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GAINING GROUND:

A Guide to Facilitating Technology Innovation
in Human Services

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Introduction

Human services agencies across the country are ripe for change. The Great Recession saw record numbers of Americans seeking government assistance for food, housing, and basic expenses—among other pressing needs. Caseworkers and administrators throughout the country pushed the limits of their creativity, as the same economic circumstances led states and localities to slash budgets and deprive human services agencies of needed resources.¹ Despite the economic recovery, fiscal pressures continue to jeopardize people in need. Meanwhile, the Affordable Care Act has presented states and localities with a widely-discussed opportunity to pursue ambitious technology projects with enhanced federal financial backing.

At the same time that public sector health and human services has faced significant challenges, technology has emerged as a transformative social and commercial tool. Shopping sites such as Amazon have changed the nature of commerce, social networking sites such as Facebook and Twitter have fundamentally altered social interactions, and blogging has permanently shifted the nature of journalism—to name just a few examples. Mobile technologies such as smartphones and tablet devices have put a wealth of information at the fingertips of millions of users. Technology also has helped to shape new forms of civic participation and governance.²

¹ See for example: “The Public Workforce System’s Response to Declining Funding After the Great Recession,” Stephen Wandner, Urban Institute, May 30, 2013.

<http://www.urban.org/publications/412866.html> and “Ramifications of State Budget Cuts to Human Services,” Yerik Kaslow and Amy Terpstra, Center for Tax and Budget Accountability, March 22, 2012.

Yet the penetration of new technologies into vital public institutions has been uneven, with government often lagging behind the rest of society in adapting new technologies. Different government sectors have had widely varying levels of success at leveraging new technology to improve outcomes. These projects have occurred against a backdrop of increasing interest in government innovation, as administrators and elected officials alike seek to maximize the return on public investment in services—both in human services and across all sectors of government. Despite the clear value in improving human services administration and access to benefits, technology innovation has yet to gain a strong foothold.

This report, based on hundreds of conversations with key thought-leaders and innovators shows that human services stand to benefit in a number of ways by successfully leveraging technology innovation, including:

- **Coordinating Services for Clients:** many families receive services and benefits from multiple public and private programs. Yet, too often, caseworkers working with the same families are not even aware of one another. This situation results in caseworkers performing redundant tasks and families frustrated with a lack of coordination among different services. Technology can enable caseworkers to

http://www.ctbaonline.org/New_Folder/Human%20Services/IPHS_Private_Impact_Public_Cuts_Full_FIN_AL_revised.pdf

² “Field Scan of Civic Technology,” Living Cities Initiative, November 2012.
<http://www.livingcities.org/knowledge/media/?action=view&id=94>

coordinate service delivery and, more importantly, ensure that families are obtaining benefits and services in a way that does not burden them unnecessarily.

- **Enriching Program Administration:** the emergence of powerful data collection and analytical tools – sometimes known as “big data” – has enabled American businesses to adjust practices in response to long-term trends. For human services, the right technology allows administrators to better target resources, track family outcomes in real time, and develop more effective approaches to improve well-being for clients. Such tools can tailor benefits and services to better meet the needs of individual families and clients.
- **Empowering Clients:** for many families, applying for services and benefits can be a taxing process, requiring waiting in line at a brick-and-mortar facility. Oftentimes, a successful application may require documents such as birth certificates or income statements that an individual may not have on-hand, requiring a rescheduled appointment. New technologies such as online portals allow families to get real-time eligibility determinations, apply for benefits, and even submit renewals or changes.

This report is ultimately intended to provide a roadmap to federal, state, and local government human services administrators as they seek to adopt technology that can improve well-being for vulnerable families. At the same time, by documenting some of the most successful examples of state and local technology innovation in the human services, the report illustrates the potential for technology to serve as a powerful tool to

support family well-being among the most vulnerable.

Drawing the Roadmap

In order to provide concrete guidance on how to successfully undertake innovative technology projects in human services, the report is divided into several sections:

- I. **The Technology Opportunity for Human Services** – this section provides an overview of some key capabilities technology can provide to improve human services administration and access to benefits, helping to clarify the stakes for policymakers and administrators.
- II. **Lessons Learned and Best Practices: A Framework for Innovation** – this second section of the report provides the key components of a roadmap for innovation. In particular, this section discusses specific challenges and strategies common to successful innovation in human services administration and benefits access based on interviews with stakeholders around the country. Strategies are organized to reflect the areas of focus which require significant attention from those pursuing technology innovation.
- III. **Innovation in Action: Site Profiles** – to illustrate effective technology innovation strategies, this section will present profiles of successful

innovations throughout the country. Each of these case studies will describe a given state or local technology innovation, and elaborate on how it was conceived, implemented and then managed.

Each of the sections of this report takes a wide perspective of human services, detailing ways that technology is being used to provide government services and public benefits, improve health care and well-being, connect individuals to educational and employment opportunities, and enhance coordination among public agencies. While various aspects of human services and benefits policy and program are separated by sometimes important distinctions, this paper seeks to identify and develop lessons and insights of general value.

Methodology

This report is the result of several streams of research. First, Freedman Consulting, LLC, conducted a thorough review of the literature on technology deployments in the human services and benefits administration dating from 2008 to the present day. This was complemented by a literature review on existing models and approaches to technology innovation human services and government.

Second, this report draws on interviews with a broad range of stakeholders, including state and local administrators, academics, federal officials, and private sector technology experts. Interviewees shared key insights about the state of technology innovation in human services administration and benefits access and top-level understandings of specific innovations.

Technology Innovations Profiled in this Report

- ✓ *State of Colorado:* Department of Human Services, Program Eligibility and Application Kit (PEAK) portal
- ✓ *Allegheny County, Pennsylvania:* Department of Human Services, Data Warehouse
- ✓ *New York City:* Mayor's Office, HHS-Connect
- ✓ *State of Washington:* Department of Social and Health Services, Washington Connection portal
- ✓ *State of California:* Department of Public Health, Healthcare Associated Infections map
- ✓ *San Diego County, California:* Health and Human Services Agency, Live Well San Diego initiative
- ✓ *Boulder County, Colorado:* Department of Housing and Human Services, integrated case management system
- ✓ *State of Idaho:* Department of Health and Welfare, Idaho Benefits Eligibility System (IBES)
- ✓ *State of Arizona:* Arizona Health Care Cost Containment System and Department of Economic Security, Health-e-Arizona/Health-e-Arizona Plus application
- ✓ *State of Florida:* Department of Children and Families, ACCESS
- ✓ *Montgomery County, Maryland:* Department of Health and Human Services, enterprise integrated case management (EICM) system

Third, Freedman Consulting, LLC, conducted 11 site visits of successful technology innovations in the human services from around the country. These site visits provided the opportunity to speak with a broad range of stakeholders involved in advancing innovation, including high-level program administrators, technologists, managers and frontline staff, community partners, vendors, and elected officials. The site visits included both in-person visits to sites, as well as ‘virtual’ visits consisting of telephone conversations.

In total, the insights in this report result from conversations with well over 100 stakeholders. All interviewees were promised confidentiality to encourage candor.

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I. The Technology Opportunity for Human Services

Technology innovation is a significant undertaking in nearly any context. Yet the imperative for government at all levels to adopt truly 21st century technology to improve health and human services and access to benefits is increasingly clear. Those interviewed for this report agreed that modern technology provides unprecedented opportunity to help public sector human services and benefits agencies do their work more effectively and efficiently, thereby improving outcomes for the most vulnerable people.

To catalogue the opportunities afforded by technology to enhance human services and benefits administration, this report divides current innovative uses of technology into five categories: Automation, Integration, Empowerment, Analysis, and Accountability.

Automation

Technology presents the opportunity for program administrators to remove inefficiencies in workflow, allowing staff to focus more on the provision of services and benefits to needy families. This can be achieved through various approaches to automating programmatic and administrative functions. Examples of automation include:

- **Olmsted County, Minnesota:** county administrators have automated core administrative functions, such as travel reimbursements, as part of the LEAP (Lean Engineered and Automated Processes) initiative, allowing county employees to spend more time performing core programmatic functions.

- **Florida:** the Department of Children and Families has developed and deployed voice recognition software, which assists caseworkers in the field by automatically transcribing case interviews. Similar tools also enable self-service, allowing clients to renew benefits and check applications without requiring in-person assistance.
- **New Jersey:** in the Division of Taxation, officials performed an express-lane eligibility check, automatically finding tax data on individuals to determine eligibility for Medicaid and SNAP benefits and sending notices encouraging eligible, unenrolled residents to apply for these benefits. This process is similar to efforts undertaken in Louisiana, Alabama, and Iowa.
- **Idaho:** the Department of Health and Welfare – in implementing a ‘no wrong door’ service delivery model – developed an advanced telephone system which automatically routes calls to personnel across the state, directing callers to the caseworker best able to provide assistance.

Integration

Many states and localities have recognized that effective human services delivery and benefits provision requires enabling collaboration among various programs and offices. Tools that facilitate integration typically assist caseworkers by providing a holistic, cross-program view of client information. In this way, technology can aid states and localities in collaborative service delivery. Examples include:

- **San Diego County, California:** as the County undertakes its Live Well San Diego initiative to create a more proactive human services delivery system, technology tools play a key role in integrating practice. For instance, a community-based care transitions program (CCTP) relies upon a technology infrastructure to share patient data among hospitals, community service providers, and caretakers, improving care transitions from hospitals to the home and reducing hospital readmissions for medically and socially complex patients.
- **New York City:** the Worker Connect tool enables users with role based access the ability to identify how clients have interacted with various New York City Health and Human Service agencies, facilitating cross-agency data sharing in accordance with applicable laws. Users are able to access agency data in order to increase service delivery and improve client and worker experience.
- **Boulder County, Colorado:** integrated case management tools allow employees in the County's Department of Housing and Human Services to track their clients across County services and view information collected by the Department's services. The tools allow caseworkers to easily refer families to other County-administered benefits and services, and to create a more seamless experience for Department clients.

Empowerment

Innovative technology tools can help human services agencies to streamline the process of obtaining needed benefits and services, and

they can empower clients and families by allowing them to manage benefits and services according to their own schedules and from the privacy of their own homes. This improves overall access and removes some of the stigma and burdens traditionally associated with recipients of these programs. Among recent examples:

- **Washington:** the Washington Connection benefits portal is available for users online and at community partners, including public libraries. People can use the online tool to screen for eligibility for federal, state, and even local benefits. They can apply for benefits such as Medical, SNAP, TANF, and child care, and submit renewals and change in circumstances. Clients may create a Client Benefit Account for additional access to information about their case.
- **Minnesota:** developed by state officials, the Autism Help app enables individuals with the condition to communicate with and obtain necessary services – especially in emergency situations – through color-coded communications.
- **New York:** with the help of a local university, the state Office of Children and Family Services obtained and deployed mobile technology such as laptops, permitting staff to access information needed to assist clients while out in the field. The technology has allowed caseworkers to spend more time in the community with their clients, providing services better able to respond to real-world client needs.
- **New Mexico:** the Department of Health has sponsored Project ECHO, an initiative to assist hepatitis C patients in isolated parts of the state. The project has set up a

teleconferencing infrastructure which allows patients to access medical assistance and clinics which might otherwise have been inaccessible to residents located in rural areas.

- **Arkansas:** as more and more Americans rely on mobile devices such as smartphones and tablet devices to access information, these technologies represent an increasingly important platform for technology innovation. The state's Department of Higher Education developed a smartphone app, called YOUuniversal, which allows students to determine eligibility for state scholarships, and even submit applications for these opportunities.

Analysis

Using technology, human services administrators, supervisors, managers, and frontline staff can gain access to data that helps them understanding their clients at both the individual and population level and that allows them to track and evaluate program performance. These innovations typically assist high-level program administrators in decision-making through data aggregation and analytics, allowing them to assess program performance, long-term trends, and develop possible improvements.

- **Allegheny County, Pennsylvania:** in developing the Data Warehouse, officials sought to design a community asset for the County and its partners. The Department of Human Services has developed numerous search queries to analyze data, enriching the information available to both administrators and third-party researchers, including those at local foundations and universities.

- **Oklahoma:** as part of the SoonerCare (Medicaid) program, officials analyzed patient data including comorbidity factors, identifying individuals prone to poor health outcomes. Equipped with a list of at-risk Medicaid recipients, managers have worked to sign these individuals up for intensive, managed-care programs.
- **Rhode Island:** to better assist at-risk children, the state's Department of Children, Youth, and Families developed the Real Connections program, which analyzes data on a child's social network. Using this analysis of existing information, the Department is able to identify mentors best suited to enable the best outcome for each child.

Accountability

Technology innovation plays an important role in improving the delivery of human services and public benefits by building upon analysis to improve transparency around program performance. Technology innovation can be used to better communicate important information to residents and administrators alike, improving the scrutiny and decision-making of administrators, elected officials, and the general public.

- **California:** the central consideration in the design of the state's Healthcare Associated Infections map was the legibility of complicated health data. The visual presentation of health data increases transparency of the state's network of hospitals, ultimately holding hospitals accountable to the public for delivering safe and effective care for patients.

- **North Carolina:** state human services officials developed a ‘data dashboard,’ which uses existing data collected by the Department of Health and Human Services to compile metrics on program performance. Every month, the Department releases public reports which present information on family outcomes. A separate Medicaid dashboard also permits the general public to view financial data.
- **Arkansas:** partnering with insurance providers in the state, the Department of Human Services launched the Payment Improvement Initiative. This project allows care providers to input payment information, and provides data to providers and insurers alike on the costs and outcomes of care episodes. Providers are even entitled to share in savings when high-quality outcomes are achieved at below-average cost.

Capturing the Opportunity

The examples listed above highlight some of the major opportunities afforded by technology, and illustrate the transformative power of truly 21st century tools to improve the provision of human services and public benefits and support family well-being. The remainder of this report is dedicated to illustrating how governments at all levels – but especially the state and local levels – can seize these and other opportunities to improve outcomes for individuals and families.

II. Technology and Human Services: A Framework for Innovation

The core of this report is a series of strategies for policymakers and administrators to consider, plan, and undertake innovative technology projects. These strategies are based on the experiences of a wide variety of stakeholders who have personally led and participated in successful technology projects in the human services. In order to present these strategies in a format that can be used by others, this report organizes them into an “innovator’s framework.” This framework has two principal components:

- **Crosscutting Innovation Principles:** interviews revealed several principles that cut across numerous types of technology projects and that reflect common areas of concern, attention and opportunity for efforts to adopt innovative technology in the human services.
- **The Innovation Checklist:** these are the areas – grouped into three overarching categories of People, Process, and Policy – that interviewees indicate require significant attention from administrators and other leaders to support a successful project. For each category, the report provides specific challenges that interviewees cited and corresponding strategies to help produce successful outcomes (see chart on page 40).

Crosscutting Principles of Technology Innovation

The framework presents both discrete challenges and action steps for would-be innovators interested in leveraging technology to improve human services. There are, however, several crosscutting themes that extend throughout the framework and that represent areas of significant emphasis among those interviewed:

1. **Business Process Innovation**
2. **Communication**
3. **Cooperation**
4. **Expectations and Scaling**

1. Business Process and Technology Innovation Are Closely Intertwined

As human services agencies leverage new technologies to improve delivery of benefits and services, interviewees noted that there is an opportunity to consider the business processes those technologies are intended to support. In many cases, interviewees treated these two aspects of innovation as inseparable and complementary. An administrator in South Carolina observed that process change is instrumental in unlocking the potential of technology, saying that “the technologists realize the innovation they can bring is from process change and process innovation.”

Process innovation frequently demands new technology tools to assist new practices, and modernizing technology often opens opportunities to improve upon the existing routines of agency staff.

2. Open Communication Is Vital to Success

Interviewees stressed that successful technology innovation projects – for all their differences – require significant collaboration among different stakeholders. Establishing reliable and robust channels of communication is, therefore, of paramount importance. “The ones that are successful don’t necessarily have more resources, [but] they see the right pathway to get to their outcome, they attack it and find a way to explain it to their people,” observed one federal official. A county official agreed, noting that “communication and culture change at all levels require a lot of time and engagement.”

These open channels of communication serve to integrate the different constituencies necessary for technology innovation in human services. For example, ensuring that staff feedback is sought and incorporated helps to secure staff buy-in to the project and enriches the resulting technology tools. Strong communication also gives technologists the guidance needed to design effective technology and the opportunity to share thoughts with administrators about what sorts of interventions are possible. Additionally, communicating with elected officials can recruit champions for technology innovation in human services who will work to ensure broad political support for these projects. As this report will detail, communicating with each of these constituencies harbors different challenges and strategies, but communications remains a vital piece of the innovation puzzle.

3. Program and Technology Cooperation Ensures Optimal Results

Both technologists and program administrators play key roles in the success of technology innovation projects in human services, according to interviewees. Many stakeholders said that ensuring a productive relationship between technologists and program administrators is critical. Said a technologist in Montgomery County, Maryland, “Our goal isn’t technology. It’s to use technology to contribute to either the business or service organization to which we belong. We’re a service organization to [another] service organization.”

Communication is equally vital between agencies and individuals receiving services and benefits. According to some interviewees, this kind of input can ensure that technology development is user-driven and tailored to the experience of the end user. Such communication cannot be taken for granted, said some. Given the sometimes complex web of regulations governing human services administration and benefits access, there can often be “a real communication barrier between the agency and the citizen. The letters and notices that an agency often sends don’t adequately communicate the salient details to the client,” as one non-profit leader observed. To ensure program success, innovators must communicate clearly and effectively with those seeking needed services. This individual continued, “Prioritizing plain language, human-readable copy is key to creating effective digital interfaces – particularly in the health and human services context – given the demographic diversity of clients.”

4. Managing Expectations and Scaling Innovation Yield Rewards

While technology has much to offer human services agencies, stakeholders made clear that it is important to carefully consider the scope of a prospective project. While it is tempting to consider a single massive project, such initiatives, stakeholders say, are often difficult to design and manage effectively without breaking them into smaller phases. Such an approach allows innovators to build “something modular and scalable so over time new benefits could be added, new departments could be added, without redoing the wiring,” as one private industry executive shared.

Many of the successful innovations profiled in this paper have self-consciously sought to commence at a smaller scale, and gradually grow based on success. Some of these innovations were initially planned for incremental roll-out, while others found that a modest, successful project opened further opportunities for technology innovation in

human services administration and benefits access.

In many cases, these efforts are enhanced by the methodology for designing, developing, and implementing the technology. Many large technology projects in human services administration and benefits access have typically used a ‘waterfall’ development process, in which the entire system is designed at once and tested as a comprehensive whole. This can result in small problems compounding into massive shortcomings in the final product.

To address these problems, one federal official pointed to “the idea of iterative or agile development techniques.” Under this ‘agile’ methodology, tool components are quickly developed and independently tested upon completion, ensuring that no problem goes unnoticed for long. This individual noted further that agile processes “have been proven in many settings to solve many of the inherent issues that exist in this realm [of technology innovation in government services].”

People

- *Agency Leadership*
- *Agency Staff*
- *Community Partners*
- *Technology Expertise*

Process

- *Strategic and Business Planning*
- *Procurement*
- *Evaluation*

Policy

- *Data sharing and Protection*
- *Governance*
- *Elected Officials*
- *Finance*

The remainder of this report provides in greater detail specific strategies that states and localities have used to adopt innovative technology in the human services, but interviewees made clear that these principles have an overarching role to play in supporting effective approaches.

The Innovation Checklist

Initial research, site visits, and internal discussions identified several areas of focus which required attention and action as each site leveraged technology innovation. Together, these areas constitute a “checklist” of potential trouble spots – and opportunities – that innovators must work through to successfully pursue effective technology. The areas of focus fall into three overarching – and sometimes overlapping – categories:

- **People:** these areas examine the roles of agency personnel and outside stakeholders in technology innovation, including, for example, agency leadership, agency staff, technology experts, and community foundations.
- **Process:** these areas examine the roles of planning and practices by agencies seeking to leverage technology innovation, and include strategic and business planning, procurement, and evaluation.
- **Policy:** these areas examine the roles of decision-making institutions and regulations in technology innovation, and include data sharing and protection, governance, finance, and political structures.

For each of the areas of focus – People, Process and Policy – this section of the report provides commonly cited challenges, followed by strategies that stakeholders have used to overcome those challenges.

People

Interviewees noted several challenges related to the role of people – internal and external – when technology projects are being planned and implemented, ranging from the gap between public and private sectors in technology understanding and leadership to generating agency buy-in and building trust among community partners. In response to these challenges, interviewees volunteered a range of strategies to address these challenges, including leveraging external technology expertise, engaging philanthropy, identifying and deploying staff champions, and engaging staff in developing and implementing technology innovation.

People

Challenges

1. *Absence of strong agency leadership*
2. *Potential resistance from agency line staff*
3. *Recruiting community partners*
4. *Identifying and leveraging adequate technology expertise*

Strategies

1. *Strong agency leadership*
2. *Engaging agency staff in technology projects*
3. *Actively partnering with community stakeholders*
4. *Leveraging existing assets to bolster technology expertise*

Challenges

In particular, interviewees pointed to four specific areas where personnel issues raised unique challenges: (1) the absence of strong agency leadership, (2) potential resistance from agency line staff, (3) recruiting community partners, and (4) identifying and leveraging adequate technology expertise.

1. Agency Leadership

An almost universal consensus among interviewees identified a gap in the current capacity for technological innovation between the private sector and public agencies. This gap was attributed at least in part to agency leadership having inadequate experience with – and a deep understanding of – technology and the innovation process. Said one private industry executive, “That lack of understanding about how to use [technology] – really use it and leverage it in an environment – is frustrating.” One technologist in Boulder County, Colorado observed that “All [agency staff] had been somewhat behind the curve in terms of implementing technologies and implementing solutions in a quick and efficient manner.”

This can be a critical challenge for any technology innovation project due to the importance of top-level sponsorship for such large-scale programs. Said a New York City administrator, “Without that agency being completely committed to the process and an understanding from the highest level that this project becomes a full-time job, you don’t get a good outcome.”

Interviewees ventured several explanations for asymmetrical progress and knowledge between the public and private sectors concerning

technology. One key factor according to experts and administrators is a cultural disconnect: the powerful spotlight on government work typically makes many public agencies risk-averse. As one technologist in New York City said, “Whenever you innovate, you’re going to encounter a lot of ‘that’s the way we do things.’ There’s always some truth in that, but a lot is psychological. A good innovator recognizes the reality and finds a way to get it done.” Similarly, a community partner in California offered that “without an external crisis, state government tends to play it safe, and that does hurt in terms of creating innovation.” The result of this preference for stable systems over innovative technology is that – in the words of a South Carolina administrator – “at the state and local level, simply the leadership and staff don’t even see where these things could or need to go.”

A related, and equally prominent aspect of this challenge, is the siloed nature of human services administration and benefits access, which inhibits effective project management. A technologist in Montgomery County, Maryland, shared that “one thing that’s been a challenge for me is that government is not well-designed to quickly implement change. There are too many different organizations that need to be part of everything, too many checks and balances.” This same individual summed up the effects of bureaucratization and program silos on technology projects in human services administration and benefits access, sharing that “responsibility for implementing technology projects falls to departments that are heavily governed and dependent upon other heavily governed departments. So every decision takes longer [and] implementation is slower and more expensive.”

2. Agency Staff

Interviewees noted that adopting innovative technology is typically a disruptive process, frequently entailing changes in longstanding agency expectations and practices. As a result, they said, many caseworkers, supervisors, and even managers can be skeptical about the value of technology.

One part of this challenge, according to some interviewees, is the time lag in changing agency culture. For instance, as Boulder County sought to build an integrated case management system, they encountered cultural resistance. The County's Housing and Human Services Departments had only recently been merged, and each agency was understandably set in its ways. "I think any time you take two agencies, they have their own cultures about expectations and agreements," observed a Department official. Pushback sometimes comes from longtime employees who have developed routines and habits over the course of their careers. One technologist working for the county noted that "there were a lot of answers that had been 'that's the way it's done,'" which inhibited the implementation of the new service model and technology tools. Some of this sentiment is generational. Noted one technology expert, "Much of this new technology may feel unfamiliar to staff who grew up using other systems, and that can inhibit acceptance and adoption."

In addition, stakeholders noted that technology innovation can raise unique anxieties about job security. "Before they try it, they've heard rumors about this or that," stated a manager involved with a case management system at the local level. Officials in another state that reengineered its human services delivery system automated department business processes to increase efficiency. This resulted in

a need to reassure some that the goal of the system was not to replace people with computers. One senior department administrator acknowledged this challenge, noting that "staff needed to know they wouldn't lose their jobs, but their jobs would change."

Innovators also expressed misgivings about technology that did not adequately reflect the needs of staff. One city administrator said of a disappointing technology project, "We made the system too complicated," engendering staff frustration. A state administrator discussed agency trepidation about technology that does not serve staff needs, saying that "technology has to come from the bottom up. We have had experiences where technology came from outside and it blew us out of the water. We weren't able to use it. It didn't come from the bottom up." In some instances, a tool that is well-suited for assisting staff can be hampered by poor training. A state administrator recalled that when a new technology debuted, "The state wasn't doing a great job making sure people are trained."

A similar problem can further impact a technology tool's usefulness for customers receiving needed services and benefits. A poorly-designed technology tool can create challenges for applicants and prevent them from receiving vital benefits and services. As a technology expert noted, "It's very important to consider not only program needs, but the needs of those people using this technology on the ground—caseworkers and customers."

The specter of past projects can also haunt present efforts, said other interviewees. In particular, some said that, because not every technology project is successful, the disappointments can influence personnel reaction to proposed innovations. In one state,

administrators designed a successful technology platform after a previous failure. As a result, said an administrator, the “legacy” of the failed system “did not help one bit, because that was a technology that was supposed to make things so much better and it didn’t live up to its promise.”

3. Community Partners

Some nonprofit leaders in particular acknowledged the potential role of community foundations in facilitating technology innovation for human services, but also noted the challenges of building and maintaining trust and aligning the vision of the wide range of stakeholders – including community-based organizations – whose engagement is often essential for these efforts to succeed. As one private industry executive related, “It’s not going to be easy to keep everybody on board with these things.” For example, a community partner involved in a state-level project noted that “if the trust relationships don’t exist, and there isn’t real clarity about project goals and aspirations, it’s hard to get through.” Another community leader spoke to the challenge of aligning vision, noting, “It’s difficult for government, philanthropy, and the community to come around something this complex with steep implications for administration and operation of programs.”

4. Technology Expertise

Even with strong agency leadership, successful technology innovation in human services administration and benefits access requires technological expertise to identify and leverage the right technical tools to assist leadership in making sound and innovative technology-related decisions. This has historically proven to

be an obstacle for many agencies. A county technologist reflected that “the inclination, historically, has been to do a lot of internal development or adaptation of solutions, and they’re not really tapping into the off-the-shelf development, so we miss opportunities there.”

For many human services agencies, interviewees suggested that this technological expertise is difficult to obtain. A state administrator reflected that “we have not invested in the right way in IT talent in human services.” Another state official agreed, pointing out that “what you wind up with are pockets of innovation – somebody from the private sector for whatever reason winds up in the public sector – but it’s not scalable.” Said still another state administrator, “We don’t know what we don’t know, and we don’t have the resources to mess around with cool technology.”

Interviewees identified several possible explanations for the dearth of these experts. The most commonly cited contributor to the difficulty in obtaining technologists is the disparity in pay between public sector positions and equivalent posts in private industry. A local administrator said that “we have the skill to do [technology] ourselves, but it’s hard getting IT people into government.” This problem is widespread. A county technologist observed that “it’s hard to attract talented folks, because we don’t pay what the marketplace pays for comparable services.” A county manager concurred, “One of the things that was really difficult about building [a new technology system] is that we don’t have as much money to offer people, so finding people who want to work in a human services agency or a local government agency was challenging.”

Another part of the problem relates to how government information technology departments are organized and run, said

several interviewees. A private sector executive noted that “IT organizations are just set up to run things, there’s very little budget capacity for skills, for building new things, so those organizations just are not equipped for really pretty rapidly changing expectations, opportunities, skill sets for those sorts of people.” The point was echoed by a local administrator, who said that “the gap can wind up being around maintenance. I think it’s difficult when after we build something and we take it over from the integrator, it can be hard to maintain these things without an outside integrator.” Hiring processes also inhibit the acquisition of technology expertise, with one local administrator reflecting that “the hiring process is slow, it’s clunky, you can’t post for a job until it’s vacant.”

In addition, some stakeholders observed that government technology efforts require a combination of technical expertise and programmatic knowledge, further restricting the supply of suitable human capital. One state administrator noted that programmatic knowledge requires a significant investment in agency personnel: “You can’t contract 15 or 20 years of program knowledge and an understanding the complexity of the programs. You have to build that, and it takes 5, 10 or 15 years to build that expertise.”

Strategies

Interviewees cited several strategies to address challenges associated with personnel, including: (1) strong agency leadership, (2) engaging agency staff in technology projects, (3) actively partnering with community stakeholders and (4) leveraging existing assets to bolster technology expertise.

1. Agency Leadership

Those interviewed were largely consonant in their view of the importance of strong leadership to successful technology innovation in human services administration and benefits access. As a community partner in Idaho said, “The first key factor is the leadership.” A federal official agreed that “there has to be a senior person who’s bought into it.”

One strategy for successfully addressing challenges related to leadership discussed by those interviewed involved utilizing program expertise to guide innovation. As an administrator in New York City observed, “What you need is somebody who understands enough about the technology but is passionate about the vision and capable of managing the processes.” Another senior official in New York City believed that “the fact that it grew out of goals from the city’s commissioners themselves, that was the huge strategic precursor necessary” for a successful project. Similarly, a technologist in Montgomery County attributed the County’s technology efforts to a leadership approach that has “molded the senior team into a group that shares [a] vision and is committed to it.”

Persistence was also cited by some interviewees as a key attribute of strong leadership in technology projects. As a community partner in Allegheny County, Pennsylvania observed, “This isn’t something that’s going to get created and solve problems immediately—this is a long project. It takes time to get created. The ability to see that benefit, and persistent leadership, is a critical element.”

Several interviewees also argued that effective leadership in technology innovation projects requires effective foresight and coordination. In

New York City, a technologist observed that “being able to speak the language and knowing where the pitfalls are going to be is really key. The folks most successful at [technology innovation] know where the landmines sit.” A key aspect of leadership and project management is the ability to coordinate among important leaders. In Arizona, a vendor with the state’s Health-e-Arizona program shared that “early in the project, the Governor’s office folks leading the Affordable Care Act (ACA) component formed a small organization footprint, maybe two or three people, and they orchestrated the essence of the state operationalization of [Health-e-Arizona].” Similarly, officials in Florida’s Department of Children and Family observed of the state’s Automated Community Connection to Economic Self-Sufficiency (ACCESS) program that “the six [regional] directors, under the new model, function as an operational team.”

Interviewees further observed that leadership entails an ability to cultivate relationships with more junior and line staff, communicating agency vision to all personnel while encouraging and listening to feedback. As a Boulder County administrator remarked, “It’s one thing to deliver the message, and another to actualize that message by being present, by holding staff focus groups, by making sure there are options for folks to provide feedback.” In Boulder County, where the Department of Housing and Human Services director set up regular meetings with staff to solicit feedback on the integrated case management system, a manager observed that “a lot of the things that are smooth running now have come from those meetings.”³

³ For a discussion of principles of leadership, see: Kotter, John and Dan S. Cohen. “Get Off the Dime!”

Leadership plays a key role in facilitating these robust channels of communication and room for experimentation, said several interviewees. As a Colorado technologist observed, “a good project manager isn’t only managing the expectations, and timelines, and resources, but is serving as the bridge between the technical and less-technical people.” In some instances, innovators found it useful to encourage a more open office culture. A California administrator said, “I think we were successful because we didn’t view this as top-down, but flat modeled. This wasn’t ‘thou shalt,’ this was an organic, fluctuating team composition.” In New York City, an administrator similarly observed that “I allow [staff] to make mistakes. I let them know that I’m there to support them, so if they need something they can come to me.” One expert noted that, in particular, frontline supervisors sit at the intersection of technology adoption and troubleshooting, explaining that “these individuals are often the least-well prepared, and benefit from early training so they can help caseworkers adapt.”

2. Agency Staff

As managers and frontline personnel, agency staff below the top leadership level play an important role in the success of technology projects. As one Florida administrator reflected, “If you want to make [technology] efficient, you need to listen to the line staff, the experts.” A county official agreed, stating that “they [the operational champions] can be more important than leadership champions at times.”

Many interviewees stressed the importance of including staff in the development of technology innovation and keeping them

Harvard Business School Working Knowledge, July 29 2002. <http://hbswk.hbs.edu/item/3031.html>

Boulder County, CO: Creating Robust Feedback Loops

Updating the technology tools available to human services agencies frequently requires larger changes to the structure and operations of human services delivery and benefits access. Keeping all levels of personnel engaged in this process is a crucial component of any successful initiative in human services.

In Boulder County, CO, a merger of the Housing and Human Services departments sparked a larger shift towards integrated delivery of benefits and services across the human services and housing spectrum. As the agency worked to break its services out of existing program silos, executive leadership worked closely with agency staff to allow concerns to be voiced and establish feedback cycles. A particularly helpful routine was the regular audiences between the Housing and Human Services Director and frontline staff across the county. At these ‘coffee klatsches,’ the Director would make himself available to agency staff to hear their experiences and views on the development of the county’s integrated case management system.

informed on the project and vision. A Boulder County manager explained, “It’s that continual messaging of what we’re doing and why, how important it is and those successes,” that is crucial for a successful project. An Idaho administrator echoed those sentiments, relating that “executive leadership talks to line staff several times a year, discussing the vision, the reason for change, and the expected outcomes. The line staff feel aligned with the change, they feel involved, and they understand the need to change.” These conversations also assuage staff misgivings about technology. Said a manager, “The discussions emphasized that the rules engine wouldn’t replace them, that we still needed them.”

According to interviewees, equally essential is demonstrating to staff the value of a new technology. A county official achieved success by being able to “translate all this data into knowledge for frontline workers, into something meaningful and compelling.” One strategy discussed to bring the benefits of technology to life for frontline workers was the strategic use of pilot programs. “A lot of times we’ll use pilot programs, and when people see the performance, they embrace it,” said a Boulder County administrator. A technologist in

the same County recalled that “once you show them how [technology] works and how it can serve their populations better, most folks are pretty quick adapters.”

Data can also be a vital tool in engaging staff, said some interviewees. In Allegheny County, observed one administrator, “We’re on a path towards data culture. Certainly leadership uses data here, but we hadn’t previously had real tools for workers and managers to do their work.” Similarly, San Diego County leaders have sought to inculcate data-driven practice by emphasizing gains for personnel. “Data is used as a flashlight to identify issues and opportunities, rather than as punishment,” offered one San Diego County administrator. As discussed previously in this report, these advantages may require training. Explained one technology expert, “Putting data at the center of an agency means helping managers learn how to make data-based decision-making. For many, this is a big change and requires support.”

Several interviewees noted that the principle of staff engagement applied directly to the development process. A manager in Boulder County related that “the IT team worked to

create a tool that would be utilized by frontline staff, so they needed our input to build the tools.” Even when staff input was not incorporated in the final design, soliciting engagement from all levels of personnel established trust. In Idaho, a manager stated that “sometimes the idea staff had wouldn’t be the best, but we listen because we are always open to ways to improve.”

Similarly, some innovators found it useful to incorporate and engage staff opposed to technology innovation in the design of the project. A New York City administrator shared that “we knew we had to have at the table not just the cheerleaders, but also the people potentially able to most get in the way, and get the benefit of their thinking.”

To further engage personnel, especially reluctant staff, many interviewees stressed the importance of deploying staff champions. An Allegheny County administrator posed the question as “how do you get the excited ones to win over people?” In the case of Allegheny County, a technologist recalled that “what we did was identify caseworkers who were assigned to use the system and had a knack for using it well, and were able to train their coworkers.” Similarly, a Boulder County manager said, “We identify champions, and in all the projects we roll out, we have a core group.” These champions “were subject-matter experts who could provide advice and act as feedback loops,” noted an administrator in the same county.

A related strategy relayed by many interviewees was adequately training staff. In several communities examined for this report, specialized training staff supplemented staff champions, ensuring that personnel were best informed on how to use technology to improve their practice. A New York City administrator

recalled that the city “had a robust training and outreach team, which still exists today for all the HHS-Connect initiatives.” These training efforts ensured that agency personnel were able to make the most of technology innovation.

3. Community Partners

Given the challenge of bringing together both considerable financial resources and subject-matter expertise, some interviewees said that philanthropic foundations can be a crucial resource to support technology projects in human services administration and benefits access. Said one academic researcher, “You need funders who are willing to put some money into getting these things off the ground.” Another researcher added that “local foundations in particular can, with their resources, get startups happening.” One private industry executive stated that “foundations are great for bringing in partners, and they have the right technical expertise to make sure the project is undertaken properly.” Allowing foundations to assist in providing initial resources also shares some of the risk associated with large technology projects. As a community partner in Allegheny County stated, “The fact that philanthropy is willing to take on the risk capital is very important.”

To effectively leverage the benefits of community foundations, many interviewees stressed the importance of open communication between agencies and the philanthropic community. An administrator in Washington noted of the state’s Washington Connection benefits portal that “we have a very constant and stable communication with our advisory committee,” which includes community partners and representatives from the foundation community. The sentiment was shared by a community partner sitting on the

Washington State: Learning from Local Expertise

While in many instances local foundations and philanthropic groups provide crucial initial funding for technology innovation projects, some agencies said that foundations can play an even more active role in fostering technology innovation. The state of Washington provides a particularly successful example. Blessed with a vibrant technology industry, the state is also home to the Bill & Melinda Gates Foundation, among other foundations. These resources proved instrumental in the Evergreen State's successful implementation of its benefits portal, Washington Connection.

A large foundation associated with the state's famous technology sector, the Gates Foundation also had a strong existing partnership with Washington's Department of Social and Health Services (DSHS), as well as state legislators, the governor's office, and community-based organizations, in other initiatives related to human services. As one administrator at DSHS noted, the original idea for creating a universal benefit portal came from the Gates Foundation itself: "They expressed a strong interest in creating a benefit portal to increase access to services and benefits for our low-income residents." The Gates Foundation had devised the initial idea for connections after the onset of the 2008 financial crisis. Said one official at the Foundation, "We asked ourselves if there was going to be a sea change in local communities, families, and kids, and what the implications would be for us." Foundation research indicated that many families in the state did not access benefits to which they were entitled, and that this population would only grow as families unaccustomed to thinking of themselves as poor faced economic hardship.

Initial conversations amongst the Gates Foundation, DSHS, community leaders, and the Governor's office produced a strong initial vision for the project, and the governor's office asked DSHS to sponsor the project. The partnership among the Gates Foundation, DSHS, community-based organizations, and other foundations helped design the functionality of the portal, determine programs to be included, and set up governance for the project. By leveraging a prestigious and trusted foundation's expertise and affiliation, the State of Washington was able to successfully design and implement a comprehensive benefits portal to better assist families.

Washington Connection Advisory Committee, who said that committee members "ensure we're all in communication with one another." In Boulder County, a manager credited the County's relationship with its community partners for its "open dialogue and a collaborative approach with feedback." In New York City, communication with community partners helps to produce broad support for technology innovation. "We work closely with our nonprofits to keep them briefed on all this and make them want this system and see it as a great solution," said one administrator.

Robust communication can also help enrich outcomes, said some. "We have agreements with our community partners in getting access to their data," explained one administrator in Boulder County. Such communication with community foundations and partners can even spark new ideas for technology innovation. A vendor in Arizona recalled that the state's Health-e-Arizona project began when "Arizona's community providers started looking for more innovative solutions for clinics and hospitals."

4. Technology Expertise

Despite the dearth of technology talent in many public sector agencies, those interviewed noted that significant technology expertise could be more readily available through concerted effort, or simply by leveraging existing personnel, local relationships, or assets. Technically proficient personnel are typically readily available when an agency prioritizes technology talent. Administrators “really wanted to make our technological makeup a department priority,” observed a technologist in Boulder County. A Boulder County manager relayed that as the County continues innovating, administrators “probably will look to the private sector here in Boulder, which is extremely strong technology-wise, for resources we can leverage.”

Where new technology talent may not be an option, interviewees said that existing technology assets can also be repurposed for new projects. An administrator in Washington noted that, in designing the state’s benefits portal, officials “made sure that what we’re developing fits in with our existing technology” and that the state “leveraged our existing contract with our current systems integrator to have them expand the scope and size of their development contracting team” rather than conduct a separate contracting process.

Alternatively, many interviewees look to outside contractors to help agency technology projects. “We bring contractors on when they have a set of skills we don’t have and can’t develop in-house,” stated a Montgomery County administrator. In Washington, where officials used an existing relationship to obtain a systems integrator, an administrator said that “we brought on additional resources to help with Washington Connection.”

Some of those interviewed use external or contracted technology expertise helps to address the knowledge gap between government and the private sector. In San Diego County, an administrator said, “When we brought in an IT contractor, that brought us up to a standard much different from when we had in-house IT.” This mirrored the experience of California’s Department of Public Health. “I think the fact that an outside vendor did the development, that closed the gap,” related one administrator. Some noted that contractors can also be useful in assisting in smaller components of projects to supplement existing personnel.

Process

The second area of focus among interviewees concerned the technology development process. Challenges cited with regard to the process ranged from identifying the best uses of technology to procurement and vendor selection. In response, interviewees pointed to several strategies, including reviewing agency practices, better structuring vendor collaboration, and incorporating the right stakeholders.

Challenges

Several specific challenges related to process were raised by those interviewed: (1) effective business planning in conjunction with technology development, (2) managing the procurement process, and (3) evaluating technology after deployment.

Process

Challenges

1. *Effective business planning in conjunction with technology development*
2. *Managing the procurement process*
3. *Evaluating technology after deployment*

Strategies

1. *Techniques to effectively merge strategic and business planning with technology development*
2. *Opportunities to enhance and streamline procurement processes*
3. *Steps to ensure adequate evaluation and monitoring*

1. Strategic and Business Planning

Despite the benefits that can accrue to human services agencies from the successful leveraging of technology innovation, interviewees revealed that many administrators struggle fundamentally to identify fruitful opportunities for technology in their agencies. One core challenge according to interviewees is a failure to clearly delineate the role of technology in a broader agency vision. In some instances, this failure was due to a lack of agency vision in the first place. “In the past, that was probably the biggest road block, was not having that vision,” noted a local administrator.

Even when there is a clear vision, said some, too much ambition can result in a failure to use technology effectively. “Some of the challenges we’ve dealt with in dealing with other states, and what I’ve seen in the Affordable Care Act, is that people look at technology as an end-all

solution,” observed one state administrator, continuing, “Technology isn’t the end-all solution. When you rely on technology to do what a good business process should do, you get a mess.”

Others noted that, without clear parameters, technology projects can quickly become unmanageable. A community partner to a state initiative said that “states have a terrible history of these projects not going well—it gets too big, and you kill it out of the weight.”

Exacerbating this challenge, said some, can be an outsized focus on regulatory compliance, rather than strategic or business objectives. One county-level official succinctly stated this problem: “States develop solutions for federal compliance and miss the opportunity to work with counties and focus on the end-user and end-service thus missing the value-added opportunity.” This can result in systems that fail to assist caseworkers with the situation on the ground. “We made the system too complicated, a lot of our line workers aren’t computer savvy,” shared one city administrator concerning a previous disappointment with technology. The challenge, as stated by a Washington administrator, is to “make sure that anything that happens in the digital world match brick-and-mortar [processes]. We needed to make sure moving forward that our paper process aligned with our electronic process, to eliminate barriers.”

2. Procurement

Widely cited by those interviewed, procurement emerged as a continually vexing problem for innovators in human services agencies. The procedures by which governments obtain technology are designed to balance program needs with the imperative of

prudently using public funds. Unfortunately, those interviewed report that the end result of this balancing act is frequently a status quo that is not conducive to technology innovation.

Interviewees were clear that vendors of technology solutions – and consequently, the selection of vendors – play an instrumental role in successful technology innovation projects. Because vendors have crucial technology expertise, interviewees say they frequently offer a valuable perspective. These vendors can play a number of important roles in technology projects, from project manager to systems integrator to quality assurance—each with its own challenges and responsibilities. Making the right choice, however, can be a genuine challenge for human services administrators, according to stakeholders.

One problem is that designing procurement processes to find the right vendor and the right contractual structure can be a challenge, said many. A local technologist recognized that “the processes of procurement, budgets, and contracts can be as labyrinthine as it can be in any hierarchical organization.”⁴ Added an administrator, “Procurement processes are so convoluted and so difficult and so full of so many pitfalls that we miss a tremendous opportunity in terms of engaging meaningfully with vendors and each other.” Another administrator concurred, “I believe our procurement has got to be improved. There can be tiers of it. We have a one-size-fits-all approach for procurement. It’s outdated and needs to be modernized in a way that reflects our current business environment.”

⁴ As health information technology expert Frank Trotter told the *Washington Post*, “When you don’t know what you’re building, hiring a black-box vendor doesn’t work. That’s just rolling the dice.” “Wonkbook,” Ezra Klein and Evan Soltas,

Many cited regulatory constraints as a driver of procurement challenges. One private sector executive indicated that the current procurement regime is another manifestation of government’s risk-aversity, saying that “procurement rules, being what they are, are not designed to leverage advantages they could take in a commercial environment with vendors. They’re designed to mitigate risk.”

Some also said that existing technology procurement procedures can introduce unnecessary and counterproductive delays into technology innovation projects. “State government procurement and implementation is horribly inefficient and takes far too long. Given the pace of technology innovation, by the time a technology is purchased and deployed, you’re likely a generation behind,” said one nonprofit director. One state administrator realized early in an effort to develop new technology that “when we tried our first software-as-a-service contract, it took us six months getting over our internal barriers.” Another state administrator agreed, stating, “As fast as technology’s moving, it might be two years before you even start a project [due to procurement cycles], and often times you get recycled technology that’s old the day you put it in.”

Interviewees also noted that procurement processes can actually inflate development costs and shrink the marketplace. Said a researcher, “Those major systems replacements—that might take a half million dollars just to put together a proposal. That cuts

Washington Post, October 25, 2013.
<http://www.washingtonpost.com/blogs/wonkblog/wp/2013/10/25/wonkbook-how-healthcare-gov-looks-to-a-health-it-pioneer/>

out a lot of those mid-size firms, those smaller firms.”

Even after agencies begin to identify potential vendors through the procurement process, other problems can emerge. Vendors can overstate what technology can accomplish. One administrator recalled a “history of overpromising and under-delivering” from vendors. This dynamic can complicate the selection of a vendor, according to a state official: “Any vendor can promise anything, and the evaluation criteria are so vague, that any vendor qualifies.”

A related challenge, added some interviewees, is that an agency may lack the leadership and expertise to choose and manage a vendor. Advocating strong agency input, one researcher noted that successful vendor selection and system procurement is “not about following the vendor’s articulated strategy.” This nevertheless requires management skills that may not be available to every human services agency. “You need pretty strong expertise in-house to guide the work of the vendor,” said a local manager. There is also a danger in vendors providing inadequate guidelines to agencies. A city administrator, recalling a past disappointment with technology, explained that “we could’ve developed a much more effective, streamlined, user-friendly system if [the vendor] had given us parameters.”

In addition, legislative appropriations processes can establish side constraints that inhibit innovation, one interviewee noted. This technology expert explained, “The biennial budget cycle in many states is problematic for agile development in particular. Legislatures want to appropriate big chunks of cash and be done with it, not deal with maintenance-level costs.”

3. Evaluation

Interviewees agreed that demonstrating accountability can pose a significant challenge once a new technology has been developed and implemented. Due to the costs associated with technology, a range of stakeholders – including agency administrators, community partners, and elected officials – want to see results.

Part of the challenge, said many, is in selecting the right metrics and measurements. “Thinking about metrics with the right statistical analysis is important,” one state official offered. Said a local community partner, “We realized we promised ambiguous things to partners. The common measurement thing is important.” One former state official added that “once you make that pitch, you make it clear that you did what you said you were going to do.”

Several interviewees noted that, too often, metrics are not sufficiently linked to desired outcomes. Noted a private sector executive, “We have been very focused on transactions and measurements that don’t lead to outcomes.” Sometimes the disconnect between metrics and outcomes emerges from the choice of metrics; other times, it is the result of an inability to use data correctly. Said one local administrator, “We looked at how to use data. [Previously] our managers and even higher-level folks weren’t able to look at the data properly.”

Strategies

To address the challenges and pitfalls associated with the technology development process, interviewees shared several specific strategies, including: (1) techniques to effectively merge strategic and business planning with technology development, (2) opportunities to enhance and streamline

procurement processes, and (3) steps to ensure adequate evaluation and monitoring.

1. Strategic and Business Planning

For many successful technology projects, interviewees stated that the key is to begin with clear objectives, informed by a vision for the agency. One academic researcher put it plainly, “If you have a firm vision as to what technology would achieve for you, your state will do better.” An Idaho community partner credited the state’s successful human services technology projects to leadership, noting that “there was such a focus on the customer, and the goals were all around making things better for the customer.” Describing this process, one Idaho administrator said that “we take a process, or something that we want to either automate or use technology to support, and we map it out.” The next step, the administrator continued, is to “think about [process] from a customer’s standpoint, and a worker standpoint.” Similarly, Boulder County, Colorado, officials began the County’s integrated case management system design with a clear understanding of the desired outcomes. Recalled one administrator, “There was a philosophy of wanting to know, rather than speculate, and be targeted on our outcomes and resources. That’s woven into everything we do.” In Montgomery County, Maryland, an administrator cited a similar process, “I have a really good vision for how I can see this being implemented and helping our service area function more smoothly and in a better way so we can better understand our program, community needs, and provide better services.”

To clarify goals, several stakeholders recommended conducting reviews of existing agency practices and business processes in

order to identify highest-impact opportunities for technology and to align technology reform with business processes. One Idaho administrator attributed his agency’s successful implementation of technology “being business driven. Business [needs] had an active role in describing what needed to be done.” In one county, an official noted that “we talk about the data infrastructure as supporting integrated case practice.” One technologist in Montgomery County said of the relationship between technology and business processes that “our goal isn’t technology. It’s to use technology to contribute to either the business or service organization to which we belong. Our goal is to utilize that knowledge and talents to further the aims of this organization.”

Research on best practices – both external and internal – was also identified as helpful for planning a technology project in human services administration and benefits access. Research can yield useful project ideas and inform best practices for undertaking projects. One administrator in Washington recalled that, in preparing the state’s benefits portal, officials “analyzed the information and identified some models that would work better in Washington.” Similarly, once executives in the Colorado Department of Human Services had decided to pursue a benefits portal of their own, they “looked at a lot of research we’d done around best practices and making sure the key stakeholders were involved in the process,” as one administrator related.

Another strategy to ensure strategic alignment, said others, is to advance technology in stages. Said a New York City administrator, “I think the best practice is to approach the change incrementally.” This process allows for mitigation against potential risks. “We just had to step back and implement this in smaller chunks because with technology there are

unintended consequences,” said one technologist about a state technology project. Furthermore, the shorter timeframes of more modest projects, in which phases move from initiation to completion more quickly, allow for leaders to quickly demonstrate the value of the technology. “We want quick wins to enforce and build support,” said a San Diego County administrator. A federal official concurred, noting that “successful innovators try to show people, early on, the practical deliverables and get to early milestones, so people will buy in and they can gain more time.”

Well-planned projects account for future needs and are based on realistic timeframes. A New York City manager observed that “it’s important to know what you’re getting in to, not just for six months, but that these are multi-year processes.” In considering an appropriate project timeline, some urged an effort to anticipate future maintenance needs for new innovations. “It would’ve been helpful to have someone encouraging us to think concretely about updating and changing the system,” said one city human services manager.

2. Procurement

The challenges associated with procurement emerged as one of the most difficult issues in technology innovation, according to interviewees. The current web of regulations, combined with longstanding silos keeping technology expertise and program administrators from sharing insights, may not yield easy fixes. Yet while long-term policy solutions and a broader discussion on how to facilitate better technology in human services administration and benefits access are worthy endeavors, interviewees pointed to several strategies to begin to address some current challenges.

Interviewees provided several strategies for managing procurement successfully, though there is significant room for further development of effective procurement practices. Many noted that initial communication is critical. Because agencies are far more familiar with their own human services practice and needs than vendors, interviewees indicated that communicating a clear agency plan with prospective vendors can help ensure that solutions meet essential goals. “We already know what we want [the technology] to do when we engage them, and we’re very clear what we want the functionality to accomplish for us,” said a senior administrator in the Idaho Department of Health and Welfare. Relayed another Idaho administrator, “We’re so deliberate in pursuing technology, the vendor selection becomes very clear for us.” This individual continued, noting that clear planning and precise communication with vendors means “they’re building what we need and not driving our projects.”

Another strategy cited was to put in place the right expertise to manage vendor relations. As a New York City administrator observed, “You need excellent contract management skills.” A technologist in New York City concurred, “You will not be able to innovate if you cannot maneuver these processes skillfully.” In a strong agency-vendor relationship, “having people who can play that liaison role between the business role and the IT partner” is important, a Boulder County technologist noted.

The right structures can also aid communication, noted some interviewees. In Allegheny County, Pennsylvania, regular meetings with vendor personnel help to ensure coordination between the agency and its partners. “We have a monthly business planning session where we sit down with

[vendor staff], talk about the statement of work, the contract status, if we need any visioning sessions,” said one administrator in the County. Coordination with vendor personnel can some facilitate learning and strengthen agency technology expertise. Explained a technologist in Boulder County, “We have the best relationships when our vendors aren’t trying to help us implement, but when they’re helping us learn and adapt their tools more fully.”

Just as an incremental approach to technology innovation can assist with planning, so, too, can it assist with procurement, said some. According to a Montgomery County administrator, “One advantage of breaking off into these phases is that it gave us a solid basis for level of effort estimation and pricing. Breaking out into phases was a good move and a risk reducer for us.”

3. Evaluation

Interviewees were consonant that quality evaluative data – including quantitative measures in particular – are essential to success. One nonprofit leader with involvement in successful technology innovation projects recalled that “bringing that quality assurance loop into the service delivery system, and doing so quickly and immediately, was an advantage at all points.”

Several of those interviewed explained that clear evaluative measures are useful tools for administrators, tracking both agency and staff performance. An administrator in Allegheny County shared that, because of the County’s Data Warehouse, administrators “can track and can care more about how much our workers are using Datavue [the Data Warehouse’s analytics tool]. Those things are quantifiable and easy.” A

similar experience was reported by a community partner in New York City, who said that an enterprise case management tool “has created transparency from employees on the line to managers, supervisors, and the Department of Homeless Services.”

Interviewees also noted that technology can also collect broader measures that track agency and technology performance. In New York City, an administrator receives reports detailing “about 30 different points that we measure on a weekly basis,” including the number of online benefits applications. Similarly, Washington State’s strategic plan for its benefits portal has yielded to a number of key metrics, including “the percentage of online applications, the percentage of eligibility renewals, and the percentage of change reports” that come through the portal, one administrator related. Data from technology innovation can also inform administration by allowing executives to more easily spot patterns in administration and benefits access. A New York City manager reflected that the HHS-Connect initiative has enabled the agency to “see trends and analyze data in a way that we couldn’t before, to inform policy initiatives.”

In addition, many interviewees praised using evaluative measures to drive programmatic improvement, particularly when they draw on the experiences of end users. In Washington, an administrator reflected that a customer satisfaction survey for the Washington Connection benefits portal helped “identify improvement opportunities for future enhancement.” A similar survey for Arizona’s Health-e-Arizona tool enabled administrators to assess possible fixes. As one administrator stated, “We used the comments people gave us to drive improvements back into the system.”

These programmatic improvements include services rendered to beneficiaries, said some. For Boulder County, data from the integrated case management system enabled the Department of Housing and Human Services to identify clients receiving benefits and services from multiple programs. This capacity “really helped us gauge where there’s duplication of services, where there may be some pain points,” an administrator related. Another Boulder County administrator offered an example: “We know that 70 percent of our Section 8 clients are also receiving food assistance, so how can we work together with the housing/Section 8 and the food case managers to improve services?” Similarly, data can be used to help improve case practice at the individual level.

Policy

Challenges

1. *Addressing data privacy*
2. *Designing effective governance structures for technology projects*
3. *Navigating the concerns of elected officials*
4. *Establishing adequate financing*

Strategies

1. *Opportunities to address data privacy requirements without significant policy change*
2. *Developing practical governance structures*
3. *Practices to garner support from elected officials*
4. *Multiple pathways to adequate financing*

Policy

The final area of focus for technology developments raised by those interviewed concerns policy considerations, ranging from data sharing restrictions to skepticism from elected officials and project financing. Interviewees encountered and development numerous strategies from tapping expert advice to taking a strategic approach to communications with key stakeholders.

Challenges

Those interviewed mentioned several policy-related challenges, including: (1) addressing data privacy, (2) designing effective governance structures for technology projects, (3) navigating the concerns of elected officials, and (4) establishing adequate financing.

1. Data Sharing and Protection

With data sharing a key aspect of many innovative uses of technology, many of those interviewed described the challenge of navigating a multitude of regulations governing and restricting data integration. Federal and state governments have recognized that the collection of private data incurs a risk of improper dissemination, use, or even theft. To protect individual privacy, a number of regulations pertain to how various data sets – such as medical history, educational records, and personal identifiers – are shared. In general, interviewees acknowledged the importance of data protection, but expressed some frustration with these regulations. One state official, for example, wished for laws that would “free up and open data sharing across the programs.”

The sheer volume of regulations protecting data and restricting its sharing emerged as a key concern faced by those interviewed. A community partner who worked on a state-level project frankly stated that “confidentiality could’ve very well killed this project.” The observation that legal barriers designed to protect privacy rights can present barriers to innovative technology was shared by a local manager, who said that “there are some laws that could hinder the full exchange of information in terms of who’s working with whom.” Another recent challenge emerged with the Affordable Care Act, which restricts the use of federal data to Medicaid only. Said one consultant, “In integrated states, that is creating major issues.”

There was some disagreement among those interviewed as to whether these federal and state regulations posed actual or perceived barriers to innovation, but the effect was the same—a reluctance by human services agencies to undertake technology innovation for fear of running afoul of governing regulations. As a local manager shared, “Some of those challenges were real, some were perceived.” Said another local official, “You’re constantly thinking about how it could be an issue. I don’t know of any actual issues, but regulations are constantly on our minds.” Still another local manager recounted that these perceptions foster a reluctance on the part of human services workers to share information, explaining that “caseworkers are used to protecting all the information pretty severely, and are at risk of prosecution if they share too much.” One local administrator suggested that these perceptions stem from a cautious interpretation of existing statutes, saying that “it’s just that the interpretation has often been more rigid than [the laws] really necessitate.”

Simply separating real from perceived barriers is itself a challenge, said those interviewed. As a local administrator noted, “I think there’s a lot of myth around confidentiality, so a big part of the process was picking out the stuff that isn’t confidential.” A technologist from another locality echoed with this assessment, observing that “everyone’s operating at a different level of understanding about what they could or could not share. A lawyer might say that there’s no problem with data sharing between partners ‘A’ and ‘B,’ and ‘B’ might disagree.” This problem can be exacerbated by program silos which set different conditions on data sharing for related services at the state and county level. A local technologist said that an impediment to integrating service delivery among human services programs was “all of them being siloed at the federal level in terms of rules and standards.”

2. Governance

Many of those interviewed explained that, due to the scale of technology projects, effective governance and decision-making can be difficult to achieve. Dynamics between agencies and business units can contribute to this problem. “I think inter-agency suspicion and competition is one [important challenge],” observed an academic researcher. Negotiating these often conflicting interests can be difficult, especially for projects that affect multiple agencies. A local administrator stated that “any time you take two agencies, they have their own cultures about expectations and agreements.”

Interviewees also said that incorporating multiple agencies into a technology project can raise procedural issues. A local administrator explained, “Larger cities usually have multiple agencies and directors and have to work on different government structures that bring the

data together.” A community partner to a state project offered a similar assessment, noting that “the issue of governance becomes critical if you have more than one benefits administrator.” Another local administrator who led a project to integrate services added that “each organization has different policies to deal with at the state, federal, and local levels.”

Various agencies and partners can also disagree with how to actually design technology, according to several interviewees. One state administrator remembered having “to work through the details of what would happen when one partner wanted ten data elements mandatory and one wanted only three.” These conflicts can also affect vendor relationships. Observed a state administrator, “Sometimes it’s been challenging to figure out who comes first, and who the vendor’s working for.”

In addition to navigating multiple agencies, interviewees explained that other stakeholders – such as community partners – can also complicate governance and management. One community partner to a state-level project reflected that “It’s difficult for government, philanthropy, and the community to come around something this complex with steep implications for administration and operation of programs.” This concern was shared by a state administrator, who believed that “the first challenge is just getting a variety of different organizations to come together and share in the vision about what we’re trying to achieve.”

3. Elected Officials

Several interviewees said that the skepticism of elected officials towards human services technology projects – sometimes warranted – can represent a substantial barrier. Many of those interviewed were acutely aware of the political crosswinds that impact state human

services policymaking, particularly because elected officials such as governors, mayors, and legislators must play significant roles in sponsoring projects and allocating funds. A key issue, said some, is recent experience. One administrator recalled “being at the joint budget community and legislative audit committee and continually being asked ‘When will [a past solution] be fixed?’ There wasn’t an appetite to explore funding for new technologies when the current technologies weren’t working that well.”

Others found reluctance by elected officials to invest in technology, irrespective of past experiences. A researcher was blunt, “There is no appetite out there in state or local governments for big IT projects.” Reflecting on success in leveraging technology innovation, one county administrator stated that “we’ve done it with no allies in government.” Even when administrators have secured the support of elected officials, they say they must contend with electoral change. A local administrator noted that “there are a lot of issues with changing administrations that you don’t get in the private sector.”

4. Finance

Those interviewed were extremely cognizant of the reality that technology innovation requires significant investment, often in places where resources for human services and access to public benefits are increasingly constrained. One challenge related by interviewees is the relatively low priority of technology. In the words of a local administrator, “As money gets cut, the first things to go are computer systems.” A state administrator experienced pushback from state officials who were hesitant to pursue technology innovation in a time of fiscal difficulty: “We were in an economic

downturn, and we didn't have a lot of funds. [They asked] is this the best way the money should be spent?"

Related to these concerns is the reality – expressed by many interviewees – that technology financing is subject to political and policy forces beyond agency control. "There used to be a certain amount of bipartisanship. Now state employees find themselves in a fairly partisan battle," said one public official. Added a local technologist, "There are a lot of places where the idea of spending more money on better health and human services isn't easy to sell." Another local official recounted that "everything from sequestration, to the shutdown, to different programming that's susceptible to cuts—all that has a huge impact on how we deliver our services."

In addition, some interviewees noted that adequate financing can be contingent upon complying with the dictates of outside actors. A state administrator was clear, "My federal spending authority has these requirements, and if I don't meet them, I don't get my money."

Strategies

Several strategies were raised by those interviewed to help address policy-related challenges, including: (1) opportunities to address data privacy requirements without significant policy change, (2) developing practical governance structures, (3) practices to garner support from elected officials, and (4) multiple pathways to adequate financing.

1. Data Sharing and Protection

Given the complex regulatory environment concerning data sharing and confidentiality,

many interviewees pointed largely to expert consultation as a way to both sort through various regulatory demands on different agencies and data types and construct a robust legal framework to structure data exchange. For example, a local manager reflected that "once we got those issues on the table and we worked with our legal counsel, we resolved all that."

Many interviewees cited government counsel as a useful resource. In New York City, for example, leaders brought together agency officials and legal counsel to address data sharing regulations. Said a city administrator, "One of the keys to the governance was the ability to set up a legal group across agencies." With the endorsement of the Mayor's Office in the form of an executive order, city attorneys thoroughly surveyed the legal landscape, seeking feasible opportunities for data sharing. The committee "identified the confidentiality provisions governing their agencies' data and determined what data could and couldn't be shared," said a New York City administrator. Recognizing the various confidentiality provisions covering different program areas helped city officials plan for the implementation of the HHS-Connect project, "We said, 'Let's start building this where there's least [legal] resistance, and tackle pieces as they come along,'" explained an administrator.

Another model raised in interviews is that of external support. In Allegheny County, Pennsylvania, one administrator said that "we use external, nationally-recognized legal experts on this stuff." The County Department of Human Services was building a Data Warehouse that would cut across program silos. Collecting and storing this information necessarily raised compliance concerns. Legal counsel, brought in by community partners, helped work through the issues. "The legal analysis is important in helping people make policy decisions, saying

that you can do this much, you can go here or here,” stated one administrator.

A third, related tool discussed by interviewees is the use of memoranda of understanding (MOUs) to construct a framework for sharing information among agencies and with community partners. A technologist in Boulder County, Colorado, noted that the County uses “a lot of MOU-type tools, elaborate agreements governing who has access to what, for what purposes.” Interviewees found that establishing legal agreements actually helped to solidify trust among partner agencies and organizations. “We have agreements and understandings, self-policing as information moves through the system, and checks and balances within and between our organizations,” said one administrator in San Diego County. The administrator emphasized that “having that trust is important.” Even a small number of memoranda can prompt other organizations to join in, assuaging concerns about the legality of data sharing practices. A Boulder County technologist said that “when the others see that groups are getting on board, they realize it’s not a big departure and they can sign on as well.”

2. Governance

Interviewees were clear that, given the complexity and scope of many technology projects in human services, it is crucial for agencies to institutionalize channels of communication and decision-making among a broad range of stakeholders.

One approach cited is a formal governance committee. A New York City administrator noted that “the important thing we did was put together the executive steering committee,” which “has been involved all along in making

decisions, setting policy and strategy.” Similarly, an Allegheny County technologist said the Department of Human Services Data Warehouse steering committee “goes over the status of projects, plans, and issues.” Washington State, which also incorporates stakeholders from the government and community partners into a steering committee, uses this body to advise administrators on the direction of the program. Described an administrator: “We always share updates with them, get their input on certain questions, and we made decisions together.”

Informal decision-making structures were also praised by interviewees. A nonprofit leader noted that a successful technology innovation project requires “constant representation of program folks, so that they are heard.” In Idaho, for instance, administrators have “a core group of people who were all the decision makers—bureau chiefs and deputies” to direct the redesign of the state’s benefits administration, according to one manager. Similarly, an administrator in Arizona observed of the state’s Health-e-Arizona project, “One thing we’ve done as well is that we’ve involved policy staff from AHCCCS [Medicaid] and the Department of Economic Security.”

Interviewees also said that community partners can be a valuable assets for governance, solidifying community support and better informing decision-making. A county official discussing a successful technology project noted that “we brought a lot of stakeholders to the table.” An administrator in Allegheny County described a similar ethos: “We did a community process. We got buy-in. We have advisory groups and all the rest of it. [As a result,] we get broad-sector community support.”

3. Elected Officials

In many cases, interviewees observed that relationships with elected officials – in either executive or legislative offices – are instrumental in initiating technology innovation in human services administration and benefits access. “You have to have a broad vision, backed up by the elected body,” stressed one county official.

A key issue, said many of those interviewed, is that actively engaged elected officials can help spur technology innovation through encouragement or even mandates, particularly at the executive level. In New York City, an administrator recalled that “the mayor issued an executive order encouraging the agencies to look for ways to share information, as opposed to looking for obstacles.” This executive order also helped institutionalize the HHS-Connect project. Explained an administrator, “With the change in administration, we have an executive order that lays out the structure.” Elected officials can encourage technology innovation by providing logistical support. An administrator who worked on the Health-e-Arizona project recalled that “the Governor’s folks leading the Affordable Care Act component formed a small organizational footprint – maybe two or three people – and they orchestrated the essence of the state operationalization of [Health-e-Arizona].”

Other interviewees pointed to the similar power of legislative mandates in catalyzing technology innovation. In California, legislation required the state Department of Public Health to annually publish information on healthcare-associated infections across the state. One administrator there credited this law with bringing the Healthcare Associated Infections map project into being, saying that “the statute wasn’t a limiting factor, but a leveraging one. It

really mobilized individuals around the goal of introducing this interactive map.”

According to those interviewed, elected officials can also assist technology projects simply by allowing a wide berth to human services agencies, granting them maximum flexibility to innovate. In Arizona, an administrator said that “the legislature, over the years, has provided us with quite a bit of flexibility – and so has the executive – so we’re able to develop these initiatives.” The administrator credited elected officials with a sort of leadership that takes on “a trusting role, which provides proper oversight while giving us flexibility.”

To achieve this trust and support, said interviewees, it is critical to build relationships and communicate effectively. Said one Boulder County manager, “We have had such a collaborative relationship for such a long time with our community leaders – both governmental and non-governmental – so we have open dialogue and a collaborative approach with feedback.” In San Diego County, relationships with elected officials are assisted by the stability of the County Board of Supervisors. Stated one administrator, “One thing we have is a very stable governance structure – one turnover in the past 20-odd years.”

Interviewees were also emphasized that effective relationships with elected officials means making a compelling case. In San Diego County, an administrator shared that “if the program or innovation supports a concept of the bottom line, it’s about the political will to make that happen, no matter your party.” In Idaho, communications to the state legislature in support of funding technology was attuned to a desire among legislators for modernizing government experience. “By clearly describing the outcome of business changes and the associated technology to our legislators, in a

pragmatic way, we avoided the political battle,” recalled an Idaho administrator.

4. Finance

Because the costs commonly associated with large-scale technology projects can be daunting, interviewees advocated several approaches to addressing financing concerns. One common strategy cited is to pursue a phased or scaled approach. Said a researcher with past experience in facilitating technology projects. “It’s more successful to start smaller and build outward. They’ve been able to demonstrate proof of concept at a small scale, then they’ve

gradually gained new partners, increased interest, and had a bigger impact.” Interviewees noted that sometimes fiscal constraints force such an incremental approach. For example, as Idaho officials sought to improve the Department of Health and Welfare through new technology tools, the state provided the agency a limited budget and mandated that administrators report back to demonstrate progress. Ultimately, this improved the clarity of agency thinking. Said a senior administrator: “Each year we were accountable for showing tangible process, and that made us think differently about how we created, built, and deployed the replacement.”

Idaho: A Fiscally Conservative Case for Human Services Innovation

With a Republican governor and a Republican-dominated legislature, officials at the Idaho Department of Health and Welfare (DHW) worked with elected officials to invest in a redesign of the Idaho Benefits Eligibility System to improve program administration of Idaho’s assistance programs. The state’s legislature is closely involved in the administration of human services and benefits in the Gem State. Noted a leader within DHW, “They approve all of our funding, but also all of our administrative rules.”

As leadership at DHW began to develop a plan to leverage technology innovation – in conjunction with process reform – to improve agency performance, the concerns of legislators needed to be taken into account. Lawmakers and public officials had read story after story of other states investing hundreds of millions of dollars in building eligibility systems only to implement these systems with serious problems, including performance and timeliness issues in delivering critical benefits, leading to penalties and lawsuits for states. To avoid similar problems in Idaho, lawmakers and leaders at DHW agreed that rather than provide a lump sum of funding, the legislature would invest a smaller amount of funds each year and required regular reporting on agency progress to ensure these investments were leading to long-term successful outcomes. Each year, the agency reported significant successes to the legislature, building trust. “They wanted to continue to invest and support the project,” observed an administrator at DHW.

As the agency sought to implement aspects of the Affordable Care Act, leaders continued to build on that existing trust and built a compelling case to Idaho politicians for modernization. To obtain funding for ACA readiness, agency executives said they focused on a message that emphasized the long-term fiscal gains to be reaped from the project. “It was described not as a political event or political implementation, but as a smart way to help Idaho citizens and make good use of taxpayer money,” said another DHW leader. The results of this message were clear: the required funds were recommended without a single dissenting vote.

Another approach mentioned was to form allies within budget offices. Said one private industry executive, “Budget directors end up being important people to break iron triangles. Budget directors tend to represent the interests of elected officials and have authority.” This observation was born out by one county official, who added that “another entity that does play a role is the legislative analyst’s office, like the federal CBO [Congressional Budget Office].” Many interviewees also pointed to the persuasive power of emphasizing long-term savings when working to secure funding for technology innovation. As a Washington community partner stated, “The idea of having a benefits portal that would save the state some money, that was pretty appealing. I don’t think anybody’s going to object to that.” A version of this argument is that better human services administration and delivery – aided by technology – can help ensure that families receive needed benefits and services in a timely manner and achieve self-sufficiency quickly. A New York City administrator recalled that “because the nature of the enterprise was one that our budget office understood to be a necessary solution, they were willing to commit new dollars to the project.”

Once technology is online, interviewees said that emphasizing improved outcomes helps demonstrate the financial value of the innovation. Said one San Diego County manager of the Live Well San Diego initiative, “We made a significant impact on reducing [hospital] readmissions and reduced health care costs.” Similarly, officials in Idaho found an effective message to secure funding, which emphasized that technology “delivered more efficiency, more streamlined delivery,” as an administrator related.

Federal Facilitation of Technology Innovation

While the technology projects examined in detail in this paper have occurred at the local and state level, federal policymakers and administrators play a crucial role in the successful leveraging of new technologies to assist individuals and families. Because federal officials are key funders and overseers of state and local human service organizations, interviewees made clear that federal agencies are uniquely positioned to catalyze technology innovation in human services across the nation. “The role of the federal government can be important and helpful in terms of facilitating and pointing states towards areas where they should be working,” observed a private sector technology executive. This section presents several practices suggested by those interviewed that federal innovators could undertake to facilitate technology innovation.

Potential Federal Opportunities

Finance

- ✓ *Clarify Cost Allocation Guidance*
- ✓ *Extend Long-Term Grant Opportunities*
- ✓ *Enhance Legislative Funding*
- ✓ *Update Funding Practices*

Data Sharing and Protection

- ✓ *Streamline Regulatory Requirements*
- ✓ *Reform Data-Sharing Practices*
- ✓ *Promote Common Data Standards*

Finance

For state agencies, strapped by recent budget shortfalls in the wake of the Great Recession, funding technology innovation projects can be difficult. Local foundations can play a key role in addressing these financial concerns, but federal agencies possess valuable levers to provide further assistance to would-be innovators, said those interviewed:

- **Clarify Cost Allocation Guidance:** federal agencies typically attach substantial conditions to the funds provided for technology projects in human services administration and benefits access. As many of the projects profiled in this report cut across traditional program areas, many administrators have been tasked with patching together funding to cover comprehensive, integrated technology projects, often at risk of a possible penalty for improperly using funds. Said a state official, “The more we share across programs, the more we have funding allocation problems. The feds and states want to solve that barrier, but we have work to do.” Cost allocation difficulties can impede the development of integrated systems which otherwise might yield cost efficiencies. One former state official noted, “As we were building a single system rather than 60 stand-alone systems, we had to figure out the federal cost allocation model so that we’d get reimbursed for each of those programs.”

In this area, federal officials are taking some important steps in the effort to facilitate innovation. In 2011, as part of implementation of the Affordable Care Act, the Office of Management and Budget (OMB) issued an exception to its funding guidelines set forth in Circular A-87, which typically requires agencies to allocate costs for multi-agency projects by usage. This means that costs for information technology systems that served multiple programs were allocated according to their use. The 2011 exception to this rule – know as the “A-87 Cost Allocation Exception” – allows states to apply for the Affordable Care Act’s 90 percent federal matching rate to build shared technology components that interact with Medicaid systems. This exception offers millions of dollars in potential savings to state governments by making a significant portion of technology investments in human services eligible for the 90 percent federal reimbursement rate. The exception is not comprehensive, only applies to shared system components paid by Medicaid, covers exclusively projects completed by December 31, 2015, and does not support ongoing maintenance of new information technology systems. Recent guidance issued in December 2013 by the OMB seeks to streamline cost allocation principles enumerated in existing guidance, and consolidate a set of uniform cost allocation principles.⁵

⁵ See “Uniform Administrative Requirements, Cost Principles, and Audit Requirements for Federal Awards,” Office of Management and Budget, December 26, 2013. <http://www.gpo.gov/fdsys/pkg/FR-2013-12-26/pdf/2013-30465.pdf> In addition, for further exposition on this exception, its history and potential

use, see: “A-87 Exception Toolkit for Human Services Agencies: Description of the Exception and Recommendations for Action,” the American Public Human Services Association’s National Work Group on Integration. <http://www.aphsa.org/content/dam/aphsa/pdfs/N>

- **Expand Long-Term Grant Opportunities:** large federal grants and awards can be leveraged to spur greater technology innovation in human services delivery and benefits access. As an example, the Beacon Communities grant from the Office of the National Coordinator for Health Information Technology, incentivizes applicant communities to consider collaborative approaches to health care delivery. Using this grant, health care and social service providers in San Diego County were able to fund development of a health information exchange that will support improved care coordination and care transitions. Long-term opportunities such as the Beacon grant also allow innovators to respond to real-world changes in the world of technology, ensuring an adaptable tool which is unlikely to quickly become outmoded.
- **Enhance Legislative Funding:** in addition to competitive grant opportunities, federal funds made available through legislation and regulation have proven useful to would-be technology innovators. As noted, in recent years, the Affordable Care Act has promised states a 90 percent federal funding match for any information technology systems designed and implemented to support the new law. A nonprofit executive lauded this opportunity: “The Affordable Care Act (ACA) and the way the feds are financing it is a primary example of where they’re trying to look at a build-out of system and technology capabilities to stimulate or to encourage that development.” Officials in the Arizona leveraged this funding opportunity to upgrade the state’s Health-e-Arizona system from an applications portal to an integrated application and eligibility engine. Legislators could continue to provide these funds to human services agencies across longer time periods, allowing administrators to undertake these projects through a modular, scaled approach.
- **Update Funding Practices:** the ways in which the federal government funds technology innovation projects create incentives which shape the very projects themselves. For instance, current federal funding practices are designed to assist with massive bulk purchases through requests for proposal (RFPs). This results in states and localities often planning projects around federal funding, resulting in large-scale, custom-built innovations when existing solutions could be effectively leveraged to the same effect. Observed one federal official, solutions that “reuse [technology] don’t get rewarded in the same way” as custom-built tools. These practices can also discourage newer models of technology, such as software-as-a-service (SaaS) tools. One local official observed that federal financing of the health care exchanges, by providing a short timeframe for federal funding, dissuaded states from pursuing long-term SaaS models, saying that “the health insurance exchange is arguably ripe for the ‘software-as-a-service’ model. But the way the program was funded militated against this model.” This problem could be mitigated by greater flexibility in the provision of federal funds, such as committing to funding a SaaS tool through the life of the contract.

[WI/FINAL%20A-87_Exception_Toolkit%201-23-14.pdf](#)

Data Sharing and Confidentiality

While technology offers substantial opportunities for agencies and program areas to collaborate and more effectively deliver services and benefits to families, interviewees were largely consonant that these advances are only possible in an environment that promotes, or at least does not inhibit, the sharing of crucial data. There are several steps federal regulators could take to promote this exchange of information, according to interviewees:

- **Regulatory Streamlining:** interviewees noted that many technology projects are covered under an array of federal privacy regulations. Legislation such as the Health Information Portability and Accountability Act (HIPAA), Title 42 of the Code of Federal Regulations, and the Family Educational Rights and Privacy Act (FERPA) restrict the exchange of information deemed as sensitive, except under certain conditions.⁶ Each regulation designates different types of information as sensitive, and imposes different restrictions on covered data. Keeping track of the overlapping regulatory requirements poses a major hurdle to would-be innovators and requires a significant investment in legal counsel. Federal agencies could cooperate to explain how states and localities can prioritize and coordinate existing regulations in a way that effectively protects consumer privacy. One local official remarked that federal officials “can hardly do [too much] when it comes to helping bring clarity and modernize our data practices rules to better serve our customers efficiently and effectively.”
- **Regulatory Reform:** Interviewees also hoped that federal officials would review data regulations with an eye towards improving data sharing practices. Said one researcher, “I think federal agencies ought to look at how rules are jeopardizing technical innovation.” A county official proposed that ideally, federal guidance would permit “more free exchange of data across all health, social service, and safety programs.”
- **Data Standards Promotion:** interviewees further identified federal efforts at promoting uniform data standards as a useful initiative to catalyze greater data sharing in human services administration and benefits access. In some instances, vendors create proprietary formats for data that can only interact with other systems from the same company. This phenomenon, can inhibit agencies from using the best tools available because it forces them to turn to a single vendor (also known as ‘vendor lock-in’). As one non-profit leader observed, “Vendor lock-in presents a real challenge for agencies striving to be innovative.” This individual continued, “Given the complexity in the human services realm - the agora of non-profits, startups, and governments at every level - ensuring a smooth and reliable stream of data in and out of systems locally and nationally is critical to pushing for system-wide change.” Recent years have seen encouraging developments in developing data standards to assist data sharing across agencies. One researcher touted the

⁶ For example: “Summary of Selected Federal Laws and Regulations Addressing Confidentiality, Privacy, and Security,” Office of the National Coordinator, February 2010.

http://www.healthit.gov/sites/default/files/federal_privacy_laws_table_2_26_10_final_0.pdf

development of interoperability standards by federal agencies saying that “one recent thing that the feds have done that’s been helpful has been the interoperability standards they’ve been promoting.” Among other efforts, the federal Administration for Children and Families (ACF) has developed an interoperability toolkit, which provides information on relevant federal policies, cost considerations, and technological models to promote system interoperability. Furthermore, standards such as the National Information Exchange Model (NIEM), developed by the National Institutes of Health, provide agencies a readymade model to collect and regulate the sharing of information, facilitating data sharing by promoting what is intended to be an easily replicable template in lieu of existing proprietary data standards.

Facilitating Technology Innovation: A Summary

		Challenges	Strategies
People	Agency Leadership	<ul style="list-style-type: none"> ✓ <i>Public-Private 'Innovation Gap'</i> ✓ <i>Risk-Averse Culture</i> ✓ <i>Program Silos</i> 	<ul style="list-style-type: none"> ✓ <i>Use Program Experience</i> ✓ <i>Persistent Advocacy</i> ✓ <i>Coordinate Stakeholders</i> ✓ <i>Engage Staff</i>
	Agency Staff	<ul style="list-style-type: none"> ✓ <i>Engrained Staff Culture</i> ✓ <i>Job Security Fears</i> ✓ <i>Concerns on Usefulness</i> ✓ <i>Past Failures</i> 	<ul style="list-style-type: none"> ✓ <i>Leverage Staff Expertise</i> ✓ <i>Show Value of Project</i> ✓ <i>Instill Data-Driven Culture</i> ✓ <i>Deploy Champions</i>
	Community Partners	<ul style="list-style-type: none"> ✓ <i>Building Trust</i> ✓ <i>Aligning Vision</i> 	<ul style="list-style-type: none"> ✓ <i>Communicate with Partners</i> ✓ <i>Include Partners in Decision-making</i>
	Technology Expertise	<ul style="list-style-type: none"> ✓ <i>Pay Disparity</i> ✓ <i>IT Department Structure</i> ✓ <i>Importance of Program Knowledge</i> 	<ul style="list-style-type: none"> ✓ <i>Prioritize Technology Personnel</i> ✓ <i>Repurpose Existing Tools</i> ✓ <i>Contract with External Expertise</i>
Process	Strategic and Business Planning	<ul style="list-style-type: none"> ✓ <i>Identifying Opportunities</i> ✓ <i>Unrealistic Ambitions</i> ✓ <i>Regulatory Focus</i> 	<ul style="list-style-type: none"> ✓ <i>Envision Goals</i> ✓ <i>Review Current Practices</i> ✓ <i>Research Best Practices</i> ✓ <i>Work Incrementally</i>
	Procurement	<ul style="list-style-type: none"> ✓ <i>Counterproductive Processes</i> ✓ <i>Regulatory Constraints</i> ✓ <i>Managing Contractor Relations</i> 	<ul style="list-style-type: none"> ✓ <i>Communicate Goals with Vendors</i> ✓ <i>Use Management Expertise</i>
	Evaluation	<ul style="list-style-type: none"> ✓ <i>Selecting Metrics</i> ✓ <i>Aligning Metrics to Outcomes</i> 	<ul style="list-style-type: none"> ✓ <i>Use Data Gathered by Technology</i> ✓ <i>Leverage Metrics to Drive Program</i>
Policy	Data Sharing and Protection	<ul style="list-style-type: none"> ✓ <i>Multiple Regulations</i> ✓ <i>Perceived Obstacles</i> 	<ul style="list-style-type: none"> ✓ <i>Use In-House or External Counsel</i> ✓ <i>Draft Memoranda of Understanding (MOUs)</i>
	Governance	<ul style="list-style-type: none"> ✓ <i>Interagency Suspicion</i> ✓ <i>Procedural Misalignment</i> ✓ <i>Different Visions</i> 	<ul style="list-style-type: none"> ✓ <i>Create Formal Committee</i> ✓ <i>Hold Informal Convenings</i> ✓ <i>Use Partners to Forge Consensus</i>
	Elected Officials	<ul style="list-style-type: none"> ✓ <i>Suspicion of Human Services Technology</i> ✓ <i>Reluctance to Invest</i> 	<ul style="list-style-type: none"> ✓ <i>Form Relationships with Elected Officials</i> ✓ <i>Use Executive Orders and Legislative Mandates</i>
	Finance	<ul style="list-style-type: none"> ✓ <i>Low Funding Priority</i> ✓ <i>Political Considerations</i> ✓ <i>Compliance Requirements</i> 	<ul style="list-style-type: none"> ✓ <i>Finance Project in Phases</i> ✓ <i>Work with Budget Officials</i> ✓ <i>Emphasize Long-Term Savings</i>

III. Innovation in Action

This final section of this report profiles in depth 11 different specific, recent technology projects. These profiles are organized according to the four principles of technology innovation introduced in the preceding section:

1. **Business Process and Technology Innovation Are Closely Intertwined**
2. **Open Communication Is Vital to Success**
3. **Program and Technology Cooperation Ensure Optimal Results**
4. **Managing Expectations and Scaling Innovation Yield Rewards**

Many of these site profiles are illustrative of multiple principles, but profiles are organized according to the principle that they best epitomize.

1. Business Process and Technology Innovation Are Closely Intertwined

Some interviewees noted that, because technology supports underlying business processes, any effort to improve technology is complemented by corresponding enhancements to business process. The following case studies illustrate how business process reform can inform technology modernization, as well as the opportunities to reexamine business processes as an extension of technology projects:

- **State of Idaho**

- **Montgomery County, Maryland**

State of Idaho: Benefits Eligibility System

The Idaho Benefits Eligibility System (IBES) is a project of the state Department of Health and Welfare (DHW) to create a seamless experience for Idaho families applying for human services and benefits such as SNAP, cash assistance, and Medicaid. The project includes an overhauled case management system, new automation components, and a redesign of business process. The IBES overhaul was completed with the help of Accenture, and debuted in November 2009.

Initiation

Prior to the redesign of IBES, the state had had trouble delivering Idaho families the services and benefits for which they were eligible. In 2005 and 2006, the state received financial sanctions from the federal government for high SNAP error rates. Previous efforts to replace the state legacy system had stalled, engendering hesitation among agency officials about technology innovation. “The Department struggled to take on all the problems and necessary technology upgrades,” said one administrator.

A change in agency leadership at DHW provided the impetus for the reform of Idaho’s human services and benefits delivery system. The new administration sought to address the agency’s past performance issues piecemeal, rather than through a single monolithic effort. “We

recognized that we'd have to do something incremental and prove we were making progress along the way," said one senior leader at DHW. The Department adopted a 'problems-first philosophy,' in which leadership "committed to looking unflinchingly at our problems."

Implementation

The centerpiece of the redesign of IBES was a thorough reevaluation and reengineering of DHW's business processes. This began by identifying agency goals that would support the ultimate mission of helping the state's residents. Agency staff then thought through the processes involved in supporting the goal, from a business process perspective for both the customer and the staff. Proposed new processes and rules were rigorously reviewed, to ensure optimal performance. The result was a set of processes that would be instituted at each DHW office across the Gem State. "We designed processes from beginning to end, we created documentation, we wrote a process manual," noted one bureau chief.

Technology functions were derived based on what supported the reformed business processes. "We really drive automation from our strategic business goals—it's part of the larger system," noted a DHW official closely involved in automation. Technology buttresses, rather than supplants, the business processes at DHW. As one administrator noted, "If we can't find an automated way to make something work better, we don't automate." To this end, the state took on many of the responsibilities of a typical systems integrator. State personnel set the vision for technology and determine specific functionality and parameters. Contractors were then tasked with implementing the specific functions.

Idaho executives also looked outside the state to identify promising technology solutions. "The business office did great research into other states," noted a field program manager. Officials identified a solution already in place in a consortium of four California counties, called C4, which could be implemented in Idaho with minimal customization.

The IBES project also entailed a significant shift in agency culture and considerable staff engagement. The shift towards customer-centered service delivery disrupted old routines and initially drew pushback from staff. "They were used to being able to have a schedule in the field—now the customers would dictate the schedule based on when they came in," said one field program manager. Buy-in was quickly obtained, however, when workers saw the benefits of the new processes and technology.

Management and Maintenance

Administrators in Idaho have sought to build off the successful initial redesign of IBES. The project has cut the processing time for services and benefits applications from over 30 days down to one. The process redesign has diminished the agency's backlog of cases and enabled workers to serve a larger customer base more effectively.

Officials have recently leveraged the Affordable Care Act to further update aspects of IBES, such as the state's reevaluation process. Idaho officials decided to take advantage of a provision in the healthcare reform law that allowed states to automate reevaluation processes, which had been a priority for DHW. The agency's earlier successes in modernizing benefits and services delivery in Idaho enabled leaders to secure the needed political and

financial capital for Affordable Care Act (ACA) compliance.

Montgomery County, Maryland: Enterprise Integrated Case Management

Bordering Washington, DC, Montgomery County is home to approximately one million residents, and is one of the wealthiest counties in the country as measured by median household income. The County's Department of Health and Human Services (DHHS) covers five service areas delivering benefits and services to families: Aging and Disability Services, Behavioral Health and Crisis Services, Children, Youth, and Family Services, Public Health Services, and Special Needs Housing.

County officials have been developing an integrated case management system to improve service delivery to Montgomery County residents. The technology component of the service redesign is the Enterprise Integrated Case Management (EICM) system, which County personnel are currently developing in consultation with external consultants.

Initiation

The Montgomery County Department of Health and Human Services was established in 1997 following the merger of four formerly separate Departments. In creating a unified health and human services agency, County leaders had hoped to integrate the delivery of services and benefits to families. Yet the County lacked basic tools to support this vision. "For the most part our service areas operated in silos. Referrals were made to other service areas and there was some info sharing, but we had our own paper

charts that we never shared," observed one official in the Department.

In 2009, DHHS leaders pulled information from the 136 information systems in use, and found that approximately one third of the agency's clients were accessing more than two of the agency's services. Recognizing the need to streamline delivery to these and other individuals, administrators decided to build an integrated case management model. "We worked from the practice end first, and came to the technology solutions after," noted a senior DHHS official. After reforming business processes, County leaders moved to the development and implementation of the technology tool.

Implementation

As an agency incorporating four different program areas, DHHS has sought to ensure that the final EICM will be a useful tool across all Department components. To support active involvement from each program area in the design of the EICM, the County has mandated that each service area designate an e-SAR, or 'EICM Service Area Representative.' The e-SARs work alongside the vendor to provide crucial programmatic guidance as contracted technologists design the Oracle-based system. The representatives were chosen carefully. The Chief Operating Officer of DHHS "went to all the service area chiefs and asked them for people to help with EICM and technology modernization projects. They didn't want somebody who wouldn't be missed—they wanted somebody who could do the work that was needed," noted one e-SAR.

The agency has worked to address confidentiality concerns in the design of the EICM. Federal policies each impose different

requirements for the protection of sensitive information. The Department currently incorporates a number of program areas with differing restrictions and permissions on data sharing. Agency leaders sought to address many of these concerns in the initial process planning phase, instituting a principle of promoting data sharing, and building parameters for data exchange.

Officials in Montgomery County have leveraged existing contracts and projects to facilitate the development of the EICM, reducing the project's duration. "We haven't had to go through the whole RFP cycle, which would've added a couple of years to our timeline," noted one senior DHHS official. Contacts with the state's Chief Information Officer provided guidance to Montgomery County officials on using existing contract templates and pricing structure to streamline procurement.

Innovation Management and Maintenance

Montgomery County's integrated case management system is currently in the development process, and is expected to debut countywide in 2015. The EICM is one of three major undertakings occurring as part of the County's Process Technology Modernization (PTM) project, which will also introduce electronic health records and document imaging to DHHS.

2. Open Communication Is Vital to Success

Interviewees were clear that successful technology innovation projects – for all their differences – require significant collaboration among different stakeholders. The following site profiles illustrate the vital role played by

open and robust channels of communication among stakeholders in technology innovation projects:

- **State of Washington**
- **State of California**
- **Boulder County, Colorado**

State of Washington: Washington Connection Benefit Portal

Developed in 2010, the Washington Connection benefit portal allows residents of the state to screen eligibility for state and federal benefits, such as food, medical, cash, child care, and long-term care assistances offered by the state Department of Social and Health Services (DSHS). Users can take advantage of the portal to apply for these benefits online, manage their information, and complete renewals and changes. In addition to direct online access, the Washington Connection portal is available through the state's wide network of community partners, including nonprofit service providers and other public agencies, such as public libraries.

Initiation

The initial conversations leading up to the creation of the Washington Connection portal occurred in the immediate aftermath of the recession in 2008. In the words of one senior DSHS administrator, "There was a lot of increase in the demand for social services and benefits, while the staff level at the state government continued to decrease," necessitating innovative solutions to streamline the delivery of services that families required.

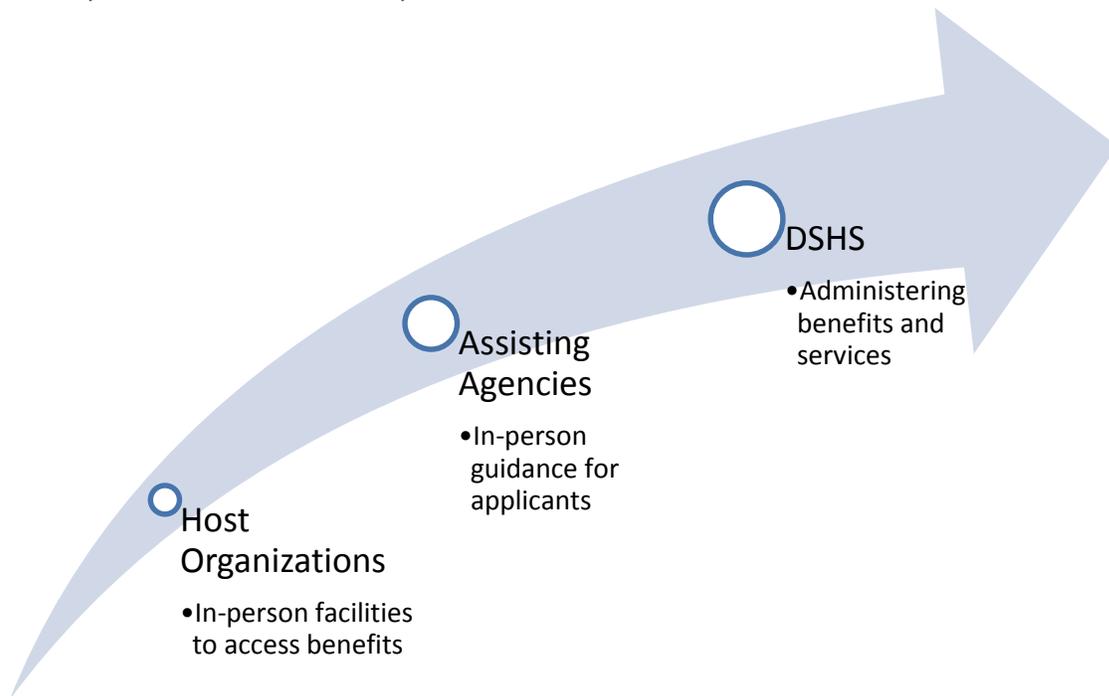
While DSHS had previously implemented the use of online application for DSHS benefit programs in 2008, the Washington Connection portal represented a step beyond past technology achievement, incorporating broader resource information, real-time eligibility screening, interface with local government, as well as individual client accounts and partner accounts. Agency leaders researched existing resources, such as The Benefit Bank and One-e-App, which had designed similar technology innovations in other states. When the Bill & Melinda Gates Foundation and other community leaders expressed interest in developing a benefit portal in Washington State, the Governor's office asked DSHS to sponsor the project's development.

Implementation

Uniquely, the concept of a broad-based benefit portal was incubated not in DSHS, but by the Gates Foundation with support from other community leaders. The Foundation provided a

preliminary \$800,000 grant to support the implementation, which was followed by a supplemental grant of \$400,000 for enhancement. The Gates Foundation convened officials from DSHS as well as community partners and other foundations to support this project. With contributions from six other foundations, about 40% (\$1.6 million) of the \$3.8 million implementation cost came from private sector. Additionally, the Foundation engaged technology expertise to assist in the design and implementation of the Washington Connection portal.

As DSHS administrators developed the portal, they focused on how best to leverage and partner with their network of community service providers. Agency leadership grouped these community partners into two tiers: host organizations and assisting agencies. Host organizations, such as public libraries, provide facilities and computers where individuals can access benefits and services information online. Assisting agencies feature caseworkers able to



provide guidance and assistance to residents and play a more active role in Washington's human services delivery. Focus group sessions with these partners helped determine the functionalities of the portal, including client searches and secured access to completed applications. DSHS and community organizations also conducted publicity and outreach campaigns to boost public awareness of the portal. In 2012 and 2013, DSHS was able to allocate grants for community partners to purchase equipment and increase the use of Washington Connection.

Management and Maintenance

The implementation of the Affordable Care Act (ACA) has required Washington administrators to adjust the Washington Connection portal, as the state has set up its own health insurance exchange website. For example, because Medicaid has been expanded under the ACA, the Washington Connection portal was modified to add functionality that screens for Medicaid coverage for pregnant women and referrals to the state's health insurance exchange website.

The original steering committee, comprised of stakeholders from both public and private sectors, has evolved into an advisory committee that offers advice on community outreach and website functionality of the portal. Ultimately, however, the Washington Connection portal is managed and maintained by DSHS on behalf of its stakeholders and partners. As one community partner on the advisory committee noted, "We understand that DSHS really runs the show, but we obviously have input." The advisory committee and DSHS have sought to incorporate local benefits into the Washington Connection portal as well.

State of California: Healthcare Associated Infections Map

The Department of Public Health's Healthcare Associated Infections (HAI) map provides an intuitive and informative online tool to the state's hospitals, health providers, and residents. The map collects information on common infections and from surgical procedures from each of the Golden State's over 400 hospitals and overlays the information on a map of the state. The map reports infection rates for a range of common medical procedures which state hospitals are required to make publicly available.

By accessing the website, individuals are able to access the data on infection rates and make informed health care decisions that account for the risk of different infections at various sites. The map allows users to view in one glance the infection rate for a given facility and compare it instantly to the statewide or national rate.

Initiation

The HAI project has its roots in California's tradition of strong civic engagement. Advocacy groups pushed for greater transparency in the state's hospitals to better inform consumer decisions. As a result of advocate pressure, the state passed laws in 2006 and 2008 which mandated the publication of a broad set of infection data, and that this data be published at the level of individual hospitals.

In the first year after the law's passage, the California Department of Public Health (CDPH) released the mandated information in the form of a report, downloadable as a PDF file. Strong feedback from advocacy and consumer groups forced the Department to rethink its approach to releasing the information.

Implementation

The Healthcare Associated Infections map grew out of CDPH's longstanding collaborative relationship with the California Health Care Foundation (CHCF). The Foundation had recently undertaken a project to identify "departments in state government that had information but needed help releasing it in a way that helps people," as one CHCF executive said. When CHCF learned of CDPH's wish to improve the public presentation of its healthcare-associated infections data, the Foundation arranged for a three-way grant that would team up CHCF, CDPH, and Stamen, a mapping firm with whom CHCF had worked previously. The Foundation would provide funds directly to Stamen, who would work with CDPH personnel in creating the map.

In creating the HAI map, CDPH partnered closely with Stamen to merge CDPH's program expertise with Stamen's design acumen. This arrangement was not without its challenges, however. One member of the Stamen team noted that "the main challenge was the legibility of the data," as the map was tasked with communicating complex information to the general public. Meetings between Department staff and Stamen personnel helped determine accurate but comprehensible language, and even addressed granular details such as color schemes.

Public input also contributed to the map's design. A public advisory committee consisting of both lay individuals and medical professionals met quarterly to discuss the Department's vision of the map and suggest changes. Feedback was also collected from three focus groups held in locations across the state with 31 members of public. Given the complex nature of health information in general and healthcare-associated infections

information in particular, the public advisory committee helped ensure a final product that was useful to Californians. As an example, one committee member cited Medicare regulations to recommend that CDPH use language comprehensible to an individual with a sixth-grade education. The public advisory committee working with a CDPH health educator served as a useful arbiter in the project's design, allowing the product to be tested with end users and adjusted accordingly by Stamen and the Department.

Management and Maintenance

The Healthcare Associated Infections map has recently released its third version. The two new releases have aimed to address concerns raised by end users. For instance, the first update of the initial map sought to expand the number of hospitals included from 48 to 429—nearly every hospital in California. Additional revisions have incorporated more surgical and healthcare-associated infections and added a more interactive user interface. As the Department rolls out each new version, the agency "share[s] it with the advisory committee and solicit[s] additional ideas based on the things they're seeing," according to one CDPH staffer involved in the project. The Department then works to incorporate these ideas into subsequent releases of the map. For example, the CDPH team has been working towards building an HTML version of the map in response to feedback received about difficulties viewing the current Flash version on some tablet and mobile devices.

Boulder County, Colorado: Integrated Service Delivery

The sixth most populous county in Colorado, Boulder County is home to the city of Boulder and the flagship campus of the University of Colorado system. Within the county government, the Department of Housing and Human Services (HHS) incorporates programs such as affordable and temporary housing, as well as traditional human services and benefits such as SNAP and cash assistance.

In 2008, the County began a system-wide shift to co-create solutions for complex family and community challenges by fully integrating health, housing, and human services. The idea was to generate a more self-sufficient, sustainable, and resilient community by focusing on the social determinants of health, removing barriers to services, and moving the system upstream towards an early intervention and prevention model.

The County continues to realize the vision of integrated service delivery across HHS' various programs. The Department, as it exists today, was formed after a 2008 merger between the County's housing and social services agencies. As part of its integrated service delivery model, among many other advances HHS continues to invest in technological tools that allow employees to track clients' case histories across programs, refer clients to additional program areas, and collaborate with other Department caseworkers.

Initiation

The movement towards a fully integrated case management system accelerated after Boulder County merged its housing and social services departments (creating the Housing and Human

Services Department) to streamline operations and leverage resources for families receiving services and benefits from the two overarching service areas. This undertaking, in part, responded to a common public wish for the new Department. "People want to be able to get what they need in a manner that's easy and accessible and supports their independence in the community," one HHS administrator said.

While the merger of the two formerly separate departments represented an initial step towards streamlining service delivery to the residents of Boulder County, agency leadership recognized that integrated service delivery would require – among other things – the development of a number of new technological tools. These tools would support the evolving integrated business model aimed at addressing the needs of Boulder County families. "The program folks know what they're trying to accomplish, and we've put some tools in place as part of a toolkit," said a technologist.

Implementation

To aid the development of technology tools, Boulder County established an integrated case management (ICM) team, which brings together representatives from each program participating in the integrated case management strategic work. The team worked together to update the County's Efforts To Outcomes (ETO) case management software, a tool developed by Social Solutions. The team began to develop the integrated case management system by looking at the program areas within HHS with the fewest restrictions on data sharing. "The pressure points have probably been around release of information," noted a partnerships coordinator.

The new technology tools were then customized to maximize their utility to the County and its clients. To broaden the reach of the integrated case management system, County attorneys drafted memoranda of understanding to incorporate community partners. An outside contractor developed an additional tool, called ICM, which works within ETO to connect the state's current automated child welfare system, Trails, to child welfare employees beyond the caseworker. This tool adds to existing capabilities within Trails, enhancing the tool even as the state seeks a new technology solution for child welfare. For instance, a removal from care entered into Trails will trigger ICM to send prompts to other employees in order to facilitate efficient service delivery by prompting an employee in the finance office to complete reimbursement. This, combined with an intensive focus on wrapping families in needed assistance to help them stabilize, has led to a safe reduction in out-of-home child placements and improvements among self-sufficiency indicators for families.

To buttress the development of an integrated case management system, HHS staff and managers sought to obtain as much data as possible on existing clients in the County. They had come to understand that by having a comprehensive view of each client's situation, caseworkers are better able to identify opportunities to apply the early intervention and prevention approach to wrap-around services and help the client stabilize. "We know that 70 percent of our Section 8 (housing choice voucher) clients are also receiving food assistance," one caseworker said. "So how can we work together with the housing/Section 8 and the food case managers to improve services?" Also, through comprehensive data tracking and analysis, clients' progress could be followed more closely. Recalled one administrator, "There was a philosophy of

wanting to know, rather than speculate, and be targeted on our outcomes and resources. That's woven into everything we do." Technology expertise within HHS assisted in obtaining the existing information from state databases. "Being able to write the queries to pull the data, we have one of the best people in the state and maybe even the nation in terms of innovative thinking, pulling data from systems," noted one division director. DHHS is now working to automate as many of these systems as possible to ensure data are being tracked consistently and efficiently.

The transition towards integrated case management entailed a substantial cultural shift among County employees. One manager, describing the preexisting assumptions among some staff, noted that "any time you're in a bureaucracy, there's always a little bit of the attitude that 'we can't do one more thing.'" Agency leaders illustrated to staff the value of the new service model and technology tools, lifting up the program's successes to solidify support. Once staff began to see the progress families and individuals were making as a result of the practice change towards early intervention and prevention and wrap-around services, they began to fully embrace the shift. A child welfare manager noted that it was "through the client successes that caseworkers realized a little bit of effort goes a long way for the clients and makes their job easier in the long run." Additionally, the agency's director conducted regular visits and 'coffee klatches' to hear from frontline staff directly. One manager observed that "a lot of the things that are smooth running now have come from those meetings."

Management and Maintenance

Using the technology tools developed as part of the integrated case management process has helped support Boulder County officials as they begin implementing the Affordable Care Act. Analyzing information shared across the agency, staff are able to identify clients in one program area who may be eligible for subsidized insurance or Medicaid coverage, and can send out notifications to encourage enrollment. Partly as a result of this, new enrollments in Boulder County through the state's health insurance exchange Connect for Health Colorado have been nearly ten percent of the statewide total, while Boulder County represents just five percent of the statewide population.

In the coming year, Boulder County plans to evolve further towards a "generative model" of housing and human services delivery, working with and empowering the community to be more resilient by strengthening the safety net, maximizing return on investment, and focusing on data-driven decision-making.

The County is also working with and learning from other agencies around the U.S. that are utilizing similar approaches. "More and more we're seeing that this is the way towards healthy, sustainable, and self-sufficient communities," said DHHS' director.

3. Program and Technology Cooperation Ensures Optimal Results

Interviewees described the complementary – and mutually essential – roles of both technologists and program administrators to the success of technology innovation projects in human services. The following site profiles

demonstrate the dividends yielded by strong cooperation between agency leadership and technology expertise:

- **State of Colorado**
- **Allegheny County, Pennsylvania**
- **State of Florida**

State of Colorado: Program Eligibility and Application Kit

The Colorado Program Eligibility and Application Kit, known as PEAK, is the state's comprehensive online benefits portal. The PEAK site allows individuals from the Centennial State to determine eligibility for food, medical, and cash assistance programs, apply for benefits, check application status, and even update personal information. Particularly of note, PEAK allows clients to determine their eligibility for medical assistance in real time.

The PEAK portal expands opportunities for residents to apply for benefits and services, allowing clients to apply from home, in the offices of community partners, and in county offices. In Colorado's state-supervised, county-administered human services system, the PEAK portal provides a uniform technology platform to access state and federal benefits such as SNAP and Medicaid, and supports applications for health coverage under the Affordable Care Act, when an individual is seeking either a tax credit or a premium subsidy which first requires a denial for Medicaid.

Initiation

The PEAK portal emerged as the Colorado Department of Human Services (CDHS) entered

the Great Recession and faced a twin onslaught: a rapidly increasing number of individuals seeking benefits and services and a decrease in resources to meet client needs. An existing system, the Colorado Benefits Management System (CBMS), provided caseworkers the ability to view client information and obtain eligibility determinations, but was widely considered inadequate as it relied on paper-based applications submitted through limited doors. The vision driving PEAK was to construct a public facing front end tool “appended onto [CBMS],” as one county-level administrator said.

Through a federal Health Resources and Services Administration (HRSA) grant as well as the reallocation of funds earmarked for CBMS maintenance, Colorado was able to obtain the funds needed to launch the development of PEAK. Nonprofit partners also assisted in the financing of the PEAK project. Specifically, grants from the Colorado Trust and the Colorado Health Foundation funded outreach efforts to community partners and the general public.

Implementation

Understanding that, in the words of one county-level official, “it was critical to have the audiences we wanted to serve” involved in the project, agency officials established the PEAK Outreach team, a steering committee that included voices from CDHS (the state agency that administers adult and family cash assistance programs, such as SNAP and TANF), Health Care Policy and Financing (HCPF, the agency that administers Colorado’s Medical Assistance programs, such as Medicaid and CHP+), the Governor’s Office of Information Technology, and Deloitte, the contractor selected to design of PEAK. Additional advisory

committees represented the state network of community partners and the state’s 64 county-level human services agencies.

The development of PEAK was centered first and foremost on customer experience. This vision of a client-centered tool drove the steering committee’s project management. The outreach team “spent money on logo design, getting client feedback, to really hone in on a logo for PEAK that was approachable and didn’t look governmental—people didn’t want others to know they were on government benefits,” said one administrator.

Frontline staff, too, contributed to the design of the portal. By including these workers on various committees and feedback loops, technologists and administrators gained a fuller understanding for how PEAK could best empower staff. Said one county administrator, “Now they get it, they know these are the people to talk to.” The state leveraged resources from county offices to assist in the implementation of PEAK and a team of human services staff based out of Boulder County developed materials and trainings to assist in the roll-out of the tool. Staff outreach was particularly crucial in Colorado’s state-supervised, county-administered human services system in which supports are delivered individually by the state’s 64 counties, as well as by Medical Assistance Sites.

Management and Maintenance

Since the launch of PEAK, the site has grown to become a reliable option for families seeking to determine eligibility and apply for benefits and services. There have been more than 100,000 new accounts created through PEAK in just a 4-month period from October 2013 to February 2014. The cost for PEAK’s base maintenance was

absorbed by the base operating budget, while updates to the system have been made possible primarily by funding from HCPF. Grant funds are used to support the PEAK Outreach team. (DHS) The state agency is currently working with community organizations to streamline processes to more effectively leverage PEAK. Recent upgrades to the site have also allowed Coloradans to determine eligibility for subsidized coverage under the Affordable Care Act.

Allegheny County, Pennsylvania: Department of Human Services' Data Warehouse

Encompassing the city of Pittsburgh and much of the surrounding metropolitan area, Allegheny County is the second largest county by population in Pennsylvania. The Allegheny County Data Warehouse collects information those served by the County's Department of Human Services (DHS), which administers such services as child welfare, behavioral health, aging services, emergency housing and shelter services. The warehouse has also grown to incorporate and link data from a variety of sources outside DHS, including the local criminal justice, public housing, and education systems.

A tool called Datavue draws upon the linked data within the warehouse to provide internal users (caseworkers, supervisors, analysts and management) with an at-a-glance view of a client's service history. For instance, an intake worker in the child welfare system would be able to find out if a family has active or past involvement in any of the range of services catalogued in the Data Warehouse.

In addition to this client-level functionality, the Data Warehouse enables a number of analytic projects. A data analysis team can run

programmatic queries for administrative reports that inform senior agency administrators, and the Data Warehouse allows community partners access to data for their own projects, under data use agreements and research partnerships. For instance, a recent study on child poverty in the North Side of Pittsburgh commissioned by the Buhl Foundation relied on the Data Warehouse to provide a detailed view of where children in the neighborhood were being born into poverty. Similarly, a recent partnership with Pittsburgh Public Schools enables educational administrators to see which students are actively receiving human services funded by DHS as well as additional details such as whether a family lives in public housing.

Initiation

The Allegheny County Data Warehouse project began shortly after a change in the administration and structure of the County's human services. In January 1996, a nonpartisan committee of community leaders released a report called ComPAC 21, outlining a strategy to enable Allegheny County to compete and prosper in the 21st century. One recommendation called for consolidating 32 County departments into five. Among these changes was the creation of an integrated Department of Human Services, bringing together previously separate departments focused on child services, mental health and intellectual disability, aging and other areas. One national advocacy organization noted that, at the time, Allegheny County's child welfare services "were known as a national disgrace."

As this consolidation was occurring, the County was using outdated data systems that could not provide administrators basic and essential information and could not actively

communicate with one another. The fragmentation of data among programs was also felt by Pittsburgh's vibrant network of foundations and community providers. One community partner recalled that "just the ability to know what agencies were out there, who were they serving—it was a morass." The head of the recently-consolidated DHS went to Pittsburgh's philanthropic community to seek support in bringing the agency's tools into the modern age. The foundations came together to form the Human Services Integration Fund (HSIF), a dedicated resource for administrative projects within DHS that could not be funded through traditional state or federal funding streams. The HSIF partnership, which continues to this day, helped support the process of integrating into a single Department. The local Chamber of Commerce and local business and legal leaders provided *pro bono* organizational and financial support as well.

Community partners also supplied the idea for a Data Warehouse. After Carnegie Mellon University studied the problem of disconnected local data and told the Department that a fully integrated system was impossible, the "Chamber [of Commerce] got involved, the CIO of PNC Bank, and they said, 'Rather than one system, why not go to a Data Warehouse?'" recalls a senior Department official. The advantage of a data warehouse approach was in the ability to maintain existing "source systems" within program areas, but to link the data at the client level between these systems to provide a more comprehensive view. Local foundations assisted in drafting an RFP, and, with \$2.8 million in foundation funding, the Pittsburgh Foundation signed a contract on behalf of the County with Deloitte Consulting to build the initial Data Warehouse. As a result of the heavy involvement from local foundations and community organizations from the onset of the project, the Data Warehouse

was conceived and built as a community resource.

Implementation

There were several initial concerns in implementing the Data Warehouse. DHS had trepidations about staff acceptance of the new technology tool, fearing that personnel might be daunted by the new technology, said an administrator. For these reasons, DHS was eager to cultivate champions among frontline worker users and leverage the resources furnished by outside partners. DHS looked to community partners from the University of Pittsburgh and Carnegie Mellon University to help teach about organizational change and help acclimate workers to the new tools. From there, DHS sought to informally identify and cultivate internal champions. One administrator noted the importance of these individuals, as the County used, in the words of this administrator, "the excited ones to win over people." The process has been iterative, with management setting goals and working to bring managers and frontline staff on board, while those staff provide ongoing input to improve and update the systems. A senior administrator noted that "the higher-level folks appreciate the data and use it, and we're working on bringing it down to the case level."

DHS administrators have sought to identify champions among existing staff within each program office of the Department. For example, specialist users train other child welfare workers and external providers on taking advantage of the tools enabled by the warehouse. These internal experts bring program expertise to the project. As one vendor associated with the project noted, "These staff can take requests for changes and figure out

what can be done with training, and what can require a system enhancement.”

Management and Maintenance

While the Data Warehouse has been a firmly established asset in Allegheny County for some time, DHS and its community partners have continuously sought to build on the initial project. One prominent example came with a recent agreement to partner with Pittsburgh Public Schools (PPS), allowing for data sharing. The initial idea had been met with skepticism. As one community partner noted, the school district had “a bad history with past researchers, so there was trauma about what we were doing to their kids rather than improving outcomes for DHS kids in the system.” Addressing these concerns, DHS enlisted the assistance of trusted community partners who were able to credibly vouch for the project’s value to the school board, including a former school board member sitting on City Council and a former local United States Attorney, both in strong standing in the community.

Since its formation several years ago, the DHS-PPS partnership has led to a much deeper understanding of the human service involvement of PPS’ students and their families, use of school data to reduce disruption when DHS’ removes a child from the home, and important analysis on factors influencing chronic absenteeism. DHS has since built on this partnership and signed additional data sharing agreements with eight additional school districts in the County.

State of Florida: Automated Community Connection to Economic Self-Sufficiency

Administered by Florida’s Department of Children and Families (DCF), the Automated Community Connection to Economic Self-Sufficiency (ACCESS) program was created in 2004 to change the model by which Florida families receive federal and state benefits and services. In lieu of the previous, traditional caseworker-based model, in which clients were assigned to an individual DCF caseworker, a new model enables clients to receive services and benefits from any DCF caseworker or other program staff.

Florida administrators invested in technology infrastructure components to support the new service delivery model. The centerpieces of the redesign were the three call centers constructed to handle client inquiries. These call centers feature an Automated Response Unit (ARU) which allows callers to obtain information about DCF benefits and services without needing to talk to a staff member.

Initiation

The impetus for the ACCESS program came with from the realization that DCF would need to adapt its practices to accommodate the increasing number of families seeking services and benefits in the Sunshine State. “We identified the need to streamline and improve service models to keep up with demand and meet our customers’ expectations,” noted one technologist. By 2007, the rate of calls that were abandoned by callers before reaching DCF personnel – known as the “blockage” rate – was as high as 85 percent in certain regions. Analysis by DCF indicated that a lack of standardization of work practices across agency offices

increased inefficiency and resulted in an increased call load to the call centers. As DCF administrators sought to improve practices in agency offices across the state, they also looked to develop technology tools which would assist caseworkers and enable clients to obtain benefits and services more easily.

Implementation

In developing the technology tools to improve client experience, DCF administrators chose to leverage existing resources across the state. “Technology has to come from the bottom up,” observed one DCF administrator. Within the agency, staff, managers, and administrators designed data tools to track clients visiting DCF offices, allowing managers to allocate these individuals to available caseworkers, thereby reducing unnecessary waiting time. Similar tools assist call center staff, prompting workers to regularly revisit cases and ensuring speedy processing.

Administrators also developed tools to track staff performance, ensuring that staff members can be reallocated to different tasks in response to real-time workflow. These tools have enabled DCF staff to serve families more effectively. “Real-time data helps us, and all of our systems are not necessarily real-time, but now we have reports (which are available within two hours), and that helps us know what needs to be done and when. We are very much data-driven. We make sure our staff are using the data and technology,” observed one DCF manager.

Innovation Management and Maintenance

Since the 2004 debut of ACCESS, DCF has undertaken a series of efforts to improve the client experience. For instance, the

development of the ARU and the virtual interview unit (VIU), which conducts application interviews over the phone, were undertaken in response to problems serving families in a timely manner. Currently, DCF is undertaking a peer-to-peer review process, called Delta Reviews, which will examine DCF’s success at implementing process and technology changes to the ACCESS program across the state.

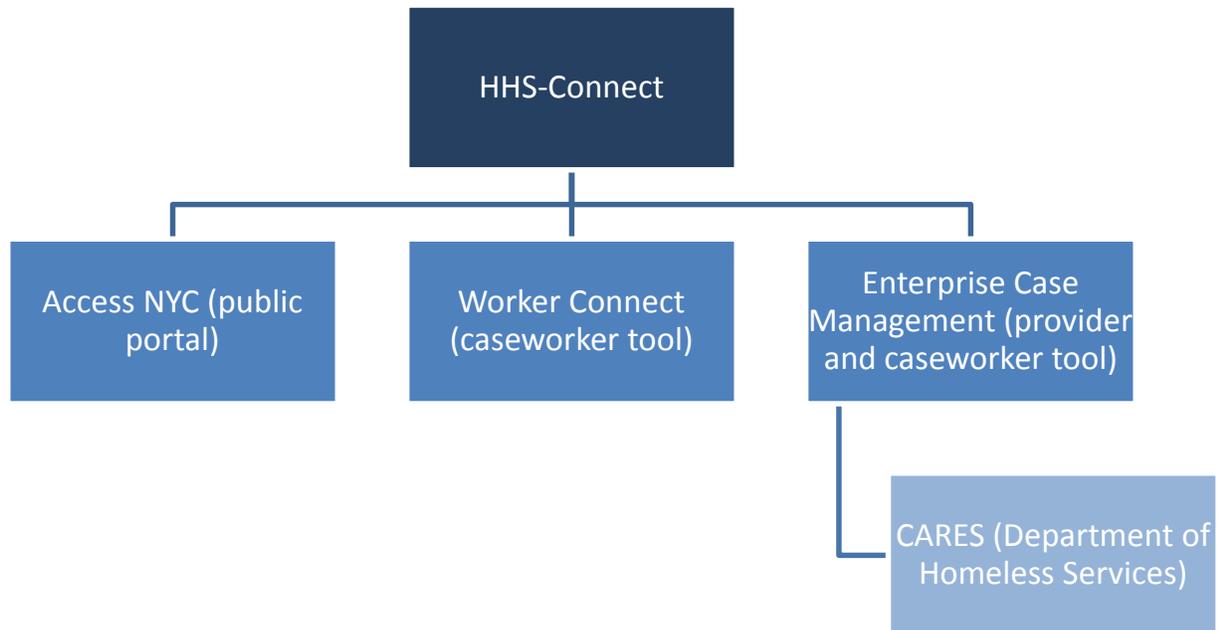
4. Managing Expectations and Scaling Innovation Yield Rewards

Interviewees warned about the challenges that emerge from overambitious projects. The following site profiles testify to the importance of approaches that mitigate the chances of project failure as a result of taking on too much, too quickly:

- **New York City, NY**
- **San Diego County, CA**
- **State of Arizona**

New York City, New York: HHS-Connect

The HHS-Connect initiative consists of three primary strands: ACCESS NYC, Worker Connect, and enterprise case management solution development. Originally administered by the Deputy Mayor for Health and Human Services and now reporting to the Mayor’s Office of Operations, HHS-Connect integrates human



services in New York such as the city’s Administration for Children’s Services, the Department of Homeless Services, and the Human Resources Administration. The goal of HHS-Connect is to create a seamless human services delivery experience for clients, caseworkers, and administrators alike.

ACCESS NYC is a benefits and eligibility tool for use by clients and families in New York City. This portal enables users to determine real-time eligibility for 35 local, state, and federal benefits and services, ranging from food assistance to cash support to child care. Worker Connect is a tool used by frontline staff, managers, and administrators that shares client information, consistent with privacy and confidentiality laws and regulations. Worker Connect enables human service agency employees to quickly determine which other agencies are assisting a given client, and help coordinate care with other caseworkers. The enterprise case management development component seeks to

develop a common software platform across human service agencies, leveraging shared middleware, and utilizing a common data model to ensure that systems can be delivered in a cost-effective and timely manner, and that the information from these systems can be readily shared with other agencies. To date, the program has launched one system for the Department of Homeless Services, known as CARES (Client Assistance and Re-housing Enterprise System).

Initiation

The idea for HHS-Connect began in 2006 with an initiative called One City. Commissioners for New York City’s major human service agencies, recognizing that they shared a large number of clients across departments, had begun asking questions about how to optimize service delivery for shared clients. In the words of a senior executive, city officials had begun to wonder “how do we develop an integrated case

management model, get all the players in the room around a case, and view a client across city agencies?” The One City initiative made progress towards producing an integrated case management model, but fell short of this promise because, in the words of one city executive, administrators “simply couldn’t figure out how to get our workers to know about one another in real time.”

In response, city administrators took a step back and recognized the need to “solve the information barrier by investing in a system that would tie the agency’s data together,” as one executive said. A strategic planning exercise laid out the governance framework for HHS-Connect. One result of the exercise was the decision to better coordinate the information technology capabilities under the oversight of the Deputy Mayor. Said a lead administrator on the project, “Up until then, strategy had been coming from City Hall, and we had a citywide IT Department that was doing the project management for implementing our policy vision. We were separated even physically from one another, and had to make sure the policy and technology were in sync.” Bringing together a governance structure under the Deputy Mayor which included agency commissioners and city technologists, the initial strategic planning sessions produced a roadmap for the development of HHS-Connect.

Implementation

The Mayor’s Office provided crucial executive support to the HHS-Connect project from the outset. An executive order institutionalized the initiative’s governance structure, mandating regular meetings among the Deputy Mayor, HHS-Connect senior staff, and agency chiefs. Additionally, the executive order mandated a legal liaison group, bringing together counsels

from each agency. Importantly, the group was charged with “looking for ways to share information as opposed to looking for obstacles,” as a senior executive with the city’s Human Resources Administration said. The legal team was able to provide an analytical framework which would ease collaboration among agencies through data sharing. A critical output of the legal workgroup was an Inter-Agency Data Sharing Agreement that defined the legal framework, including the terms and conditions under which HHS agencies would share data through HHS-Connect applications.

To ensure that the tools were as effective as possible, New York City executives sought feedback on tools as they were developed, adjusting the software to user response. This has included substantial focus groups with various end-user groups such as beneficiaries and community organizations, as well as city employees. In the words of one city executive, the process began by “figuring out who are the relevant key stakeholders, including clients [and] community-based organizations.” City personnel worked diligently with these groups to ensure that programs would be as useful as possible for both organization staff and clients. This collaboration also helped to overcome any misgivings from outside staff about the new tools. As one Department of Homeless Services partner noted about the Department’s CARES case management tool, “Once employees know it, they like it.”

City leaders also actively engaged staff in the roll-out of HHS-Connect. Trainings conducted by managers and supervisors who had been caseworkers previously allowed the city to demonstrate concrete gains from tools such as ACCESS NYC and Worker Connect. One city administrator noted that these technical demonstrations and trainings often helped workers realize the potential of these tools to

“lessen their workload, sometimes by hundreds of hours.”

Management and Maintenance

Managing the massive HHS-Connect infrastructure has been a significant undertaking for New York City. City officials have been planning a virtual client center for ACCESS NYC, and the city Human Resources Administration has been considering process adjustments to provide applicants with enhanced technical tools. Additionally, city officials have been contemplating advanced evaluation measures to assess the initiative’s impact. Current data reports bring together approximately 30 points of information which are “primarily output measures—how many visits, how many applications,” in the words of a senior city administrator. The city hopes to expand its technological capabilities to produce data that more readily captures high-level client outcome measures.

With the original contractors having moved on from the project, city government now has sole responsibility for maintaining HHS-Connect’s systems and infrastructure. This has been a challenge, particularly due to problems in hiring outside experts to work for the municipal government on a city government salary. Nevertheless, HHS-Connect has successfully maintained and enhanced the systems. A relatively flat hierarchy throughout HHS-Connect encourages free and open communications among all levels of staff, promotes innovative thinking and risk-taking among personnel and encourages staff to be proactive in raising concerns about the technology tools.

⁷ “Live Well San Diego Third Year Annual Report,” San Diego County, October 2013.

San Diego County, California: Live Well San Diego

Containing the city of San Diego, 17 other municipalities and surrounding unincorporated areas, San Diego County is the fifth most populous county in the United States. Home to more than three million people, the county is larger in population than 20 states, houses one of the largest military and veteran populations in the country, and has the busiest border crossing in the world

In the summer of 2010, the County’s Board of Supervisors, launched, *Live Well San Diego*, an aggressive ten-year plan involving intensive collaboration among county departments and community partners to create a “healthy, safe and thriving San Diego County.”⁷ The comprehensive initiative involves three components: Building Better Health, Living Safely, and Thriving. Leveraging technology effectively is essential in every aspect of planning and implementation.

Initiation

Live Well San Diego emerged from a realization among County leadership that residents were increasingly affected by preventable chronic diseases. The construct ‘3-4-50’ — three behaviors (poor nutrition, physical inactivity, and smoking) contribute to four chronic diseases (cancer, heart disease and stroke, diabetes, and respiratory conditions) that account for over 50 percent of all deaths in the region—became the focal point. The then-imminent implementation of the Affordable

Care Act afforded an opportunity to rethink the delivery of health and human services to San Diego County residents as well as to place new emphasis on population health and wellness.

Leadership in the County Health and Human Services Agency (HHS) set a vision for “generative” human services delivery based on a collaborative, holistic, person-centered approach.⁸ At the urging of a Chief Administrative Officer (CAO) recruited from the private sector, the County had previously adopted the General Management System, “a goal-oriented, cyclical way of planning that wasn’t siloed but looked across business groups,” noted an HHS official. A new CAO helped cement and reinforce this vision. County administrators began to incorporate the idea of ‘threading,’ thinking holistically about how different service areas interact. When a new director of HHS was appointed in 2008, he “mandated the threading, asking our programs to think of how changes influence not only them, but also the other divisions of the agency,” observed another senior County leader.

Elected officials also featured prominently in the development of the initiative. Agency leaders presented *Live Well San Diego* to the Board of Supervisors in economic terms, emphasizing the \$4 billion in direct medical expenditures that result from preventable chronic diseases and the cost savings and value to taxpayers that could be achieved through an emphasis on health, safety, and overall well-being in the region. The Board of Supervisors

⁸ For more information on the ‘generative’ model of social services delivery, see: “Outcomes and Impact: Insights from the 2012 Human Services Summit at Harvard University,” Leadership for a Networked World, 2012.

approved the “Building Better Health” component in 2010 and “Living Safely” in 2012. “Thriving” is currently under development and will be brought to the Board in 2014.

Implementation

The County’s strong existing relationships with the community provide the foundation for the “collective effort” that is the essence of *Live Well San Diego*. “A long history of contractual relationships provided familiarity and experience,” noted a consultant to HHS. Organizations of every kind – cities, schools, diverse businesses including healthcare and technology, military and veterans organizations, and faith-based organizations – are working collaboratively with the county to plan and implement innovative and creative programs to achieve the vision of a healthy, safe and thriving region.

The County leveraged a number of federal opportunities to support *Live Well San Diego* and involve community partners. One important funding source came in the form of a Beacon grant, which supported the creation of a health information exchange to enable collaborative delivery of health services. Established by the Office of the National Coordinator for Health Information Technology, the Beacon program advances “the vision of patient-centered care, while achieving the three-part aim of better health, better care at lower cost,” according to the program’s website.⁹ Now called Health Connect, the San

http://community.lnwprogram.org/sites/default/files/Outcomes_and_Impact.pdf

⁹ “Beacon Community Program: About the Program,” Office of the National Coordinator.

<http://www.healthit.gov/policy-researchers-implementers/beacon-community-program>

Diego health care services exchange has inspired planning for a Community Information Exchange (CIE) to facilitate knowledge sharing among community-based social and human services agency workers and providers across the county. A state-of-the-art call center operated by the County's Health and Human Services Agency and integrated with a private non-profit call center 2-1-1 San Diego enables individuals to quickly obtain guidance on and apply for a wide array of benefits and services.

Based on successful pilots, the Centers for Medicare and Medicaid Innovation (CMMI) awarded the County's Aging and Independence Services (AIS), partnered with four major hospital systems (11 hospitals in 13 sites), a Community-based Care Transitions Program (CCTP) to reduce the high rate of readmissions within 30 days of discharge for 21,000 fee-for-service Medicare patients transitioning from hospital to home. The program is supported by technology tools enabling information sharing among hospitals and among the medical and social services professionals involved in a patient's care. A website enables patients and their caregivers to input and view their medical information and obtain information about community resources.

Management and Maintenance

From the earliest planning stages of *Live Well San Diego*, the County recognized the need to enhance its own technological infrastructure to support person-centered service delivery and associated program and resource planning. The Knowledge Integration Program was established to develop the required technology and business processes. The County has defined an electronic information exchange that will include social service, public safety, and health information. Explained one HHSA administrator,

"We will first emphasize having person lookup, electronic referral, electronic collaborative case notes, notices and alerts, and population-based analytics." County leaders are also laying the administrative groundwork necessary to support these collaborative tools, including developing standards and governance required for integrated service delivery. One example is the drafting of agreements among County agencies to govern the use and sharing of data. "We just stood up our data governance structure, and I'm excited because it goes beyond HHSA," said one senior official. As part of the Knowledge Integration Program, key business process are being re-examined and redesigned to center around the person accessing services.

Live Well San Diego is based upon a shared vision, and using a shared measurement system allows all partners to focus their efforts and track collective progress. To support monitoring and evaluation, ten indicators have been identified that span five "Areas of Influence": health, knowledge, standard of living, community and social.

To expand the breadth and reach of *Live Well San Diego*, formal partnerships are being created with other organizations and governmental jurisdictions that influence policy, programs and environments so that collectively all 3.2 million residents can be reached, underscoring the power and opportunity of working together.

State of Arizona: Health-e-Arizona Plus

The Health-e-Arizona Plus (HEAplus) tool, recently implemented and based on the previous screening and application tool Health-e-Arizona (HEA), is the state of Arizona's

application site for both health coverage programs - including the referrals to the federally facilitated marketplace (FFM) - and traditional human services programs such as SNAP and TANF. Two state agencies are responsible for HEAplus, the Department of Economic Security (DES) and the Arizona Health Care Cost Containment System (AHCCCS), which administers Medicaid in the state. The tool is also available to community organizations under a subscription plan.

Initiation

The impetus for the former HEA tool grew out of discontent with the old paper system of eligibility determination and application for Medicaid coverage. The state's federally qualified health centers (FQHCs) expressed interest in an existing tool called Health-e-app, developed by the firm Social Interest Solutions for the California HealthCare Foundation and used in California.

Adaptation of the Health-e-app tool began with the FQHCs operating with the guidance of state officials. The passage of an initiative in 2000 to expand Medicaid coverage prompted clinics to examine reforming the eligibility and application process. At the time, about 80 percent of Medicaid applications were processed by entering paper applications into the DES eligibility system. Approvals were submitted electronically to the AHCCCS MMIS system. The clinics identified Health-e-app in California and supplied the initial funding for the purchase and configuration of the tool. The new application proved its value. "It went from a 20-page application to a 30-minute electronic screening—everybody in the state wanted to use it," observed one community partner with a long history of involvement in the HEA project. Initially implemented in 2001, the FQHC

consortium transferred HEA to the state in 2008. Also in 2008, the state expanded the system to allow for public access. This way, consumers wanting to enter their own applications on line could do so from any computer with internet access.

Implementation

The many years of successful use of Health-e-Arizona at FQHCs, and other community providers and organizations, prompted state interest in leveraging HEA as the core of a new integrated eligibility system. "We knew many of their players from the HEA project, so we knew their work style," noted a senior leader of the Health-e-Arizona Plus project. To guide the development of the tool, state officials set up a steering committee which brought together leadership from the two agencies and working groups to figure out the parameters for Health-e-Arizona. Agency leaders made sure to staff the working groups with program area expertise. "You want somebody who won't be hesitant to speak up," said a senior project manager.

As the state developed the HEAplus project, it faced a variety of challenges. Working across two state agencies that were each reporting to different federal agencies presented a difficulty in "having people come together and bond around a common theme," noted an executive with the Social Interest Solutions team. There were also technical challenges associated with the project's comprehensive structure. "We have about ten state hub integrations—we integrate with the state human services systems, as well as the state Medicaid systems. This is probably one of the most complex integration projects I've ever been on," said a senior technologist involved in the project.

Regulations governing information sharing also posed challenges to Arizona officials, and sorting through the various regulations was a sizable undertaking for the agency. “We have to stay up with all these security laws that govern secure data, financial data, and all kinds of stuff,” noted a senior Arizona official. Additionally, the state had to standardize data sharing arrangements between agencies and community partners. “Each agency, prior to merging with HEAplus, had their own individual data sharing agreements with entities which would see data in their systems,” said an administrator.

Management and Maintenance

The new Health-e-Arizona Plus system has been designed to both increase the range of programs available to applicants and incorporate a larger number of community organization subscribers. Additionally, the Health-e-Arizona Plus system completely integrates DES and AHCCCS users into one information technology system, as application information is stored in a single, joint system rather than the previous siloed legacy systems.

The ACA has significantly impacted the provision of Medicaid across the country, including Arizona. The state chose to accept the increased funding for Medicaid, and state officials adjusted the Health-e-Arizona Plus system to the new policy landscape. Previous planning for a possible state exchange eased the adjustments. Administrators had been “so active in looking to the future that they’d started building the enhancements to get us into the federal marketplace,” observed an Arizona executive.

Lessons Learned for Innovators

The table on the following page presents a series of lessons derived from each site. This table is not intended to be an exhaustive inventory of every key insight emerging from each site’s experience, but instead to provide a cursory overview of some important takeaways from each of the successful technology innovation projects listed above.

LESSONS LEARNED FOR INNOVATORS

State of Idaho	<ul style="list-style-type: none"> ✓ Process Planning Guides Technology Innovation: Idaho officials undertook a comprehensive review of agency processes, reforming these work flows and building technology solutions to assist the new processes. ✓ Incremental Funding Is Viable: rather than pursue a single large procurement for technology innovation, Idaho administrators agreed to smaller annual allocations. This allowed the agency to work iteratively, and mitigated the fiscal risk.
Montgomery County, Maryland	<ul style="list-style-type: none"> ✓ Agency Staff Can Drive Innovation Design: as Montgomery County has sought to design an enterprise integrated case management system, agency leadership have used designated staff members, called enterprise service area representatives (e-SARs), to guide the design of the new system, ensuring its fit into agency practice.
State of Washington	<ul style="list-style-type: none"> ✓ Foundations Can Bridge Stakeholders: with the initial sponsorship and financial support of the Gates Foundation, the Department of Social and Health Services was able to use the credibility of the Foundation to bring other foundations and community partners into the steering committee.
State of California	<ul style="list-style-type: none"> ✓ Legislative Action Can Spur Technology Innovation: a state law requiring all hospitals to report infection rates for common medical procedures helped drive the California Department of Public Health to think of innovative ways to make this information accessible to the public, leading to the Health Associated Infections map.
Boulder County, Colorado	<ul style="list-style-type: none"> ✓ Leadership Should Seek Input from Staff: as the Department of Housing and Human Services designed its integrated case management system, agency executives organized regular meetings to hear feedback from managers and frontline staff.
State of Colorado	<ul style="list-style-type: none"> ✓ Staff Champions Can Lead Outreach Efforts: in Colorado, staff in Boulder County decided to take over the training process for the new PEAK portal. This allowed trainers to knowledgeably respond to concerns raised by colleagues in other counties.
Allegheny County, Pennsylvania	<ul style="list-style-type: none"> ✓ Foundation Resources Can Provide Needed Seed Funding: As Allegheny County sought to reorganize its human services agencies into one department, local foundations and community partners provided significant funding to support the new technology infrastructure.
State of Florida	<ul style="list-style-type: none"> ✓ Existing Agency Assets Can Be Used in Innovative Ways: rather than undertake an expensive procurement, officials in Florida’s Department of Children and Families used existing technology tools to monitor the performance of the state’s ACCESS centers to ensure efficient service to Floridians.
New York City, New York	<ul style="list-style-type: none"> ✓ Ambitious Projects Can Be Divided into Components: when New York City decided to improve the technology tools available to its human services agencies and community partners, officials had ambitious plans. This vision was broken down into several discrete components to better address the distinct needs of clients, caseworkers, and administrators.
San Diego County, California	<ul style="list-style-type: none"> ✓ Community Partners Can Help Foster a Culture of Innovation: in San Diego County, longstanding relationships with a large network of community partners helped the innovative ideas behind the Live Well San Diego initiative to permeate through all stakeholders, ensuring maximum cooperation.
State of Arizona	<ul style="list-style-type: none"> ✓ Partner Organization Assets Can Be Leveraged: when community partners responded positively to a new Medicaid eligibility tool, Arizona officials sought to adapt this new asset for agency use, leading to the creation of Health-e-Arizona.

Conclusion

Drawing on innovative technology to improve human services administration and access to benefits is a critical challenge but also a golden opportunity to promote family well-being in America. This report has sought to provide key strategies for successfully navigating and pursuing the technology opportunity, as experienced by states and localities that have undertaken technology projects themselves.

Developments in technology have the potential to revolutionize the administration of human services and provision of public benefits. The ultimate ends of better empowering American families to reach self-sufficiency will require better collaboration between caseworkers and clients, better information to administrators, and better integration of necessary benefits and services into the realities of daily life. Insofar as technology can support these improvements, it will be a crucial focus for successful human services agencies in the future.

The strategies address in this report are only the beginning. They are neither exhaustive nor universally applicable. Instead, they are intended as a broad framework to help would-be innovators conceive, plan and begin to implement technology projects.

It is clear that technology is not and cannot serve as a panacea for the challenges of providing human services and benefits to the most vulnerable families. It is equally clear that states and localities must avoid harboring illusions about the relative ease of technology projects. Enterprise-scale technology is a substantial undertaking, requiring significant resources, time and energy.

What this report does show, however, is that many of the common challenges that inhibit the development of robust and effective technology to serve vulnerable populations at the state and local level can be addressed through effective planning and concerted effort. This report is intended to contribute to a vital and burgeoning conversation about how technology can become an engine for the effective provision of services—rather than a hindrance.

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Appendix A: Interviewees

This appendix lists interviewees from both the initial research phase of this project as well as those from specific site visits. This appendix includes names from those sites which granted permission to publish the names of interviewees, as well as those individual interviewees who assented to the listing of their names. The organizational affiliation reflects the individual's affiliation at the time of the interview. In some cases, an individual engaged with the development of an innovation in a prior position; these previous affiliations are included in parentheses.

Research Interviewees

- June Allen, First 5 Alameda County
- Tom Baden, Minnesota Department of Human Services
- Julie Boughn, Center for Medicare and Medicaid Services
- Claudia Coulton, Case Western University
- Dennis Culhane, University of Pennsylvania
- Stacy Dean, Center on Budget and Policy Priorities
- Stephen Fletcher, National Telecommunications and Information Administration (formerly State of Utah CIO)
- Nicole Gardner, IBM
- David Hansell, KPMG
- Kelly Harder, Dakota County (Minnesota) Community Services
- Chris Hwang, First 5 Alameda County
- Jess Kahn, Center for Medicare and Medicaid Services
- Sam Karp, California HealthCare Foundation
- Erin Kenny, Alvarez and Marsal
- Alicia Koné, Koné Consulting
- Jerry Mechling, Gartner

- Abhi Nemani, formerly Code for America
- Antonio Oftelie, Harvard Human Services Summit
- Ben Pierson, Bill & Melinda Gates Foundation (formerly Alvarez and Marsal)
- John Rossman, Alvarez and Marsal
- Bryan Sivak, Department of Health and Human Services
- Lucy Street, Social Interest Solutions
- John Supra, South Carolina Department of Health and Human Services
- Penny Thompson, Center for Medicare and Medicaid Services
- Bobbie Wilbur, Social Interest Solutions

State of Colorado: Program Eligibility and Application Kit (PEAK)

Interviewees:

- Lynnae Flora, Jefferson County
- Heather Hewitt, Denver County (formerly State Health Care Policy and Finance)
- Tammy Hoffman, Denver County (formerly Arapaho County)
- Patrick Kelly, Boulder County
- Sue Williamson, Colorado Health Foundation (formerly State Health Care Policy and Finance)

Allegheny County, Pennsylvania: Data Warehouse

- Judy Barisella, Allegheny County Disability Connection Unit
- Randy Brockington, Allegheny County Office of Administrative and Information Management Systems
- Diana Bucco, Buhl Foundation
- Marc Cherna, Allegheny County Department of Human Services

- Erin Dalton, Allegheny County Office of Data, Analysis, Research, and Evaluation
- Kate Dewey, The Forbes Funds
- Patrick Dowd, Allies for Children
- Bob Gradeck, University of Pittsburgh
- Jacki Hoover, Allegheny County Office of Children, Youth, and Families
- Jean O'Connell Jenkins, Allegheny County Office of Data, Analysis, Research, and Evaluation
- Wayne Jones, The Heinz Endowments
- Charles Martin, Allegheny County Office of Children, Youth, and Families
- Alex Mezhinsky, Deloitte Consulting
- Samantha Murphy, Allegheny County Resource Services
- Dan Robinson, Allegheny County Director's Action Line
- John Sawyer, Allegheny County Department of Human Services
- Kary Sousa, Allegheny County Office of Children, Youth, and Families

State of California: Healthcare Associated Infections Map

- Amy Blandford, California Department of Public Health
- Loriann DeMartini, California Department of Public Health
- Dave Fisher, California Department of Public Health
- Rae Greulich, Healthcare Associate Infections Advisory Committee
- Lynn Janssen, California Department of Public Health
- Andy Krackov, California HealthCare Foundation
- George Oates, Stamen Design

- Jorge Palacios, California Department of Public Health
- Maribeth Shannon, California HealthCare Foundation
- Karla Van Meter, California Department of Public Health

San Diego County, California: Live Well San Diego

- Alfredo Aguirre, Behavioral Health Services, County of San Diego Health and Human Services Agency
- Holly Baughman, United Way of San Diego County
- Scott Bechtler-Levin, Community Information Exchange
- Bud Beck, Community Information Exchange
- Lynn Calhoon, Community-based Care Transitions Project (CCTP), AIS, County of San Diego Health and Human Services Agency
- Regina Carrillo, Palomar Health
- Carol Castillon, Community-based Care Transitions Project (CCTP), Aging and Independent Services (AIS), County of San Diego Health and Human Services Agency
- Dan Chavez, San Diego Beacon Health Information Exchange
- Arlen Correa, Community-based Care Transitions Project (CCTP), AIS, County of San Diego Health and Human Services Agency
- Greg Cox, County Board of Supervisors
- Steve Escoboza, Hospital Association of San Diego and Imperial Counties
- Dale Fleming, County of San Diego Health and Human Services Agency
- Angela Goldberg, Prescription Drug Abuse Task Force
- Elissa Hamilton, Palomar Health
- Carrie Hoff, County of San Diego Health and Human Services Agency
- Barbara Jimenez, County of San Diego Health and Human Services Agency

- Gregory Knoll, Consumer Center for Health Education and Advocacy
- Nick Macchione, County of San Diego Health and Human Services Agency
- Debbie Malcarne, Behavioral Health Services, County of San Diego Health and Human Services Agency
- Sandy McBrayer, The Children's Initiative
- John Ohanian, Chief Executive Officer at 2-1-1 San Diego
- Steve O'Kane, Council of Community Clinics
- Pam O'Neil, Staff, County Board of Supervisors
- Robert Peters, San Diego County Medical Society
- Pam Plimpton, Community-based Care Transitions Program (CCTP), AIS, County of San Diego Health and Human Services Agency
- Sunny Ramchandani, Naval Medical Center of San Diego
- Helen Robbins-Meyer, Chief Administrative Officer for San Diego County
- Ron Roberts, County Board of Supervisors
- Nancy Sasaki, Alliance Healthcare Foundation
- Ellen Schmeding, AIS, County of San Diego Health and Human Services Agency
- Brenda Schmitthener, Long-Term Care Integration Project, AIS, County of San Diego Health and Human Services Agency
- Donald Steuer, Assistant Chief Administrative Officer, Chief Operating Officer for San Diego County
- Marc Stevenson, Project 25, St. Vincent de Paul Village
- Carleen Stoskopf, San Diego State University Graduate School of Public Health
- Henry Tarke, Homeless Coordinator, County of San Diego Health and Human Services Agency

- Rick Wanne, County of San Diego Health and Human Services Agency
- Adrian Watts, Vision San Diego
- Mary Woods, Regional Administrator, Telecare
- Wilma Wooten, Public Health Services, County of San Diego Health and Human Services Agency
- Bill York, Chief Operating Officer at 2-1-1 San Diego
- Nick Yphantides, County of San Diego Health and Human Services Agency

State of Washington: Washington Connection

- David Bley, Bill & Melinda Gates Foundation
- Jerry DeGriek, City of Seattle
- Cristie Fredrickson, Department of Social and Health Services
- Patty Hayes, Public Health – Seattle and King County
- Tony Lee, Solid Ground
- Alice Liou, Department of Social and Health Services
- LiLi Liu, Bill & Melinda Gates Foundation
- Susan McAllister, City of Seattle

Boulder County, Colorado: Integrated Case Management System

- Tonja Ahijevych, Housing Counseling Program
- Frank Alexander, Director
- Lorraine Archuleta, Community Support Division
- Susan Bawn, Finance Division
- Norrie Boyd, Housing Development Division
- Sarah Buss, Housing and Community Partnerships

- Chris Campbell, Office of the Director
- Melissa Frank Williams, Integrated Services Program
- Andy Garnand, Work Supports Division
- Amanda Guthrie, Housing Division
- Ann Harris, Family Self-Sufficiency Program
- James Hayen, Child Support Services
- Mae Hsu, Community Outreach
- Wendy Ingham, Ongoing Children and Family Services Division
- Paul Jannatpour, Management Information Systems
- Theresa Kullen, Screening and Intake Division
- Angela Lanci-Macris, Case Management and Community Outreach Division
- Aaron Martinez, Energy Conservation Program
- Melissa Maling, Family Engagement
- Jason McRoy, Business Operations and Systems Support Division
- Terrie Ryan-Thomas, Screening and Intake Division
- Chris Saunders, Operations
- Kit Thompson, Family and Children Services Division

State of Arizona: Health-e-Arizona

- Tom Betlach, Arizona Health Care Cost Containment System (AHCCCS)
- Michal Goforth, Pima Community Access Program
- Melanie Norton, AHCCCS

- Linda Schroeder, Health-e-Arizona Plus
- Linda Skinner, Office of the Governor
- Jim Wang, AHCCCS
- Bobbie Wilbur, Social Interest Solutions

New York City, New York: HHS-Connect

- Lauren Aaronson, Human Resources Administration
- Cory Cary, Department of Homeless Services
- Louisa Chafee, former Office of the Deputy Mayor for Health and Human Services
- Andrea Cohen, Mayor's Office
- Audrey Diop, Human Resources Administration
- Linda Gibbs, former Deputy Mayor for Health and Human Services
- Diane Gilroy, Administration for Children's Services
- Isaac Leshinsky, Housing Bridge
- Kenza Martin, Health and Hospitals Corporation
- Ivy Pool, HHS-Connect
- Richard Siemer, Human Resources Administration
- Tayyab Walker, HHS-Connect

State of Idaho: Idaho Benefits Eligibility System (IBES)

- Renee Blythe, Training Manager for the Division of Welfare
- Julie Hammon, Bureau Chief for the Division of Welfare
- Greg Kunz, Deputy Administrator for the Division of Welfare
- Julie Lister, Bureau Chief for the Division of Welfare

- Tonya Standerfer, Program Manager for the Division of Welfare
- Karen Vauk, Idaho Food Bank
- Laela Wilmot, Program Manager for the Division of Welfare
- Lori Wolff, Deputy Administrator for the Division of Welfare

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- Uma Ahluwalia, Director of Montgomery County Department of Health and Human Services
- Joanne Becka, Child Care Subsidy Program Subsidies Manager
- Sara Black, Department of Health and Human Services Special Needs Housing Specialist
- Bob Eaton, Special Needs Housing Consultant
- Mark Hodge, Nurse Administrator for Tuberculosis Control at Montgomery County Department of Health and Human Services
- Debra Rosenberg, Department of Health and Human Services Program Manager
- Steve Sonkin, Chief Information Officer at Montgomery County Department of Health and Human Services
- Stuart Venzke, Chief Operating Officer at Montgomery County Department of Health and Human Services

Appendix B: Further Reading

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