leveraging External Talent

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# ENTREPRENEURS- IN-RESIDENCE

Recruiting outside talent to solve complex challenges

## **CHALLENGE**

In an era of rapid technological growth and constrained budgets, HHS needs expertise in entrepreneurship, modern information technology, and data science skills. The Department currently lacks tailored recruiting tactics to attract these individuals.

**APPROACH**

Established in 2012, the HHS Entrepreneurs-in-Residence (EIR) Program offers HHS employees the opportunity to recruit entrepreneurs with unique skill sets to work on mission-critical projects for 13 months. With support from the highest levels of HHS leadership and freedom to incorporate new approaches, Entrepreneurs-in-Residence partner with HHS employees to deliver solutions that reduce time, lower cost, and improve customer satisfaction for HHS programs.

**BY THE NUMBERS**

**21**

Entrepreneurs Recruited

**53**

Staff Supported Across HHS

**~450**

Applications from Entrepreneurs

**~50%**

are asked and choose to stay longer than 13 months



*Photo Credit: Chris Smith HHS*

## EXAMPLE: CREATING THE ELECTRONIC TRACKING SYSTEM FOR THE ORGAN TRANSPLANTATION SYSTEM

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 only 4 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 thoughtful, iterative testing and scaling, his solution - called TransNet - was implemented nationwide as the electronic system for tracking the nation's organ transplantation system.



Donor ID: AAAL204  
Donor ABO: O  
Cross Clamped:  
12/1/2014 12:29 EDT  
LIVER

Shipping Label 1

OSS CLAMP TIME (Military Time) Time Zone

CONTENTS OF BOX:  
Contents of Box:

<input checked="" type="checkbox"/> LIVER	<input checked="" type="checkbox"/> Blood
<input type="checkbox"/> Vessels	<input type="checkbox"/> Spleen
<input type="checkbox"/> Documentation	<input checked="" type="checkbox"/> Nodes
<input type="checkbox"/> Other:	<input type="checkbox"/> Biopsy

Shipping Label 2

Date	Time	Initials
12/2/2014	12:28 EDT	AP

Originating OPO: VATB  
JheNet Health

Shipping Label 3

ORIGINATING OPO

**LIVER** **KEEP UPRIGHT**

**DONATED HUMAN ORGAN/TISSUE for TRANSPLANT**

TO INSTITUTION: \_\_\_\_\_ LIVER  
Donor ID AAAL204

CITY: \_\_\_\_\_ STATE: \_\_\_\_\_ OPO: VATB

If available, PRIMARY FLIGHT #: \_\_\_\_\_ If available, CONNECTICUT \_\_\_\_\_ Shipping Label 4 v5.0.3

**In case of delays or problems call UNOS Organ Center at 1-800-292-9537 a 24 hour number.**

This shipment is made possible by an exchange of information through United Network for Organ Sharing, a charitable, non-profit organization which has no proprietary interest in this container or its contents.

**HANDLE WITH CARE**

UNOS ORGAN CENTER  
UNITED NETWORK FOR ORGAN SHARING



## EXAMPLE: **ACCELERATING CLINICAL QUALITY MEASURES**

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.

But 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.

# COMPETES

Tapping into the ingenuity of the American people to solve problems

## **CHALLENGE**

Talent is everywhere and doesn't always work with government. Traditional ways of sourcing tend to reward those who understand how to craft a government proposal, not the most talented or qualified.

**APPROACH**

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.

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**BY THE NUMBERS**

**140+**

Challenges

**\$34M**

In Prizes

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**9,000+**

Participants Across the U.S.

**450+**

HHS employees in the  
community of practice  
around open innovation

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**2**

OpDivs (NIH, CDC) have  
open innovation leads

**9**

OpDivs have sponsored  
a challenge

**EXAMPLE:**

**ACTIVATING A GENERATION  
OF BIOMEDICAL ENGINEERING  
STUDENTS SOLVING FOR REAL  
HEALTH PROBLEMS**

The availability of advanced tools and technology alone doesn't guarantee the development of new solutions to the challenges we face 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.

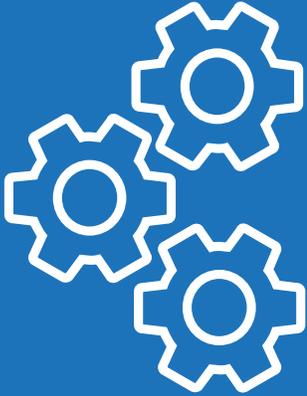




**EXAMPLE:**  
**SOURCING CREATIVE USES OF  
TECHNOLOGY TO DISRUPT EARLY  
CHILDHOOD LEARNING**

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 already yielded powerful 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.



# Strategy & Collaboration

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# HEALTH DATA

Unleashing the power of open data to improve health and human services

## **CHALLENGE**

Historically, the high volume of data that the Department collects has been inaccessible, preventing the creation of new solutions and innovations in health and human services as well as deterring better open government practices.

**APPROACH**

The Health Data Initiative, established in 2010, makes huge troves of government data, that was previously inaccessible, openly available for use by the public - tech innovators, policymakers, researchers, and more. Every Operating Division at HHS has data represented on HealthData.gov in a network of interconnected data catalogs from each division. Healthdata.gov also federates health data from 11 states and 3 cities, highlighting localized resources for health innovation, and underscoring that all levels of government now recognize the power of open data. Open health data is now serving to develop new solutions, spur business development, and catalyze innovation. In addition, the Health Datapalooza, a national conference around open health data that now attracts thousands, began as part of the Health Data Initiative.

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**BY THE NUMBERS**

From **30** to  
nearly **3,000**  
data resources

From **50** to  
**3,000+** Health  
Datapalooza  
attendees and  
speakers, including  
the Vice President  
in 2016

**100%**  
of Operating  
Divisions have a  
designated Health  
Data Lead and  
a community of  
colleagues making  
data available

EXAMPLE:

## **BETTER UNDERSTANDING THE HEALTH CARE SYSTEM WITH OPEN DATA**

The Centers for Medicare and Medicaid Services (CMS) collects large amount of data that are critical to decision making within the nation's health care system. In 2014, the agency announced the creation of the Office of Enterprise Data & Analytics (OEDA) to oversee improvements in data collection and dissemination led by their first-ever Chief Data Officer, Niall Brennan. Since then, OEDA has overseen the release of large volumes of secure Medicare data, including information on hospital changes, physician utilization, and prescription drug utilization. They also launched the Virtual Research Data Center to facilitate lower cost access to CMS data for researchers and federal grantees.

EXAMPLE:

## **DATA DRIVES NATIONAL HEALTH CARE FRAUD TAKEDOWN FOR APPROXIMATELY \$900 MILLION IN FALSE BILLING**

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.



## EXAMPLE: DATA FOR JOURNALISM AND DECISION-MAKING

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

Identifying emerging opportunities and challenges in health and technology

## **CHALLENGE**

Leaders focused on the day-to-day work of running the Department need support to stay informed of what may be on the horizons of health and technology. The Chief Technology Officer plays a strategic role in identifying potential technological surprise.

**APPROACH**

Invent Health is one example of a discovery initiative focused on medical and assistive technology, low-cost manufacturing tools, and a return to craft symbolized by the Maker movement. Through strategic outreach and engagement activities both inside and outside HHS, the Invent Health initiative began identifying opportunities and barriers relevant to the Department's roles in hardware innovation, ranging from discovery and regulation, through to delivery of care and services.

**BY THE NUMBERS**

**5**

Strategic convenings that included internal and external stakeholders

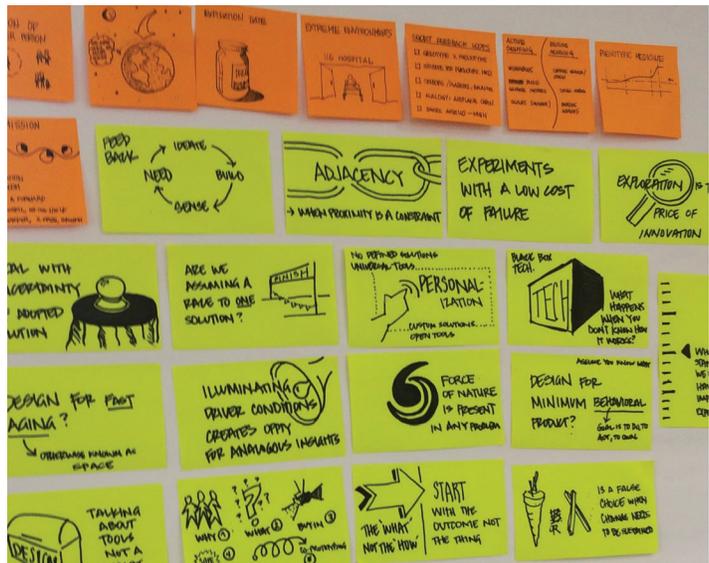
**400+**

Registrants (in-person and virtual) for Town Hall Kick Off event at HHS

**#InventHealth** on Twitter has stimulated national conversation on hardware innovation in health

**The HHS CTO is co-chair** of the Maker Interagency Working Group of the National Science and Technology Council.





## EXAMPLE: UNLIKELY INTERSECTIONS SPUR COLLABORATION TO BETTER ADDRESS RESOURCE CONSTRAINED ENVIRONMENTS

On April 12, 2016, the HHS IDEA Lab, the National Aeronautics and Space Administration (NASA), and the University of Texas Medical Branch (UTMB) jointly hosted a roundtable discussion at the John Sealy Hospital in Galveston, TX, to explore common principles and problems of innovating with resource constraints in space and in health care settings. Physicians, nurses, administrators, NASA medical officers and engineers, designers, and colleagues from the CDC and NIH shared insights, common barriers to innovation, opportunities for low-cost hardware innovation in constrained environments, and ways to collaborate in the future. The event also included a visit to the nation’s first “maker space” in an acute care hospital that was created for hospital staff to develop and prototype solutions to clinical care challenges.

# BUYERS CLUB

Modernizing IT acquisition  
by testing new methods

## CHALLENGE

Information technology (IT) services are increasingly key to delivering on the mission of HHS, and yet the majority of large IT service procurements by HHS and across the government fail due to antiquated methods used to acquire those services.

**APPROACH**

In the aftermath of the troubled Healthcare.gov launch and its later successful implementation, many federal employees began actively identifying problems associated with federal information technology (IT). The most glaring problem is the high failure rate of IT service acquisitions in terms of cost, compatibility, performance, and utility. In response, the HHS Buyers Club was launched in 2014 to educate, test, and operationalize acquisition methods that are approved under federal regulations to mitigate risk and increase success. The HHS Buyers Club worked directly with HHS employees to guide them through the process of applying innovative acquisition methods. The initiative also educated and built a network of innovators across HHS and the federal government interested in applying these methods to achieve successful IT acquisitions. After a successful pilot to educate and implement these methods, the Buyers Club has taken a strategic pause.

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**BY THE NUMBERS**

**36+**

acquisition projects supported

**300+**

individuals and teams supported

**10**

innovative acquisition training seminars with more than 100 HHS attendees

**100%**

of directly-supported projects for IT services awarded to small businesses

**EXAMPLE:**

**RAPID & RESULTS-ORIENTED WEBSITE ACQUISITION**

Here is a typical story of government acquisition: 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.





Photo Credit: Chris Smith HHS



# THANK YOU

We exist because there are individuals who believe that together we can creatively solve problems to better deliver on our mission to the public. We are powered and inspired by individuals at HHS, colleagues from across the federal government, and external partners and collaborators who challenge the status quo, focus on what's possible, and regularly ask, "why not?" To this tirelessly dedicated community of innovators who courageously hack red tape – thank you.





The enterprise that does not innovate ages and declines. And in a period of rapid change such as the present, the decline will be fast.

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**PETER DRUCKER**  
THE FOUNDER OF  
MODERN MANAGEMENT

