Re-Imagining Digital Communications at a Large Federal Agency: A Case Study

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Abstract: A large US government agency undertook a multi-year systems change effort to re-imagine its digital communications activities, which are led by communications staff in its numerous sub-agencies and offices, along with a central coordinating office within this agency. The systems change strategy used draws from the literature on systems change in the private and government sectors, from two previous systems change efforts within the agency, and from input provided by actively engaging and listening to staff at all levels of the agency. The systems change effort resulted in a business model for the coordinating office to use in advancing the agency's digital activities. It provides a framework for implementing activities more quickly - encouraging experimentation and emerging best practices. A significant result of the systems change effort to date is transformation of the agency's main website. At the beginning of this process, fewer than 20 percent of users were finding what they were looking for on the site. Currently over 80 percent of users consistently say they found or partially found what they were looking for. Page load times also improved. The coordinating digital communications office also has received a significant budget increase since these improvements took place. Despite limitations on generalizability from this case study, it may be useful for other government agencies when designing similar systems change activities

Keywords: Systems change; Diffusion of innovations; Organizational transformation; Business model; Engagement; Stakeholder involvement; Technical assistance and support

1. Background and Overview

Given frustrated staff and customers, the rapidly evolving communications environment, tight budgets and demands for return on investment, the Office of the Assistant Secretary for Public Affairs (ASPA), U.S. Department of Health and Human Services (HHS) embarked on a systems change process to re-imagine the Department's digital communications, as coordinated by ASPA's Digital Communications Division (hereafter called ASPA Digital). The process was driven by (1) reviewing pertinent literature on government and private sector systems change and digital activities in the government realm, (2) learning from two previous HHS systems change efforts, and (3) listening to staff leading HHS digital communications activities – both within ASPA and those in the many HHS sub-agencies and offices. Sorting through and organizing their feedback led to creating an ASPA Digital Business Model (Digital Communications Division 2017a). It provides a framework for implementing digital activities as soon as they became minimally viable, encouraging experimentation and emerging best practices.

With time and continued engagement of ASPA and other HHS staff, the steps taken have produced impact. Most significant was transformation of HHS.gov, the agency's main website. At the beginning of this process, fewer than 20 percent of users were finding what they were looking for on HHS.gov. Currently over 80 percent of users consistently say they found or partially found what they were looking for, and this number is holding steady with the continued consolidation of content and implementation of new functions (Digital Communications Division 2017b). And after years of a flat line budget, the ASPA Digital program recently received a significant budget increase.

After significant enhancements in the site, as described below, 80 percent of users (up from 20 percent) said they found or partially found what they were looking for, and this number is holding steady (Digital Communications Division, 2017b). The website's mobile responsiveness also was increased, as detailed below. (Google Page Speed Insights, 2018).

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1.1 Literature on Systems Change and Government Digital Communications

Mergel (2018) reports that governments all over the world are implementing innovative digital communications approaches to increase efficiency and create more effective relationships with their publics – these approaches are sometimes referred to as "Internet-Plus Government." Innovative approaches include social media and mobile-first technology for websites. Such approaches often are implemented using agile or adaptive frameworks for change (Mergel 2018; Janssen & van der Voort 2016). These methods bring both new opportunities and challenges, sometimes addressed by systems change methods from the private and government sectors that "re-integrate digital service delivery with a holistic focus on human-and client-centered design delivered through shorter development cycles" (Mergel 2016, p. 516). The main challenge for government – as it is with the private sector – is the "cultural change that needs to go hand-in-hand with the procedural change" (Mergel 2016, p. 523). Technical solutions such as those at the back-end and front-end of websites, as well as external innovations, also help to drive this change (Faith-Allah et al, 2014).

There has been much room for improvement. U.S. government websites are an important channel for access to government information and services, yet many are not mobile friendly, fast, secure or accessible, according to a review of 300 (out of about 6,000) U.S. government websites (McQuinn & Castro 2017). This review found that 92 percent failed to perform well on at least one of these benchmarks.

In particular, the use of social media by HHS and other government agencies has expanded in recent years, and is increasingly seen as an essential tool for two-way public communication (Mergel 2017; Schein, Wilson, and Keelan 2010; We Are Social 2016). Social media and other new technologies not only complement traditional sources (e.g., radio, TV, newspapers) in spreading messages, but are necessary to reach the growing percentage of the population abandoning traditional media as adoption of internet technologies increases (Greenwood, Perrin, and Duggan 2016). Mergel (2013) reports from a study of social media directors in Federal agencies that there is a need for more formalized knowledge sharing in promoting adoption of social media approaches in highly bureaucratic environments, but work by Mergel and others cited above emphasize the importance of cultural factors in successful systems change.

At the societal level, changes in public consumption of information make necessary the development and implementation of new digital media approaches. More than ever, Americans can consume and interact with online media anywhere, anytime from any device. Consumers have come to expect "instant gratification" – that desired content is available when they want it, where they want it and how they want it in a way in which they can talk about it or otherwise act (Patel, 2014).

Change does not come easily to any large bureaucracy, particularly in a component part like ASPA Digital, which had not changed its organizational structure for some years despite many changes in both information technology and its consumers. Fortunately, there is good learning to build on. The challenges mentioned are similar to those ASPA confronted with the successful implementation of the HHS Strategic Communications Planning (SCP) tool, using a technology-based Platform to guide planning and dissemination of communication products and campaigns (Weber et al 2015). ASPA's SCP project, and a previous effort at a component HHS agency, the Substance Abuse and Mental Health Services Administration (SAMHSA) (Weber and Backer, 2012), both implemented successfully an enhanced mechanism for planning, producing and disseminating agency communications products and campaigns.

These two efforts resulted in a set of principles for systems change which were applied to the work described here, alongside guidance provided by ASPA Digital staff and others within HHS. Guidance also was provided by digital strategies for HHS and the Federal government overall (The White House 2012; U.S. Digital Service n.d.-a; Office of the Assistant Secretary for Public Affairs n.d.).

The change effort described here also was informed by private sector work on organizational uses of digital communications – which are vital to business success because they can support – or readily disrupt - marketing and other business activities (Kane et al 2016). And it was built on the body of experience in the private sector on change management, e.g., Drucker (1995), Gardner (2004), Kotter (2012), and Ready (2016).

For instance, the latter identifies four things successful change leaders do well, and which are reflected in the work described here – they recognize embedded tensions and paradoxes, hold everyone accountable, invest in new organizational capabilities, and emphasize continuous learning.

One of the most frequently-cited approaches to systems change in a business organization was set forth by Kotter (1995) in an influential *Harvard Business* Review article. This approach features eight steps needed to transform an organization: (1) Establishing a sense of urgency, (2) Forming a powerful guiding coalition, (3) Creating a vision, (4) Communicating the vision, (5) Empowering others to act on the vision, (6) Planning for and creating short-term wins, (7) Consolidating improvements and producing still more change and (8) Institutionalizing new approaches. The systems change process used in this case study was aligned with these eight steps.

This private sector work aligns in turn with reports of successful change management in the public sector, e.g., Ostroff (2006), who emphasizes that "leaders of government agencies operate under handicaps unknown within the private sector" (p. 140). Public organizations are especially likely to function under conditions of great complexity, leading to chaotic change that needs to be managed very carefully (Karp and Helgø, 2008). But change efforts can be successful under these conditions if handled properly (Fernandez and Rainey, 2006; Van der Voet, Kuipers, and Groeneveld, 2016). These government efforts also align with systems change and organization development work in the nonprofit sector, as summarized by Wittenberg et al (2007).

1.2 HHS Environment

ASPA is responsible for coordinating the flow of information between HHS and the agency's targeted audiences. ASPA Digital manages HHS.gov, a number of other agency websites, the HHS Intranet for the agency's employees, and many HHS social media accounts. Sub-agencies and offices also may manage directly some of their own digital activities.

HHS is one of the largest Federal agencies, with over 80,000 employees, a $1.3 trillion annual budget, and a complex digital footprint bringing together information on topics like health care financing and insurance, public health issues from AIDS to Zika, scientific research breakthroughs and economic safety net programs from early childhood education to temporary assistance to needy families. ASPA Digital manages communications channels that, in FY 2017, garnered 31,704,355 impressions on Twitter, Facebook and Instagram; 9,879,643 YouTube video views; and 1,328,189 email subscribers. On the HHS.gov website, there were 35,532,467 unique visitors; 61,105,705 unique page views; and 98,844,998 total page views. The annual operating budget for ASPA Digital from Fiscal Year (FY) 2014 through FY 2017 was just over $20 million. And as mentioned, ASPA Digital recently received an $8 million annual budget increase (Digital Communications Division, 2017a)..

2. Study Question

This case study is focused on learning whether a particular approach to systems change can help a large bureaucratic government agency enhance its digital communications activities.

3. Aims

The specific aims of this systems change case study were (1) to identify principles under which the systems change approach operates, (2) to describe what was done over a three-year period to implement these principles, (3) to analyze the initial impact of this intervention and its possible value for other government agencies, and (4) to analyze the limitations of the case study.

4. Method

The ASPA Digital systems change effort, which began in 2014, had five major phases of activity:

4.1 Discovery Phase (Kotter Step 1)

After initial conversations with senior HHS leadership, an external consultant conducted a series of interviews with ASPA Digital staff and leadership, and communications leaders in various organizational units at HHS. These interviews helped to identify what was and wasn't working in ASPA Digital's management, operations and products.

At the same time, a "follow-the-money" budget analysis was conducted - to see where investments were being made Digital Communications Division, 2017a). At the time, 64 percent of the ASPA Digital budget was directed to content development, production and maintenance. Shared Licenses and Services used by the HHS community for a variety of digital related services consumed 14 percent of the budget. Management and Overhead required 13 percent of the budget. Only 6 percent of the budget was invested in Engagement Services. The result was that major resources were devoted to adding content and building new websites on a variety of topics for a variety of reasons - thus shortchanging what was available to maintain and improve the HHS.gov website. This led to relatively low satisfaction rates for users of HHS.gov. Similar challenges faced the social media component of ASPA Digital. Engagement through social media was an afterthought, not part of a strategy.

Results from both activities helped establish a sense of urgency within HHS about the need for change in ASPA Digital's goals and operations. To begin the process of change, four key user audiences for ASPA Digital products and services were identified:

- **Users of HHS websites, audience engagement channels, and other digital materials.** This audience potentially encompasses the entire American public. However, most products focus on a particular population segment.
- **Third-party content users.** Not all audiences use HHS products directly. State and local governments, private sector organizations and the news media often place HHS information on their websites, social media channels, and mobile applications.
- **Other HHS communications programs.** ASPA Digital is uniquely positioned within HHS to help HHS's sub-agencies and offices shape the Department's digital footprint. The goal is not for ASPA Digital to control what Agencies and Offices do, but to provide both technological and consultation support to their efforts to evaluate audience needs, to select the best channels and messages to reach and engage the audience, and to effectively measure impact.
- **HHS employees who are users of the HHS Intranet.** ASPA Digital serves this audience by effectively managing the Intranet (a separate systems change effort will address needed changes)..

There are, of course, many market segments within these audience categories, particularly for the users of HHS digital content and social media channels. Performance measurement activities must define and engage these market segments to be effective. The future analysis of audiences and ASPA Digital activities will provide information that can be used to drive and trigger actions.

4.2 Initial Diagnosis and Change Phase (Kotter Steps 2-3)

Two meetings of a thought leader group convened by ASPA leadership were held in September 2015 and March 2016. Group participants in this guiding coalition included ASPA Digital staff, and staff from the communications units of a number of HHS sub-agencies and offices. Input was provided from the Discovery phase both about the current effectiveness of ASPA Digital and about how its operations and impact might be improved. The second of these meetings also included review of a "follow the money" presentation made by an ASPA Digital staff member, which helped identify how financial resources were being spent. This initial advisory work led to development of a new Business Model for ASPA Digital, which is discussed later.

In parallel with the thought leader consultations, significant re-structuring of ASPA Digital was taking place. A vision was created of a new organizational structure, which now places all activities under three operating units – Engagement, Content, and Performance and Operations.

The Engagement branch is primarily responsible for planning and executing the strategic use of digital communications associated with HHS priority content. The Content branch is primarily responsible for maintaining and updating HHS.gov and the HHS archives. The Performance and Operations branch is primarily responsible for contracted web and database development; contract management; and use of financial information along with content analytics to track and report performance.

Leadership changes also occurred with the retirement of two long-time leaders and appointment of a new leader supervising the entire unit. A number of new staff have been hired, and the Federal employees' union was consulted on changes in job duties made for unionized personnel who work in ASPA Digital.

The administrative re-structuring was put into place along with substantial changes in ASPA Digital programming and operations. Most significant was transformation of the HHS.gov main website (operation, maintenance and upgrading this website is ASPA Digital's most important activity). On May 16, 2015, ASPA launched a new HHS.gov and began to consolidate content from multiple websites managed by various offices and divisions within the Office of the Secretary (OS) into the new HHS.gov environment.

ASPA started by removing 150,000 obsolete files and redesigning and consolidating content from 40 websites or website sections; and by introducing new features and functionality, such as highlighting top requests, improved search, and structured content, to ensure HHS.gov continues to improve. The new design was informed by considerable research, starting with market research (government and commercial), literature review and rigorous user-experience testing. As already mentioned, after the launch of the new HHS.gov, 80 percent of users (up from 20 percent) said they found or partially found what they were looking for, and this number is holding steady (Digital Communications Division, 2017b). The website's mobile responsiveness was increased, with 63% faster page load time (from 4 seconds to 1.5 seconds), and page load time on desktop is now 77% faster, making HHS.gov one of the fastest loading sites in the Federal government (Google Page Speed Insights, 2018) **.** The website had previously scored 45th in McQuinn & Castro's (2017) analysis of overall website performance, and presumably would rate higher in a future assessment.

4.3 ASPA Digital Business Model Development Phase (Kotter Step 4)

But wider systems change was still needed. ASPA staff worked (with input from others throughout the agency) to create a new Business Model (Digital Communications Division, 2017a), built around a conceptual approach developed in the private sector by Dignan (2013). The Model document also presents a strategies section that lays out implementation activities for this new integrated approach to planning, operating, financing and evaluating ASPA Digital activities. Implementation of the Business Model(and the vision on which it was built) also relies on Agile Project Management approaches (Manifesto for Agile Software Development, 2001), also developed for the corporate world, which emphasize rapid response to identified needs and gaps. And the Model includes a significant emphasis on audience engagement, both to identify needs and to promote successful use of digital products or services. There is in addition a focus on accountability and transparency in the model's operation, centered on a "digital products scorecard" (Digital Communications Division, 2017b).

Following the Dignan conceptual approach, the ASPA Digital Business Model has five components – Purpose, Products, Platforms, People and Process. Each component is defined briefly here, and in greater detail in the Business Model document.

Purpose. The purpose of ASPA Digital is to support achieving the mission of HHS – to enhance and protect the health and well-being of all Americans.

Products. As previously discussed, ASPA Digital has a large portfolio of products that fall into five general categories: (1) HHS.gov; (2) HHS Secretary social media accounts; (3) other digital products, including other websites, social media channels, email products, etc.; (4) the HHS Intranet, for use by HHS employees; and (5) internal support products that are not visible to external users, but essential to meeting HHS's purpose and goals.

Platforms. ASPA Digital products provide platforms that can be used by ASPA, the rest of HHS, and various public constituencies to communicate with specific audiences. Users inside and external to the Department may build on top of these ASPA-created platforms to serve their own purposes, while also expanding the communication of ASPA Digital information.

People. ASPA Digital creates and delivers communication products and services through HHS staff who serve as "product owners" working in three organizational branches defined earlier: Engagement, Content, and Performance and Operations. Cross-functional project teams consisting of people (both federal employees and contractors) from each branch accomplish special projects, prioritize work, and preserve accountability.

Process. ASPA Digital implemented a number of process approaches that are designed to focus resources on achieving its purpose. The ASPA Digital Business Model is built on five processes:

- **Audience engagement** to identify and respond to needs and desires of HHS online audiences.
- **Scorecards** to demonstrate impact and drive continuous improvement.
- **Continuous improvement** to ensure that products meet user needs.
- **Agile project management** methodologies for delivering products and services rapidly.
- **Flexible contracting and procurement** to supply the resources needed to create and deliver digital communication products.

Audience engagement provides the foundation for offering relevant content and messages. Engagement occurs through the following:

- ASPA's SCP Process (with its online planning tool, as discussed earlier)
- Collaboration with HHS sub-agencies and offices as they engage in digital communication planning and execution, including social media
- Usability and user experience activities to ensure content and products are audience-friendly
- Content structured for search engine optimization, social media sharing, and re-use through syndication
- Customer satisfaction surveys to determine whether communication products are meeting needs from the user's perspective

If there is value in the information being provided, customers will return to seek additional information and "spread the word" about the helpfulness of the information. If dissatisfied, customers are almost certain to let their reactions be known – spreading the word in a way not helpful to HHS.

Scorecards are used to understand and track content and message performance with intended audiences and make resource decisions (including human resources) across product lines. Appropriate data from customer satisfaction surveys, page load speeds, search results, social media "likes" and sharing, contractor hours, tickets for content updates, Web Content Management System metrics and other performance metrics are collected and analyzed by an ASPSA Digital Data Warehouse to produce the Scorecards. The Scorecards will not only demonstrate impact, but provide insight about possible improvements both for individual communication products and ASPA Digital in general. The goal is to use data to keep the costs as low as possible (cost-efficiency) for delivering the content desired by target audiences, continue to improve performance and justify expenditures or discontinue the investment.

Continuous improvement is driven by audience engagement and the scorecards. The product launch is all too often seen as the end of the road for digital communications products. Work is complete, the team goes on to the next project while an operations staff takes over. Continuous improvement shifts the frame from what is called "launch, leave and hope" to "engage and evolve." It also helps solve two problems associated with content-oriented websites: the need to do costly "redesigns" and "content clean ups" that are necessary when a website is failing and frustrating users. Modest, ongoing investments to address performance issues as they occur (based on the Scorecards), along with active content management, will help ensure user satisfaction *and* pre-empt the cycle of expensive, long-term projects to fix things that have accumulated over time.

Agile project management uses short project cycle times and faster product iterations than typical "waterfall" project management. This quick delivery to meet audience needs is particularly well suited to digital communications projects that have rapidly changing requirements. An Agile approach allows management to quickly adjust resources across multiple projects. These practices were implemented to develop and deliver digital products faster and more efficiently, along with an increased focus on identifying and responding to user needs.

Flexible contracting and procurement provide ASPA Digital with the opportunity to scale up and scale down as needed. These best practices are set forth in the U.S. Digital Services' TechFar Handbook (n.d.-b). It spells out "how to use contractors to support an iterative, customer-driven software development process, as is routinely done in the private sector." The ASPA procurement model uses every strategy outlined in the TechFar Handbook to support the success of the ASPA Digital Business Model.

4.4 Business Model Implementation Phase (Kotter Steps 5-6)

The Business Model was developed through a series of drafts by the authors, working with colleagues in ASPA. Drafts were presented to ASPA Digital staff, and input was incorporated. The Model was then reviewed by members of the overall HHS "digital community," who provided their comments and suggestions. All of these steps helped empower HHS staff with digital communications responsibilities to implement the Business Model.

Finally, the Model was presented to HHS budget decision-makers with success to secure the budget for services desired in FY 18. As mentioned, ASPA Digital was granted almost $29 million for FY 18 operations, an $8 million increase over the budget that had been flat lined since FY 14. This created a powerful "early win" for the systems change effort, and increased motivation for the hard work of implementation. The approach for using the funds was documented in the Business Model and based on the need for two-way audience engagement investments; an extensive backlog of undelivered projects; technological debt from increases in mandates and security requirements; growth of revitalized HHS.gov and need for data-driven continuous improvement vs costly redesign later; and planning for future innovations and growth.

For budgeting purposes four categories were created – Operational Fixed Costs, Operational Variable Costs, Programmatic Fixed Costs, and Programmatic Variable Costs.

Operational Fixed Costs are costs required by budget, contract, statute, or other commitment - or if eliminated or reduced would have immediate impact on external audiences or internal customers.

Operational Variable Costs are costs which could potentially increase or decrease based on new requirements, in response to an elastic capacity/demand, or in order to invest in improved operations, medium, or long term.

These costs can generally be eliminated or reduced without having an immediate impact on external audiences or internal customers. If eliminated or reduced there may be a medium or long-term impact. (e.g., technical debt, diminished capacity or not following or implementing business model or strategy.)

Programmatic Fixed Costs are costs that are essential to existing commitments for basic, continued delivery of products and services that are directly connected to programmatic activities. If eliminated there would likely be an immediate impact on program functions, digital product performance, and the audience of those products.

Programmatic Variable Costs are costs which are used to develop new or enhanced products or services and are generally one-time.

It is incumbent on ASPA Digital is to control fixed costs where possible in order to maximize the organization's responsiveness through a larger variable cost budget. The programmatic variable cost budget is how ASPA Digital meets new leadership requirements and audience changes. The operational variable cost budget is how ASPA Digital implements new technology and controls fixed costs through innovation and improvements. The legacy of systems, sites and activities supported by ASPA Digital presents an inherent challenge and tension between the old (which drives fixed costs) and the new (which drives variable costs).

The Business Model presented here, based on the use of data and evidence as well as transparent processes focused on demonstrating impact, provides the best path forward for responsible management of these costs. Savvy strategic planning based on detailed understanding of audiences and technological trends and capabilities will also be necessary to control fixed costs. The decisions necessary will not be easy or risk free. But the alternative is a budget that is unbalanced by uncontrolled fixed costs, and a digital program that is not responsive to the changing digital world.

The ASPA Digital Business Model is guiding the strategy for investing in digital communications and optimizing impact, user satisfaction and investments To help plan, execute and report on its budget, ASPA Digital has moved to a *unit based budget forecast* and expenditure model specifically for variable costs (both Operational and Programmatic), where inherently there is more decision-making involved, and where funds are generally spent on projects.

The unit to support these projects is based on the spending required for a core development team of five people (one government Product Owner, one contractor Scrum Master, and two contractor developers) plus the as-needed addition of a variety of specialized "support team" members to work on a project for two weeks—commonly referred to as a "Development Sprint." This unit measure currently applies to approximately 40% of ASPA Digital's overall budget (some variable costs include licenses and fees and therefore not included in this unit costs).

As of January 2017, the average unit cost for an ASPA Digital Development Sprint is $45,000. Based on the current budget and staff, ASPA Digital has the assets available to deploy as many as five development teams at a time. These teams would mostly support projects under discretionary non-fixed costs. Note that the unit costs do not capture one-time costs associated with many projects, such as setting up new environments, software licenses, etc., and some projects are best served by a smaller or larger team. Estimating and projecting costs will still be done in the context of each product's unique requirements.

Many smaller projects do not require a full-size development team or full Sprint, and those projects will be managed and expenditures tracked as smaller, highly variable ad hoc teams or as a percentage of the full Sprint unit cost. Many of these projects would support discretionary fixed costs. Also, a lot of work does not require a project structure, and is best described as operations and maintenance and fall in the category of Operational Fixed Costs.

4.5 Business Model Operational Phase (Kotter Steps 7-8)

Current understanding of the ASPA Digital investment in systems change is based on historical data; the approaches described in the Business Model, particularly the Development Sprint unit, provide a way for more active management and decision-making to be done around the budget. The mechanism for tracking—and projecting—this work will be the ASPA Digital "Program Board." ASPA Digital piloted this Program Board to track the progress of each development team and account for project costs. The goal was to create a sustainable funding model for ASPA Digital that uses at least 50 percent of available variable costs for continuous improvement so that HHS.gov and the supporting public engagement activities are always on the cutting edge of digital communications. These consolidations of the previous implementation work have helped to institutionalize the Business Model – a process that is still ongoing.

5. Findings

The administrative re-structuring of ASPA Digital appears to have been successful. Early evaluation data about the HHS website transformation are favorable, as discussed, and the HHS budget decision makers are investing additional new financial resources. Results so far, taken together with the two previous change efforts described earlier (Weber et al., 2015, Weber and Backer, 2012) reveal three common principles necessary for success, particularly in a government bureaucratic setting:

Sustained leadership is essential for systems change to occur - in each of the three settings, prior efforts failed in part because there were leadership changes while the change effort was being planned or underway;

Stakeholder involvement is essential, not only in implementing the change but also in the effort to plan and shape it - to build ownership, get needed input for how the change should be shaped, and overcome resistance to change; and

Technical assistance and support is essential to help staff implementing the change day to day deal with both the technical and psychological challenges of making major change happen – and making it last.

These principles align with the larger literature on systems change and the diffusion of innovations in organizations and communities (Rogers 2003). They may be useful for other decision-makers in large public communication bureaucracies, to think about how to best plan for and implement systems change in their environments.

6. Discussion

Implementation of the ASPA Digital Business Model will be evaluated further over the next several years. Outcome data about the HHS website, other digital products and operations, and the utilization of the

Business Model's concepts all will be gathered and analyzed by the ASPA Digital Data Warehouse. The Scorecard described above will be a major part of this performance management and outcome evaluation process, but other sources also will be used, such as further input from the Working Group (also described above) representing communications leadership at HHS.

Results also will be aligned with data gathered by ASPA through the Strategic Communications Planning effort – HHS staff are receiving technical assistance and training on how to create and make use of impact measures that can be part of this process. At the whole-agency level, HHS also is moving more to a performance management and evaluation model, which will be aligned with the several levels of evaluation happening within ASPA, as described here.

It is likely that the ASPA Digital Business Model also will evolve significantly over time, especially as communications technologies themselves continue to evolve. At the least, an annual review of the model will be conducted, using results from the data gathering activities just described, and modifications considered as necessary. Also, ASPA Digital is working with its partners (described above) in the HHS sub-agencies and offices to design an overall HHS Digital Strategy within which the Business Model will function, and that too may result in some changes in the Model.

Just as the systems change approaches developed for the earlier SAMHSA communication and SCP efforts have helped shape the current ASPA Digital systems change effort, so the current ASPA Digital work may be applied to other systems change efforts led by ASPA in the future, or by other components of HHS. The three principles discussed above can be used as a starting place for thinking about how to plan and conduct such large-scale efforts.

Returning to Kotter's (1995) eight stages of systems change, the budgetary analysis and input on challenges and opportunities from digital communications leaders at the beginning helped establish a sense of urgency.

ASPA Digital staff partnered with key communications leaders from throughout the department to form a powerful guiding coalition, and worked together to create a vision for the Business Model. The working group helped communicate that vision, empowered the communications leaders who were part of the working group (as well as their colleagues in the "communications shops" of the HHS sub-agencies and offices) to take action on the vision the Business Model provided. The re-vamping of the HHS website powerfully communicated that this process could be effective – producing short-term wins that will continue to pay off over time. Now the ongoing effort will result in more "wins" and in institutionalizing these new approaches.

7. Limitations

Case studies by their nature have many limitations – a single case study does not produce many grounds for generalizations, and even if there are a number of case studies addressing similar questions, they typically do not produce data under controlled circumstances. The case study reported here provides only a very limited amount of data about outcomes from the implementation of the Business Model, though they are in the right direction. And the descriptive analysis of the five stages of systems change (with the overlay of Kotter's eight principles) provides a way of thinking about how such systems change efforts might be undertaken in other settings.

While systems change around digital communications in government bureaucracies is happening throughout the world, this case study happened in the Federal government in the United States, and in a particular agency. While the human and system variables addressed probably do have some generality, there's no strong evidence at present about whether this approach would work (a) in other US Federal agencies, (b) at other levels of government in the US (state or local), and (c) in other countries. Given these important limitations, the systems change approach presented may serve as useful inspiration for others considering similar kinds of change in their bureaucratic environments.

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