

**Summary of the Digital First Strategic Objective:
Analysis and Recommendations
October 2018-October 2019**

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Summary of the Digital First Strategic Objective: Analysis and Recommendations October 2018–October 2019

1 Summary

1.1 Overview

The U.S. Army Public Health Center's (APHC) ability to effectively and efficiently communicate data and findings to its customers in useful and actionable ways is critical to the success of its public health missions. It is becoming more imperative that government agencies adopt a digital strategy for their communication, content management, and data management activities in order to remain relevant and effective in an increasingly digital age.¹ The Digital First strategic objective was introduced in Fiscal Year (FY) 19 to create a culture at APHC where content and data are conceptualized, created, cleared, and published in the most flexible, searchable, and accessible digital formats first. This report summarizes the findings and recommendations from the Digital First Strategic Objective.

1.2 Purpose

The Digital First Strategic Objective aimed to identify, document, and prioritize APHC's requirements regarding the people, processes, and technology needed to effectively manage and communicate the Center's findings and information to beneficiaries and customers. The Objective also aimed to generate recommendations for meeting those requirements.

The scope of the Digital First Strategic Objective was focused on evaluating and generating recommendations related to the development, distribution, management, evaluation, and maintenance of publicly releasable public health mission-related information intended for external audiences (e.g., beneficiaries and customers outside of APHC). Findings and recommendations in these areas will likely inform future initiatives related to internal content, data, and processes (e.g., intranet site and internal content management capabilities).

1.3 Methods

The Digital First needs assessment analysis utilized the Army Design Methodology (ADM):^{2,3} a combination of qualitative and quantitative data inputs; a gap analysis; and a risk-benefit analysis to assess APHC's capabilities, implementation, and resourcing related to managing its digital content, cross-channel media, and data. The ADM was also used to identify and prioritize action plans for implementing a more comprehensive digital strategy in the future. Needs assessment data inputs included a needs assessment survey, data call, work breakdown structure (WBS) data collection, APHC stakeholder meetings, external agency meetings, and a literature review.

1.4 Key Findings and Implications for Practice

The analyses conducted as part of the Digital First Strategic Objective revealed 10 key findings. These key findings include—

- A significant portion of communication materials continue to be produced in document-based rather than digital-based formats.
- Insufficient importance is placed on formative research.
- Customer satisfaction data are underutilized in communication planning.
- End-user input is absent during development of digital products/services intended for non-expert audiences.
- Insufficient strategic planning occurs at APHC.
- There is a poor grasp of marketing in a digital environment.
- Insufficient quality assurance exacerbates quality control challenges.
- Insufficient communication resources exist to provide requested services.
- Underutilization of collaboration with role model organizations known for best practices.
- Insufficient data governance exists at the Center.

Additionally, the needs assessment analysis led to the development of 15 action plans. Four action plans were determined to be foundational. Completion of the four foundational action plans is required before appropriate planning and implementation of the remaining 11 longer-term action plans can occur.

The four foundational action plans include—

- Align enterprise data management with the Federal Data Strategy (FDS)⁴ (Data Strategy Gaps).
- Improve quality assurance/quality control processes for digital content (Communication Quality Gaps).
- Expand workforce and identify needed information management and information technology (IM/IT) solutions to support transition to digital formats (Communication Resource Gaps).
- Develop and deploy digital skills training to address gaps existing following expansion of expertise (Communication Training Gaps).

1.5 Recommendations

1.5.1 Establish Oversight and Organizational Structure Needed to Implement Foundational Action Plans

The Digital First planning team generated the following immediate-term recommendations in order to establish the oversight, proponentcy, and accountable parties needed to facilitate implementation of the foundational action plans.

► **Data Management:** Manage data at the enterprise level as a strategic resource for APHC.

- Establish a Data Governance Office.
- Designate an APHC Chief Data Officer.
- Establish a diverse Data Working Group.

► **Communication Strategy and Expertise:** Increase APHC's capacity to effectively and efficiently communicate with its customers.

- Ensure sufficient communication resources exist to execute communication activities and provide requested services.
- Ensure communication efforts align with best practices and standards.
- Ensure sufficient adherence to best practices and standard operating procedures (SOPs) and that quality assurance occurs during the communication content lifecycle.

► **Communication Evaluation:** Integrate formative research and evaluation into communication planning and efforts.

- Strengthen collaboration between the Health Communication Science (HCS) and the Public Health Assessment (PHAD) Divisions to ensure formative research and evaluation data are collected, available, and actionable during communication planning, development, and dissemination activities.

► **Content Management:** Establish content management lifecycle planning and processes to meet APHC's content management, records management, and knowledge management needs.

- Initiate collaboration between the Digital First and Knowledge Management Strategic Objectives, the Publications Management (PMD) and Information Management (IMD) Divisions, and the APHC Information Architect to investigate planning and technology-independent processes that will provide management of content throughout its lifecycle.

► **External Collaboration:** Maintain visibility of standards, best practices, and priorities of, as well as foster collaboration with, other Federal agencies and communities of practice.

- Designate personnel to actively participate in each identified community of practice relevant to data, communication, content management, and knowledge management.
- Establish a working group of APHC and the Defense Health Agency (DHA) communication, content management, and data management subject matter experts to keep lines of communication open and to discuss plans, strategies, and collaboration opportunities.

1.5.2 Implement Foundational Action Plans in FY 20

The Digital First planning team generated the following recommendations for FY20:

- Identify appropriate action officers to lead each of the four foundational action plans.
- Develop implementation plans, incorporating feasibility and business case analyses and DHA considerations, for each of the four foundational action plans.
- Implement the four foundational action plans.
- Prepare planning for FY21 and beyond by thoroughly documenting resources and processes established during FY20 efforts.

1.5.3 Implement Long-Term Action Plans over the Next Five Years (FY21–FY25)

Once the foundational action plans are completed, the remaining 11 long-term action plans should be implemented in the following order:

Data Action Plans:

- i. Ensure data quality is sufficient to achieve their intended uses (Data Quality Gaps)
- ii. Better manage access to data (Data Access Gaps)
- iii. Expand ability to convey insights from data (Data Visualization Gaps)
- iv. Improve data safeguards (Data Security Gaps)

Communication Action Plans:

- i. Prepare for new digital service development (Communication Strategy Gaps)
- ii. Improve timely release of information to primary audiences (Communication Timeliness Gaps)
- iii. Improve and expand audience research and communication evaluation capabilities (Communication Research/Evaluation Gaps)
- iv. Improve research and evaluation methods for digital marketing (Digital Marketing Research/Evaluation Gaps)
- v. Expand usability testing and human-centered design capabilities (Communication Planning/Design Gaps)
- vi. Expand digital analytics capabilities (Digital Analytics Gaps)
- vii. Improve and expand customer satisfaction monitoring (Customer Feedback Gaps)

2 References

See Appendix A for a list of references used in this report.

3 Authority

This project was directed by the APHC Office of the Director (OOD) as part of APHC's FY19 Strategic Planning efforts. It supports completion of Strategic Objective 2.2: Implementation of a Digital First Philosophy.

This project is also authorized by Department of the Army Regulation 40-5, which directs "effective communication and education with all affected populations" and support of Army preventive medicine activities through "consultations, program evaluations, supportive services, program development, development of best practices, investigations, and training."⁵

4 Digital First Problem Statement

APHC strives to achieve four common communication objectives associated with communication quality: (1) effectiveness, (2) reliability, (3) productivity, and (4) audience reach. The APHC's ability to achieve these objectives and communicate findings to its customers in useful and actionable ways is critical to the success of its public health missions. Expectations of today's information consumers are high. They expect up-to-the-minute information delivered via conveniently available communication channels, and they judge the potential value of an information source within seconds. Modern information consumers quickly abandon sources that do not address their needs or value their time.⁶ The ability to meet consumer needs in this manner requires organizations to implement a Digital First strategy. A Digital First strategy involves creating and designing content for digital platforms instead of document-based formats in order to facilitate content utilization via as many channels as possible, thereby enhancing the ability to reach consumers via their preferred channels.⁷

Currently, APHC relies on an outdated approach to communication; exhibits document-centric thinking; lacks strategic planning, coordination, and technological sophistication; and is not meeting industry standards with regards to communication planning, practices, and technology. The organization's relevance and future effectiveness rely on its ability to adopt a Digital First strategy.

Furthermore, a number of Federal regulations require Federal agencies to move toward a Digital First strategy. APHC is failing to meet regulatory standards in several areas, given its resource and technology constraints. For example, APHC has not fully met regulatory standards associated with Section 508 from the Rehabilitation Act (29 U.S. Code, Section 794d), which requires that all web site content be accessible to people with disabilities,⁸ or the Plain Language Act of 2010, which requires Federal agencies to use clear communication that the public can understand.⁹ The newly established 21st Century Integrated Digital Experience Act (IDEA) adds additional requirements for public-facing digital services beyond those the Center is currently meeting.¹ Addressing these new requirements will further strain already limited resources and could impact the Center's ability to compete with other Federal digital services and the private sector, potentially decreasing its relevance in communicating important public health messages to Army and Department of Defense (DOD) audiences.

The first step in moving towards implementing a digital transformation roadmap was to determine the APHC's current state (baseline) and needs (requirements) in terms of capabilities, implementation, and resourcing related to managing digital content, cross-channel media, and data. Data collected as part of the Digital First needs assessment were used to inform the follow-up analyses (gap and risk-benefit) and develop recommendations for implementing an APHC Digital First strategy.

5 Methods

The Digital First analysis utilized the ADM,^{2,3} qualitative and quantitative data inputs, a gap analysis, and a risk-benefit analysis in order to: 1) assess APHC's capabilities, implementation, and resourcing related to managing its digital content, cross-channel media, and data and 2) identify and prioritize action plans for implementing a more comprehensive digital strategy in the future.

5.1 Data Inputs and Data Collection Tools

5.1.1 Digital First Needs Assessment Survey

The Digital First needs assessment survey (see Appendix B) was developed by the APHC PHCOM Directorate and personnel from the Health Education and Application (HEA), Health Hazard Assessment (HHA), Environmental Health Sciences (EHS), and PHAD Divisions. It was reviewed by the APHC Public Health Review Board (PHRB) and approved as public health practice (PHRB project #18-696). The needs assessment survey was designed to identify communication capabilities and requirements for each APHC Division/Office and to define the Center's communication gaps, goals, and priorities as they relate to meeting current and future public health challenges. The survey contained multiple choice, multiple answer (select all that apply), fill-in-the-blank, Likert-type, and short answer questions about demographics, communication efforts and materials, communication tasks and support, communication processes and collaboration, target audiences, and communication resources and technology.

The survey was programmed using Verint® software; a link to the needs assessment was disseminated Center-wide via e-mails from the APHC's Deputy Director and Operations Managers and a series of APHC intranet announcements. The survey was disseminated on 5 November 2018 and closed on 21 November 2018. APHC Soldiers and Civilian employees were the only eligible respondents; contractors were excluded from completing the survey.

A report summarizing the descriptive results for each question was generated using Verint and further summarized and formatted into Directorate-level Summary Reports. Analyses were conducted using SAS® and Excel®.

5.1.2 Digital First Data Call

APHC PHCOM, HEA, HHA, EHS, and PHAD personnel developed the Digital First online data call (see Appendix C), which was approved by the APHC (PHRB project #18-696) for dissemination to APHC Divisions. The data call was designed to define the communication goals and priorities at APHC and to determine the current practices, needs, and desired future capabilities of the Center's various Divisions.

The data call contained questions about each Division's audiences, processes, and the technology used to communicate findings and health information to customers. The data call also asked Division Operations Managers to identify which WBS elements were used to document time spent developing and managing content, as well as the estimated percentage of time charged to those WBS elements directly supporting content development or management. Percentage of time spent was captured in ranges of percentages (i.e., 26–50%).

The online data call was programmed using Verint software, and a link to the data call was disseminated to 12 Directorates/Offices via the APHC tasker system. The data call was deployed on 2 November 2018 and closed on 16 November 2018. A total of 64 data call responses were collected from Divisions in 12 APHC Directorates/Offices. Some Divisions submitted incomplete responses, and some submitted more than one partially completed response. For these reasons, and because response rates were low, all responses including incomplete and duplicate responses, were included in the analysis.

A report summarizing the descriptive results for the data call was generated using Verint and further summarized and formatted into Directorate-level Summary Reports. Analyses were conducted using SAS and Excel.

5.1.3 Work Breakdown Structure Data Collection

As part of the Digital First data call, each Division was tasked with providing the WBS elements used to capture time spent developing and managing content, as well as the estimated percentage of time charged to those WBS elements that directly entails content development or management. The Excel VLOOKUP function was used to add Cost Center, Cost Center name, and WBS element Project Description to the data provided by data call responses. The response options regarding "Percentage of Time Spent" included ranges of percentages (i.e., 0 - 25%, 26 - 50%). Values were assigned to these percentage ranges as follows: for all the responses except "No time," the minimum value was the lowest end of the given range, and the maximum value was the top end of the given range. For responses of "no time," the minimum and maximum values were assigned as zero. A value for Average Percentage was calculated using Minimum and Maximum Percentages. After this, FY18 Army Time and Attendance Production System (ATAAPS) hours were applied against the WBS elements using the VLOOKUP function. The ATAAPS hours were multiplied by the Minimum, Maximum, and Average Percentages to obtain values for Minimum, Maximum, and Average Hours spent on a given task. Minimum, Maximum, and Average Full-Time Equivalent (FTEs) were also calculated by dividing the Minimum, Maximum, and Average Hours by 1,740 (the Army manpower standard for a work year). Manpower costs were then applied to the FTE calculations using the current average APHC salary cost (fully burdened). Lastly, the VLOOKUP function

was used to apply the respective Directorate to each line of data in order to facilitate reporting. A pivot table was created based on the Excel file to show the Average, Minimum, and Maximum Percentages; Total Minimum, Maximum, and Average Hours; Total Minimum, Maximum, and Average FTEs; and overall Minimum, Maximum, and Average manpower costs.

5.1.4 Web site Content Management Full-Time Employee Calculation

Analysis of needs assessment survey data provided a median estimate of hours spent per web content item produced in FY18. Web content management records from PHCOM provided the total number of web content approval requests completed in FY18. Multiplying these two figures supplied an estimate of total work hours for web content-related tasks in FY18. The estimated total work hours for web content-related tasks was then divided by 1,740—which represents the total number of hours in a work year for full-time employees, typically used at APHC for manpower/workload calculations—to calculate the estimated number of FTEs.



Figure 1. Equation for Estimating the Number of Full-Time Employees Working on Web Content-Related Tasks

5.1.5 APHC Stakeholder Meetings

A total of 27 meetings with APHC personnel from various Directorates, Offices, Divisions/Branches, and communities of practice were conducted between October 2018 and February 2019. The APHC Digital First Planning Team developed meeting guides (see Appendix D) and conducted the meetings, which were recorded by at least one note taker during each meeting. Meetings were conducted in-person, and dial-in information was provided to those working remotely. Once meetings were conducted, notes were combined and analyzed to identify response themes. See Table 1 for more information regarding the purpose of each meeting.

Table 1. Purpose of Stakeholder Meetings

Meeting Type	Participants	Purpose of Meeting
Director Meetings	- APHC Directors	<ul style="list-style-type: none"> - Determine the vision for communicating with target audiences/customers and the resources needed to accomplish that vision - Identify additional sources of information and input for the Digital First needs assessment
Office Meetings	- APHC Office Directors and Program Managers	<ul style="list-style-type: none"> - Determine the vision for communicating with target audiences/customers and the resources needed to accomplish that vision - Identify additional sources of information and input for the Digital First needs assessment
Division and Branch Chief Meetings	- APHC Division and Branch Chiefs	<ul style="list-style-type: none"> - Determine the vision for communicating with target audiences/customers and the resources needed to accomplish that vision - Identify communication, content management, and data management successes, shortcomings, processes, and needs - Document requirements and recommendations related to improving APHC's digital capabilities and strategy - Identify additional sources of information and input for the Digital First needs assessment
Community of Practice Meetings	- APHC personnel identified for inclusion by Directors and Chiefs as having additional insight into Digital First topics	<ul style="list-style-type: none"> - Identify processes and steps taken when managing data and developing content and media - Document requirements and recommendations related to improving APHC's digital capabilities and strategy - Identify additional sources of information and input for the Digital First needs assessment

5.1.6 External Agency Meetings

In addition to the APHC stakeholder meetings described above, eight meetings with personnel from six external Federal agencies were conducted between October 2018 and February 2019. The APHC Digital First Planning Team developed meeting guides (see Appendix E) and conducted the meetings, which were recorded with at least one note taker present during each meeting. Once meetings were conducted, notes were combined and analyzed to identify response themes. The purpose of these meetings was to document successes, limitations, considerations, and lessons learned from external agencies at various stages in their own digital

transformations, as well as to establish partnerships and identify opportunities for future collaboration.

5.1.7 Literature Review

The purpose of the literature review was to gather insights into Digital First-related best practices, leading benchmarks, digital transformation guidance, and lessons learned. Over 100 resources were reviewed, sorted, and prioritized to determine relevance to the Digital First goals and objectives. A list of topics of interest and keyword search options was initially created based on planning team input and early information gathering meetings. Throughout the literature review process, this was a “living” list, so new topics of interest were added and explored based on various data collection findings and identified gaps/needs. Multiple search engines and web site repositories were used to collect resources including: the ProQuest® Database, Google Scholar™, Digital.gov, CDC.gov, plainlanguage.gov, and Google®. The APHC Library Services was also consulted to acquire additional resources and literature review strategies. Topics were initially searched broadly using more general keyword searches, and modifiers were added as needed depending on the search engine. For example, “user experience” may have been searched as a general topic, but to narrow down search results into more relevant findings, modifiers such as “user experience AND best practices AND public health” were employed as needed. If search results spanned multiple pages, only the first three pages were scanned for relevant documents that were in-scope. Search results were narrowed down by quickly determining what was in and out of scope based on whether or not the source directly aligned with Digital First strategic goals and action plan objectives. Due to the volume of search results for each entry, it was critical to determine what was in and out of scope as efficiently as possible. If a document was determined to be in-scope, the full text was reviewed and summarized in a separate document. An Excel spreadsheet and Word® document were used to summarize resource information. Information collected for documents in-scope included main overarching points/themes, relevance to the Digital First mission, limitations of the article or perceived feasibility of implementation at APHC, and administrative information (i.e. author, date published, journal, and so forth). Findings were incorporated into the gap analysis process and citations were developed for each article using *Chicago Manual of Style*.

5.2 Army Design Methodology

The ADM provides a framework focused on the “critical and creative thinking abilities of leaders and teams to understand and solve problems.”^{2,3} The ADM was used to establish and conduct the four steps of the Digital First effort:

1. Define the current state,
2. Define the desired end state,
3. Frame the problem, and
4. Define the operational approach to get from the current state to the desired end state.

5.2.1 Step 1: Defining the Current State

Step 1 of the Digital First analysis, defining the current state, involved documenting current levels of personnel/time, processes, and technology utilized throughout APHC to communicate publicly releasable mission-related data and findings to targeted audiences. Several tools were used to collect these data, including an online needs assessment survey, online data call, APHC stakeholder meetings, and the collection of time and cost data related to communication, content management, and data management efforts at APHC.

5.2.2 Step 2: Defining the Desired End State

Step 2 of the Digital First analysis, defining the desired end state, involved identifying APHC employee needs and requirements related to the personnel/time, processes, and technology needed to effectively communicate mission-related data and findings to targeted audiences, as well as ascertaining industry best practices and benchmarking tools used among other Federal agencies at various stages in their own digital transformations. The tools used to collect these data were open-ended comments in the needs assessment survey and data call, queries during APHC stakeholder meetings and external agency meetings, and a literature review to define best practices in communication, content management, and data management.

5.2.3 Step 3: Framing the Problem

Step 3 of the Digital First analysis, framing the problem, involved identifying the gaps between the current and desired states. In this step, the data collected during steps 1 and 2 were used to determine the gaps in and requirements for improving APHC's resources, processes, and technology related to managing its digital content, cross-channel media, and data. A gap analysis was conducted during this step.

5.2.4 Step 4: Defining the Operational Approach

Step 4 of the Digital First analysis, defining the operational approach to achieving the desired end state, involved analyzing and prioritizing the requirements identified in step 3 and generating recommendations and specific action plans for ways to address those requirements. Two APHC Stakeholder Offsite sessions were held to assist with this step.

5.3 Gap Analysis

Data from the needs assessment were analyzed using Grounded Theory and the steps outlined in the ADM.^{2,3}

5.3.1 Grounded Theory

Grounded Theory, also called analytic induction, attempts to develop causal explanations for an event from one or more cases being studied. Explanations are altered as additional cases are studied until the researcher arrives at a statement that fits all cases.¹⁰ This theory was used to process current-state data in order to arrive at the identified desired-state themes.

5.3.2 Gap Analysis Model

Various data inputs were used to complete the ADM^{2,3} phases during the gap analysis.

1. *Current State*—free response data mined from Needs Assessment and Data Call surveys, and notes from the APHC Director and Division meetings.
2. *Desired State*—common desired state themes derived from Current State free-response data and from results associated with Best Practices and Lessons Learned findings using grounded theory.
3. *Gaps*—noted deficiencies between Current State and Desired State, including regulatory requirements and industry standards.
4. *Action Plans*—broad plans intended to achieve results represented in Desired State Themes, regulatory requirements, and standards.

5.4 Risk-Benefit Analysis

A risk-benefit analysis examining the proposed action plans was conducted to assist with the prioritization of action plans and in future planning. In the absence of cost data, each action plan was assigned benefit and certainty values, which were then plotted in a decision matrix (see Figure 8).

The action plan benefit value served as the y-axis on the decision matrix and represents the benefit of implementing a particular action plan at APHC. The benefit value was calculated by multiplying the frequency of a desired state theme identified during the needs assessment by the number of standardized gaps assigned to that theme during the gap analysis.

5.5 APHC Stakeholder Offsite Sessions

The Digital First planning team held a 2-day offsite meeting on 16 and 18 July to gain input from Digital First contributors and stakeholders. The offsite meetings were conducted away from APHC facilities in order to minimize distractions and conflicting obligations for participants. Day 1 of the offsite provided participants with information on the FY19 needs assessment methods and findings, gap and risk-benefit analyses findings, and proposed action plans for FY20. Day 2 of the offsite was spent collecting input from participants regarding: (1) who needs to be involved in the implementation planning for FY20, (2) the role(s) those individuals should have (planning team member, action officer, decision maker, influencer, etc.) during FY20, (3) current projects that support or align with the proposed action plans, (4) projects that should be considered for inclusion in FY20 planning, and (5) priority ranking of longer-term action plans. The planning team included members from the PHCOM, Health Promotion and Wellness (HPW), Environmental Health Sciences Engineering (EHSE), Occupational Health Sciences (OHS), and Veterinary Services and Public Health Sanitation (VPHS) Directorates. Twenty-one participants from 8 APHC Directorates and a DHA Army Satellite contractor attended day 1 of the offsite, and 19 participants from 8 APHC Directorates and a DHA Army Satellite contractor attended day 2. Data were collected using the WooClap® application and frequencies and percentages were calculated in Microsoft Excel.

6 Findings

6.1 Demographics

6.1.1 Survey and Data Call Respondent Demographics

A total of 135 eligible respondents from 12 APHC Directorates/Offices submitted completed needs assessment surveys. This accounted for a 22% survey completion rate among eligible APHC respondents (N=611).

A total of 64 data call responses were collected from Divisions in 12 APHC Directorates/Offices. At least one response was received from each Directorate/Office. Some Divisions submitted incomplete data call responses, and some submitted more than one partially completed response. All responses, including incomplete and duplicate responses, were included in the analysis. See Table 2 for the demographic breakdown of respondents.

Table 2. Data Call and Needs Assessment Survey Respondent Demographics

Variable		Data Call n = 64		Needs Assessment Survey n = 135	
		n	%	n	%
<i>Directorate/Office</i>	Business Operations	7	11%	13	10%
	Clinical Public Health & Epidemiology (CPHE)	9	14%	37	27%
	Environmental Health Sciences & Engineering (EHSE)	11	17%	23	17%
	Health Promotion & Wellness (HPW)	5	8%	8	6%
	Laboratory Sciences (LS)	4	6%	8	6%
	Occupational Health Sciences (OHS)	6	9%	16	12%
	Office of the Director (OOD), excluding Produce Management (PDM) and Quality Systems and Regulatory Compliance Office (QSARC)	1	2%	2	1.5%
	PDM	1	2%	3	2%
	Public Health Communications (PHCOM)	6	9%	9	7%
	QSARC	5	8%	3	2%
	Toxicology (TOX)	3	5%	6	4%
	Veterinary Services & Public Health Sanitation (VPHS)	6	9%	5	4%
	No Directorate or Office Identified	n/a	n/a	2	1.5%
<i>Affiliation</i>	Civilian	n/a	n/a	120	89%
	Military	n/a	n/a	15	11%

6.1.2 Stakeholder Meeting Participants

A total of 27 meetings with APHC personnel from various Directorates, Offices, Divisions/Branches, and communities of practice were conducted. Meetings included: (1) nine Director meetings, (2) three Office meetings, (3) nine Division and Branch Chief meetings, and (4) six Community of Practice meetings.

6.1.3 External Meeting Participants

Eight meetings with personnel from six external Federal agencies were conducted between October 2018 and February 2019. External agencies included the DHA, the General Services Administration (GSA), the National Cancer Institute (NCI), the Centers for Disease Control and Prevention (CDC), and the U.S. Department of Agriculture (USDA) National Agricultural Library. Additional meetings were conducted with the Army Materiel Systems Analysis Activity, the U.S. Army Corps of Engineers, Engineering Research and Development Center, and the Joint Artificial Intelligence Center; however, results from those meetings were not included in the analysis as they were deemed out of scope. Topics generated during those meetings will be revisited at a later date.

6.2 Current State as of February 2019

The n-values referenced in this section represent the number of respondents who answered the particular question(s) being described. The percentages reported represent the proportion of those who responded to the particular question(s) being described.

6.2.1 Importance Placed on Communication and Marketing at APHC

Seventy-four of the 135 needs assessment survey respondents answered the questions described below. The majority of those respondents (n=70, 95%) agreed that communicating information to audiences outside of APHC was critical to their Divisions' missions and that doing so was a priority for their Divisions (n=62, 84%). Similarly, more than half of the 74 respondents who answered the questions agreed that marketing materials to external audiences was critical to their Divisions' missions (n=52, 70%), and that doing so was a priority for their Division (n=45, 61%).

Additionally, 86% (n=64) of the 74 respondents who answered the questions reported that they have the skills to effectively communicate to target audiences; however, fewer responded positively about their ability to market materials to target audiences (n=36, 49%). These responses were contradicted by subsequent responses to related open-ended questions from Director meetings, during which Directors overwhelmingly indicated a lack of personnel with the skills to effectively communicate or market to target audiences.

6.2.2 PHC Primary Audiences and Communication Purposes

Fifty-seven of the 64 data call respondents indicated which audiences would most benefit from the findings generated by their Division. Overall, DOD public health professionals and general Soldier populations were the most frequently identified audiences.

Table 3. APHC Primary Audiences

Audience	Percent of Divisions (n=57)
DOD Public Health Professionals	74%
General Soldier Population	63%
Officers	61%
Medical Providers	60%
Federal Public Health Professionals	60%
Non-commissioned Officers	53%
Non-government Organization Public Health Professionals	47%
Other	30%

The audiences listed in Table 3, combined with the additional audiences that were specified by respondents who selected “Other,” were then grouped into public health expert (e.g., DOD public health professional, medical providers, and nongovernment organization public health professionals); non-expert (e.g., general Soldier population, officers, and noncommissioned officers (NCO)); and unknown categories. Of the 255 APHC audiences identified by data call respondents, the majority (n= 137, 54%) fell into the expert category, 101 (39%) fell into the non-expert category, and 17 (7%) fell into the unknown category (see Figure 1). This finding highlights the diversity of APHC audiences and the need to tailor communications to optimally meet audience member needs.

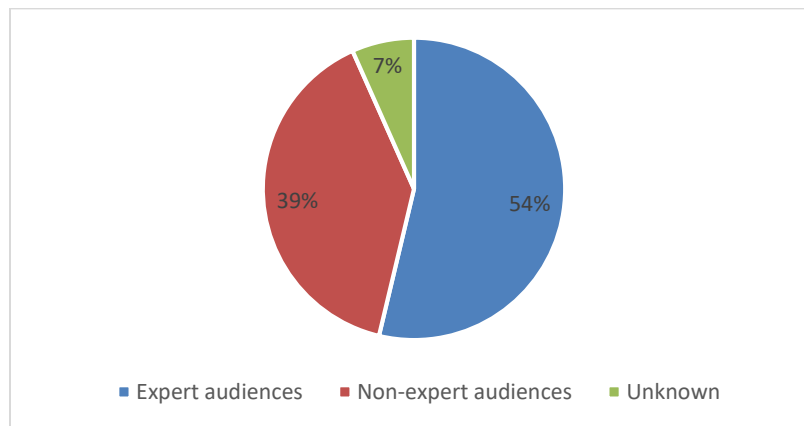


Figure 2. Primary Audience Types

Sixty-one of the 64 data call respondents identified the perceived purposes for communicating with each audience. Informing policy decisions, influencing SOP development, and informing priorities were identified as the most common purposes for communicating with audiences. These data highlight the diverse reasons for which APHC communicates with its audiences and shows the need to tailor communications to optimally meet the intended purposes.

Table 4. APHC Purposes for Communication

Purpose for Communication	Percent of Divisions (n=61)
Inform policy decisions	56%
Influence SOP development	52%
Inform priorities	52%
Health Education	48%
Provider education	46%
Inform funding decisions	39%
Contribute to literature	33%
Other	25%

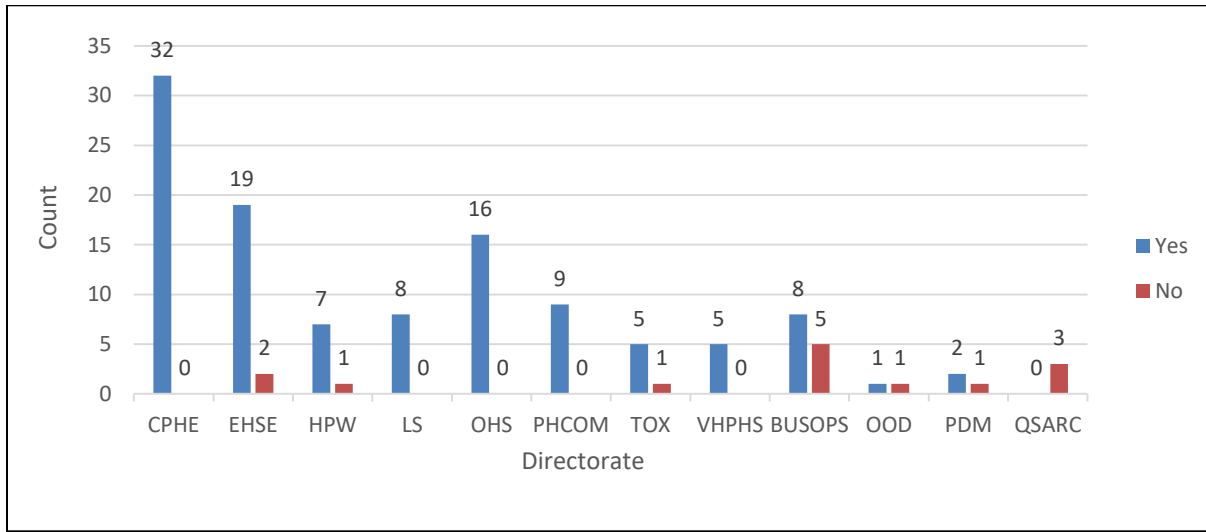
As shown in Table 3, the top four APHC target audiences were DOD public health professionals, the general Soldier population, Officers, and medical providers. The listing below provides the most common purposes for communicating with each. The percentages were determined by dividing the number of times each purpose was selected for a particular audience by the number of times that audience was selected. Respondents could choose more than one purpose per audience.

The most common purposes for communicating with the top four APHC primary audiences were—

1. DOD Public Health Professionals:
 - 37% Inform policy decisions
 - 30% Set priorities (tied w/Officers)
 - 22% Inform funding decisions
 - 22% Contribute to the literature
2. General Soldier Population:
 - 37% Provide health education
3. Officers:
 - 30% Inform SOP decisions
 - 32% Set priorities (tied with DOD Public Health Professionals)
 - 15% Other
4. Medical Providers:
 - 33% Provide provider education

6.2.3 Communication Content Development Efforts at APHC

The majority (n=126/135, 93%) of needs assessment survey respondents produced communication materials for external audiences (see Figure 3). Of those producing communication materials for external audiences, few (n=48/126, 38%) indicated using an SOP to guide material development.



Note: OOD excludes the PDM and QSARC offices

Figure 3. APHC Communication Material Development for External Audiences by Directorate

More than 80% of needs assessment survey respondents (n=111/135) identified the types of communication materials they produced for broad dissemination to audiences outside of APHC during FY18 (see Figure 4). Nearly half of all material types identified were document-based (briefing materials, reports, fact sheets). The remaining material types were digital formats (web pages, social media, mobile apps) or unspecified. Reliance on document-based information will prevent us from meeting IDEA Act requirements for mobile accessible information.

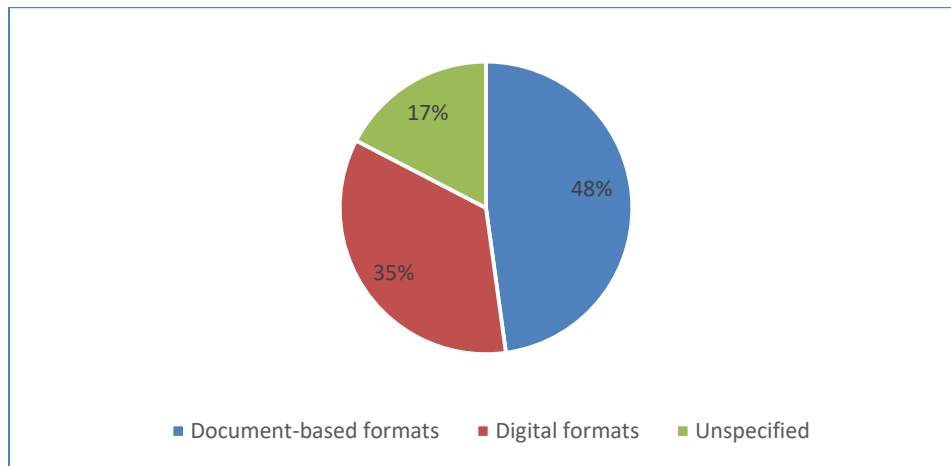


Figure 4. Communication Material Types Produced at APHC in FY18

6.2.4 Availability of Communication Resources and Expertise (Personnel, Time, and Technology) at APHC

Seventy-four of the 135 needs assessment survey respondents answered the questions described below. Nearly two-thirds ($n=46/74$) of those respondents indicated that they had sufficient time to effectively communicate health information and findings to audiences outside of APHC. Fewer respondents ($n=25/74$, 34%) indicated having sufficient time to market APHC and its capabilities/services to external audiences. This finding, however, contradicted subsequent responses to related open-ended questions from Director meetings, which indicated a significant need for additional communication expertise and resources at the Division level.

Thirty-four of the 135 needs assessment survey respondents indicated needing additional resources to optimally communicate findings to target audiences. Of those respondents, nearly half ($n=16/34$) indicated needing manpower (people to communicate, experts in software, etc.) to optimally communicate findings to target audiences. Additional resource needs included software, training, and infrastructure (see Figure 5). Respondents could choose more than one needed resource type.

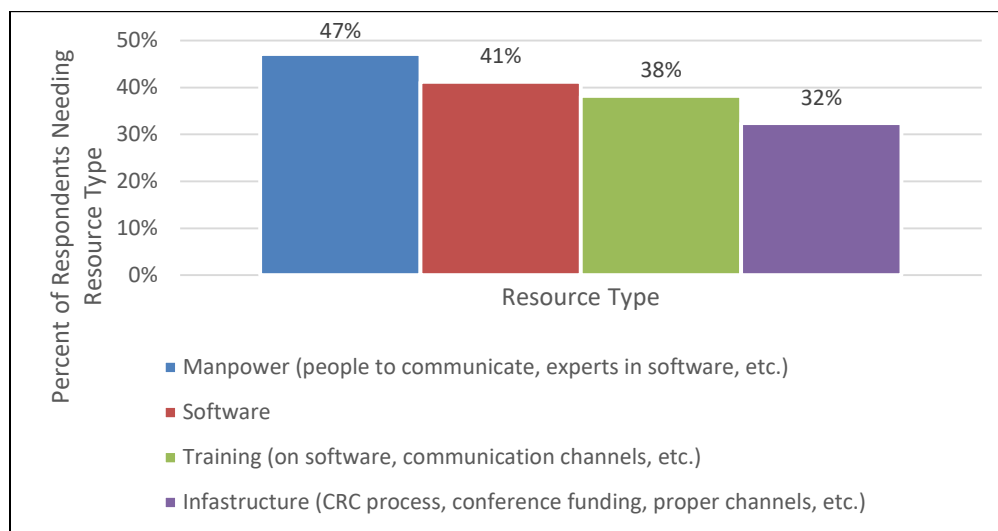


Figure 5. Resources Needed by Divisions to Optimally Communicate Findings to Target Audiences

Needs assessment survey and data call respondents, as well as stakeholder meeting participants, provided the following open-ended comments regarding their need for additional experts to meet the communication and digital marketing needs within their Divisions. Open-ended comments related to a lack of communication expertise, such as the following, were second only to comments requesting additional training.

“Would like a communications specialist dedicated to our Division or Directorate, who will routinely check in with our scientists and work with them to translate investigation findings, manuscript key points, etc. into communication products.”

“Would like a more robust team of Center resources/staff who can be called upon to help execute communication initiatives (especially those requiring with specific technical expertise, such as Defense Collaboration Service).”

“People really aren’t trained in our Division to effectively communicate to outside audiences... We’re scientists, not marketing/communications experts. If you want any Division/Directorate to excel in this area, someone with this background should be embedded into each Division/Directorate. Otherwise, you’re going to have a lot of efforts emerging that are ineffective at communicating the key points and a waste of everyone’s time. If we really want to up these efforts, there should be some foundational training available to everyone, and consultation with marketing/communication experts on all projects (before inception of ideas that will ultimately fall flat).”

6.2.5 Efficiency of Communication Processes at APHC

In addition to lack of resources to accomplish communication and marketing activities, the stakeholder meeting data revealed inefficiencies in existing communication processes. As an example, APHC relies on Directorate personnel, who are often not communication experts, to develop and maintain content for the public website. The lack of quality assurance on the part of these Web Content Managers (WCMs) overwhelms resources dedicated to quality control. This results in the Center's noncompliance with existing laws and broken web functionality on the APHC public website.

The June 2019 WCM roster showed that content management efforts at APHC rely on a large number of high-level employees for execution. It was estimated that the number of FTEs working on web content-related tasks was equivalent to 20. Additionally, the WCM roster showed that there were 62 trained, part-time WCMs at the Center. Of those, 50 WCMs were confirmed as active, part-time WCMs during FY18. Of those 50, five were Officers and four were Civilian personnel with doctorate degrees, which accounts for 18% of active, part-time WCMs.

6.2.6 Software/Technology Used to Create Communication Materials

Roughly three-quarters of data call respondents (n=49/64) identified software/technologies used to create communication materials. The most commonly identified software included MS[®] Office[®], Adobe[®] PDF, and SharePoint[®] (see Table 5). Respondents could choose more than one software/technology.

Table 5. Software/Technology Used to Create Communication Materials

Software/Technology	Percent of Divisions (n=49)
MS Office	94%
Adobe PDF	90%
SharePoint	69%
Tableau [®]	24%
Adobe (other)	22%
Visio [®]	20%
SMS	14%
Other	12%
None	2%

Approximately 40% of these data call respondents (n=20/49) indicated needing additional platforms/software to improve their communication capabilities.

6.2.7 Formative Research and Evaluation Activities at APHC

Formative Research

Fifty-two of the 64 data call respondents indicated the frequency with which they collect information about audience characteristics, such as level of expertise with subject matter and user preferences. Roughly two-thirds of these respondents indicated never, rarely, or occasionally collecting this information (see Figure 6).

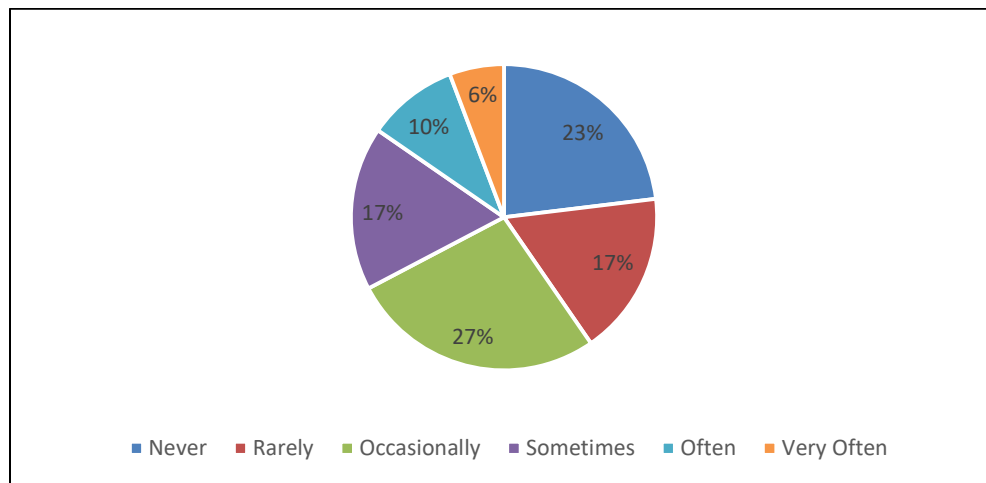


Figure 6. Frequency with which Divisions Conduct Formative Research (n=52 Divisions)

Evaluation Activities

Fifty-two of the 64 data call respondents answered this question. Of those respondents, 58% (n=30/52) obtained feedback from target audiences regarding the efficacy of communication materials. When asked what was preventing them from collecting these data, respondents identified lack of time, resources, and expertise, as well as lack of understanding of the importance of target population characteristics when developing communication media.

Forty-six of the 64 data call respondents identified the process and performance metrics they used to evaluate communication efforts. These respondents identified digital analytics (website analytics, document downloads, and social media analytics), customer feedback, and the number of product/service requests (product/service requests and health information product orders) as their evaluation metrics (see Figure 7). Respondents could choose more than one metric type when answering this question.

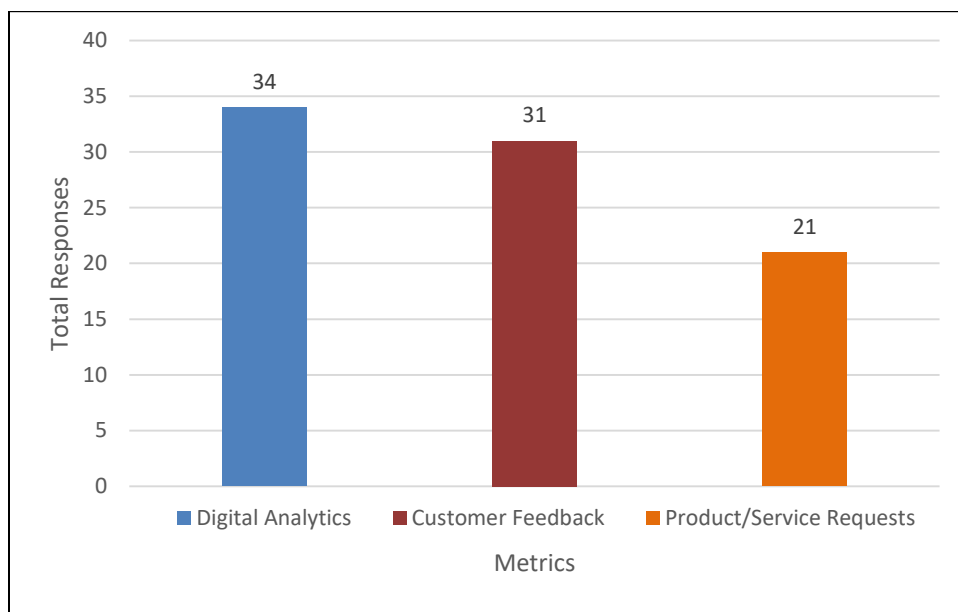


Figure 7. Process and Outcome Metrics Used at APHC

6.2.8 Communication Role Model Organizations

Fifty-eight of the 64 data call respondents answered the following question. Of these respondents, nearly three-quarters (n=43/58) indicated their Division used one or more organizations as a role model for achieving communication goals. Two of the organizations frequently identified include the CDC and the U.S. Environmental Protection Agency (EPA).

Forty-one of the 64 data call respondents identified the communication attributes of role model organizations that they emulate. The top two communication attributes of those role model organizations identified by data call respondents were: (1) the ability to communicate with target audiences and (2) the ability to measure efficacy or quality of communication (see Table 6).

Table 6. Communication Attributes of Role Model Organizations

Attribute	Percentage of Divisions (n=41)
Ability to communicate with target audience	68%
Measure effectiveness or quality of communication	56%
Speed at which information is disseminated	46%
Methods used to manage customer relations	46%
Other	27%

6.2.9 Accessing Data at APHC

Seventy-four of the 135 needs assessment survey respondents answered the following question. Nearly two-thirds (n=46/74) of these needs assessment survey respondents indicated that they had access to the data needed to complete their work. This finding contradicted subsequent, related open-ended comments as well as 23 comments made during stakeholder meetings, which articulated limitations to data access, lack of timeliness regarding access to data, and poor visibility of available data sources and data use agreements throughout the Center.

Fifty-nine of the 64 data call respondents identified five primary reasons for accessing data. The top reason for accessing data was for surveillance purposes (see Table 7).

Table 7. Reasons for Accessing Data at APHC

Reason for Accessing Data	Percentage of Divisions (n=59)
Surveillance	52%
Forecasting/predictions	41%
Personnel	37%
Other	22%
Monitoring healthcare encounters	20%

6.2.10 Data Sources

Fifty-nine of the 64 data call respondents identified a number of internal and external data sources that they routinely accessed. The internal data sources identified in Table 8 include those sources managed and accessed within APHC servers and systems.

Table 8. Data Sources within APHC

APHC Databases	Percent of Divisions (n=59)
Other	42%
Defense Occupational and Environmental Health Readiness System [DOEHRS]	37%
General Fund Enterprise Business System [GFEBS]	32%
Microsoft Access®	25%
Army Behavioral Health Integrated Data Environment [ABHIDE]	8%
SQL®	8%
Remote Online Veterinary Record [ROVR®]	6%

The magnitude of the number of databases classified as “other” (n=25/59, 42%) indicates there are likely many internally developed and maintained databases throughout APHC that are not visible and/or shared across organizational elements.

The external sources identified in Table 9 include those managed and accessed outside APHC servers and systems.

Table 9. Data Sources outside APHC

External Databases	Percent of Divisions (n=59)
Defense Technical Information Center [DTIC]	27%
Other	25%
Defense Medical Surveillance System [DMSS]	22%
Defense Manpower Data Center [DMDC]	17%
Military Health System Data Repository [MDR]	14%
MHS GENESIS®	5%
Interactive Personnel Electronic Records Management System [iPERM]	3%

6.2.11 Data Management and Sharing at APHC

Forty-seven of the 64 data call respondents identified a number of data management platforms/software that they used, the most common of which was Excel® (see Table 10).

Table 10. Data Management Platforms Used at APHC

Platform	Percent of Divisions (n=47)
Excel	94%
Access®	36%
Verint	30%
SAS	28%
SPSS®	26%
SAP®	23%
Tableau	23%
Visio	21%
SMS	19%
Other	19%
R™	11%
NVivo®	9%
Python®	4%

Forty-six of the 64 data call respondents indicated whether or not having access to any data management platforms or software would improve their data capabilities. Just over 40% (n=19/47) of these data call respondents indicated they needed additional platforms/software to improve data capabilities.

Forty-six of the 64 data call respondents identified a number of methods for sharing data. Email was the most frequently identified method.

Table 11. Data Sharing Methods at APHC

Platform	Percent of Divisions (n=46)
Email	89%
SharePoint	67%
U.S. Army Aviation and Missile Research Development and Engineering Center [AMRDEC]	65%
Network	54%
Shared database	39%
Other	7%

6.3 Desired State at APHC

6.3.1 Desired State Common Themes

Qualitative analysis of open-ended survey and data call responses, APHC stakeholder and external agency meeting comments, and literature review findings resulted in identification of 70 desired end-state themes or areas of improvement. These themes represent areas where communication and data needs and requirements were identified for improvement. The full list of themes appears in Appendix F.

The full list of desired state themes cover the following broad areas:

- Customer experience
- Evaluation
- Data management
- Procedure
- Digital content
- Quality
- Digital marketing
- Research
- Health communication
- Resourcing
- Information management
- Training
- Information technology
- Strategy
- Process and outcome measures.

6.4 Gap Analysis Findings

6.4.1 Identified Gaps

During the gap analysis, desired end-state themes were mapped with corresponding current-state data entries. Gap categories were developed taking current states into account but were then assigned to desired-state themes in a standardized fashion. A total of 12 standardized gap categories between the current and desired states of APHC's digital transformation were identified during the gap analysis. The gap frequencies included in Table 13 below were inferred

from the number of times each gap appeared for desired states across all current state entries. The most commonly identified gaps were related to expertise and strategy.

Table 12. Gaps between Digital First Current and Desired States

Gap	Frequency	Percent
Expertise — ability to employ expert knowledge and regulatory guidance	577	13.48%
Strategy — ability to plan strategically to bridge organizational silos	507	11.84%
Resourcing — ability to secure required resourcing	461	10.77
Information management — ability to organize and retrieve information	393	9.18%
Timeliness — ability to deliver products and services on-time	384	8.97%
Evaluation — ability to evaluate performance and effectiveness	344	8.04%
Quality – ability to enforce quality standards	338	7.90%
Productivity – ability to conserve resources	337	7.87%
Information technology – ability to maintain IT infrastructure	322	7.52%
Practical Skills – ability to apply practical knowledge	227	5.30%
Digital marketing – ability to reach target populations	219	5.12%
Design – ability to design communication products and management systems	172	4.01%

6.4.2 Key Gap Analysis Findings

Based on the analysis of the identified gaps and deficiencies in communication and data objectives, 10 key findings were identified. These key findings were used to guide action plan development, and they include (in no particular order):

1. A significant portion of communication materials continue to be produced in document-based rather than digital-based formats.

Nearly half of communication materials produced at APHC are in document-based formats. Regulations and best practices dictate and encourage Federal agencies to make their content more easily accessible to and useable by target audiences, especially on mobile devices. Transitioning to a Digital First mindset will be a challenge for APHC personnel, and they will need support and resources throughout the process.

2. Insufficient importance is placed on formative research.

Human-centered design standards and lessons learned from successful Federal agencies (e.g., GSA, CDC, NCI, and the USDA) indicated the importance of formative and user research in the design of effective communication media.^{1,11} Insufficient formative and user research into target population characteristics and preferences increases the likelihood of poorly targeted, underutilized, or ineffective communication products which, in turn, compromise the communication mission and waste valuable resources.¹¹

According to the needs assessment data, a large number of APHC employees lacked an understanding of the importance of target population characteristics when developing communication materials. This finding, combined with the fact that APHC's target populations were a combination of expert and non-expert audiences, makes formative and user research even more critical.

3. Customer satisfaction data are underutilized in communication planning.

Customer feedback is a useful source of audience information for communication planning.¹² In addition to being useful for communication planning, collecting customer feedback is required for the Center's ongoing Laboratory accreditation to the International Organization for Standardization [ISO] 17025 standard. Despite this, customer surveys and data collection mechanisms were poorly utilized. According to APHC stakeholder meeting participants, existing customer surveys were infrequently returned, and those that were returned seldom provided actionable results.

Directorates used other methods to collect customer feedback (email, telephone), which resulted in unstructured data that were underutilized because they were either not trackable or did not lend themselves to analysis. The ad-hoc methods for collecting customer feedback also prevented these data from being visible to and utilized throughout the Center.

4. End-user input is absent during development of digital products/services intended for nonexpert audiences.

Based on APHC stakeholder meeting comments, there is a lack of prototype/pilot testing with end users during digital products/services development, as is required by the IDEA Act.¹ This lack of action results in missed opportunities to correct problems when they are easiest and most cost-effective to fix. Collecting and applying end-user input would also increase the capacity of the Center to produce quality, effective communication products and services.

5. Insufficient strategic planning occurs at APHC.

According to needs assessment data, APHC does not have established, Center-wide communication and data plans and priorities. Such planning is needed to inform data and content management system design, ensure interoperability, and eliminate redundancies of systems. It is also needed to guide resource allocation and assignment, enhance data access and sharing, and improve the overall quality of communication and data management activities at APHC. The lack of such planning inhibits the Center's effectiveness and efficiency in reaching its audiences and achieving its missions.

6. There is a poor grasp of marketing in a digital environment.

The APHC stakeholder meeting comments demonstrated an insufficient emphasis on and understanding of digital marketing across the Center. The lack of emphasis placed on these activities results in insufficient request of appropriate resources for—

- Social media marketing
- Search engine optimization (SEO)
- Digital analytics collection and analysis
- Conversion of document-based content to mobile-enabled content
- Content syndication

A number of APHC employees wished to expand upon and capitalize on this area in the future.

7. Insufficient quality assurance exacerbates quality control challenges.

According to needs assessment data, a number of limitations related to quality assurance activities and processes during content creation exist at APHC. Insufficient quality assurance during content creation made regulatory compliance more challenging and heavily strained quality control resources down the line. The lack of sufficient quality assurance measures directly impacts compliance with the following regulations:

- Public affairs/Operations security
- Cyber security
- Records management
- Section 508 accessibility
- Plain Language
- Information technology governance
- 21st Century IDEA Act

Non-compliance with the above regulations directly affects the Center's functional integrity, audience reach, and audience retention.

8. Insufficient communication resources exist to provide requested services.

Free responses from needs assessment and data call surveys, and from respondents attending APHC stakeholder meetings, indicated a need for additional communication resources in the midst of tightening budgets. The APHC will need to direct expertise and provide training where it will be most useful; this will ultimately increase the effectiveness and efficiency of our communication activities and efforts, which is critical as the quantity of information we need to communicate continues to expand.

9. Underutilization of collaboration with role model organizations known for best practices.

Nearly three-quarters quarters (74%, n=43 Divisions) of data call respondents (91%, n=58 Divisions) indicated they had communication role models; however, few respondents indicated direct collaboration on communication efforts with those role models. To learn more about the opportunities for collaboration, the Digital First Team began meeting with best-in-class Federal agencies identified by the Digital.Gov team at GSA. The GSA was tasked to assist Federal agencies with implementing the 21st Century IDEA Act and has broad visibility of the efforts and activities supporting the government's digital transformation. Collaborative relationships developed during our meetings will remain important moving forward, especially as budgets continue to shrink.

10. Insufficient data governance exists.

Responses during APHC stakeholder meetings indicated a need to manage data at the enterprise level as a strategic resource. This data management would align with the priorities of the FDS and would improve visibility of available data sources across the Center; allow for the establishment of more comprehensive data-use agreements that would benefit multiple organizational elements; and reduce a great deal of duplicated effort spent accessing, storing, managing, and analyzing data throughout the Center.

7 Action Plans and Analysis

7.1 Action Plan Development

Action plans were developed using survey findings, current-state and desired-state information, as well as reviews of best practices and lessons learned. The plans were then ranked and prioritized using risk-benefit criteria and input from Digital First stakeholders and planning team members.

7.1.1 Accounting for Data Diversity during Action Plan Development

Due to the variety of qualitative data from surveys, internal meetings, literature review best practice topics, and lessons learned from other Federal agencies, it was a challenge to ensure that action plans adequately represented the wide range of input.

Similar topics from the data were grouped into pools of references from which to develop action plans. The pools of references included—

- Suggested solutions from survey responses
- Desired state common themes
- Best practice principles
- Lessons learned ideas

7.1.2 Aligning Action Plans to Broader Federal Initiatives

Federal regulations shape and dictate the digital requirements and services that APHC is required to meet. Accordingly, these regulations and their various requirements must be considered when developing and prioritizing Digital First action plans. Two such regulations include the 21st Century IDEA Act¹ and the FDS.⁴

7.2 Action Plan List

A total of 15 action plans, 4 for data and 11 for communication, were developed based on gap analysis findings. Based on further review and analyses, 4 action plans—1 data and 3 communications—were determined to be foundational. Completion of these four foundational action plans is required before appropriate planning and implementation of the remaining 11 longer-term action plans can occur.

7.2.1 Foundational Action Plans

Foundational Data Action Plan

This plan will establish resources and processes needed to accomplish the longer-term data action plans. As a result, this plan must be completed before work on the remaining data plans can begin.

► **Align enterprise data management with the FDS (Data Strategy Gaps)**

Evaluate and implement applicable Year 1 FDS Action Plans.

The FDS provides a 10-year vision for how the Federal government will accelerate the use of data. The Strategy is comprised of three components to guide Federal data management and use: (1) a mission statement, (2) 10 principles that serve as motivational guidelines for the overall Strategy, and (3) a set of 40 practices to guide agencies on how to leverage the value of federal and federally sponsored data.⁴ According to their Agency-Specific actions, APHC will need to complete Actions 12 through 16:

12. Establish a diverse data governance group,
13. Assess data and related infrastructure maturity,
14. Identify opportunities to increase staff data skills,
15. Identify data needs to answer key agency questions, and
16. Identify priority data sets.

Foundational Communication Action Plans

These plans will establish resources and processes needed to accomplish the longer-term communication action plans. As a result, these plans must be completed before work on the remaining communication plans can begin.

► Improve quality assurance/quality control processes for digital content (Communication Quality Gaps)

- Improve quality assurance during content development to include adherence with Public Affairs, Operational Security, Privacy Act, Section 508, and Plain Language requirements, as well as maintain SEO and information system architectural integrity.*
- Develop process/methods for maintaining version control of multi-channel content.
- Improve process/methods for monitoring content compliance with regulatory requirements on public facing content.*

Poor quality assurance during content creation is contributing to delays and overwhelming current quality control resources as it is published to information systems. This Action Plan would investigate ways to improve quality assurance during content creation and streamline quality control during content approval and publishing.

[*The APHC is currently failing to meet regulatory standards in several areas. Actions 1 and 3 under this plan are associated with regulatory compliance, and are therefore considered urgent. If the Center transitions to DHA, information that fails WCAG 2.0 AA (Web Content Accessibility Guidelines) will not be published to public-facing information systems].

► Expand workforce and identify needed IM/IT solutions to support transition to digital formats (Communication Resource Gaps)

- Investigate ways to meet demands for digital communication expertise (e.g., number of personnel).*
- Collaborate with the USDA to expand digital media capability (such as e-books and data stories, storytelling blogs, ask an expert, and video interviews with an expert).
- Research software that enables communication staff to automate manual tasks and become more efficient.

Expectations of today's information consumers are high. They expect up-to-the-minute information tailored to their task-at-hand and delivered expeditiously via whatever communication channel is convenient at the moment.³ Creating and formatting information as documents, then cutting and pasting document content into web sites, mobile apps, and so forth, is not a sustainable or effective strategy for APHC. Delivering information quickly across multiple devices requires content that is malleable or format-independent. Although APHC has pockets of communication expertise, PHCOM does not have the manpower required to support all of our Directorates through a digital transition.

[*As the volume of generated information increases, APHC continues to fall further behind in its ability to manage and deliver in a timely manner. The Center needs to find innovative ways to address demands for digital communication expertise within budget constraints. Action 1 is considered urgent as human resources are necessary to implement any meaningful Digital First recommendations].

► **Develop and deploy digital skills training (Communication Training Gaps)**

- Develop and provide digital skills training including social media: messaging, planning and channels; writing for the web: SEO, mobile optimization, Section 508 accessibility; digital analytics; Clear Communication Index; Plain Language; and Risk Communication Framework.*
- Ensure analytics integrity by requiring those who interpret digital analytics data to complete Google Analytics Individual Qualification (GAIQ) certification.

Lessons learned from over 10 years of digital transformation show that government employees realize they need to upskill, but the opportunities to do so are not evenly distributed.¹³ There must be a balance of training the workforce, improving customer experience, and incorporating new tools and technologies into the organization that does not slow the assimilation of change. Each employee must understand the importance of digital transformation and what their roles and responsibilities are as APHC moves forward.

[*Action 1 under this plan is considered urgent because it is associated with regulatory compliance].

7.2.2 Longer-Term Data Action Plans

► **Ensure data quality is sufficient to achieve their intended uses (Data Quality Gaps)**

- Data intended to inform public health policy must be of appropriate utility, integrity, and objectivity.
- Design new data collections with the end uses and users in mind to ensure that data are necessary and of high enough quality to meet planned and future agency and stakeholder needs.

Data quality is affected by how the data are collected, handled, and communicated. The data we collect at APHC must be complete, of high scientific quality, and formatted in a way that will meet planned and future agency and stakeholder needs. To accomplish this, APHC will need to establish processes to ensure data protections are in place during the project design phase, establish data use documentation, and design application data entry using human-centered design principles.

► **Better management of data access (Data Access Gaps)**

- Increase enterprise visibility of data access agreements and establish terms and conditions for contracts, grants, cooperative agreements, and other agreements that meet data management requirements for processing, storage, access, transmission, and disposition.
- Promote equitable and appropriate access to data in an open, machine-readable format and through multiple mechanisms to meet stakeholder needs while protecting privacy, confidentiality, and proprietary interests.

In order to better manage APHC's access to data sets and collaborative analysis, policies and procedures need to be developed that enable stakeholders to effectively and efficiently access and leverage data assets. This change will involve enterprise-level visibility of data agreements (and the terms and conditions of those agreements), data sets, and resources. New data collections will need to be designed with external partners and users in mind to ensure the data are necessary and of sufficient quality to meet their intended purposes. This need also involves developing and providing training and/or SOPs on data collection tools and methodologies, as well as assured adherence to PHRB requirements for protected health information/personally identifiable information (PHI/PII).

► **Expand ability to convey insights from data (Data Visualization Gaps)**

- Investigate ways to equitably provide statistical analysis, communication tools, and training—including data visualization to effectively present insights from data to a broad set of audiences.
- Develop and provide training about data visualization.

In order for APHC to contribute to data-informed decision making, target audiences must gain a better understanding of APHC products. Additionally, APHC's data management and analyses need to be presented in user-friendly and intuitive formats. APHC needs to investigate ways to provide statistical analysis and communication (including data visualization) tools and training to staff throughout APHC so they are able to effectively present insights from data to a broad set of audiences. To accomplish this, APHC must develop and provide training on communicating scientific data using modern tools to include data visualization and dynamic visualizations.

► **Improve data safeguards (Data Security Gaps)**

- Establish processes to ensure PHI/PII data protections and PHRB procedures are in place at the project design phase.
- Establish descriptive metadata to maximize appropriate legal use of data and define their potential value to stakeholders.
- Supply linkage and analysis tools that use secure technologies to address key agency questions and to meet stakeholder needs while protecting privacy.

APHC will need to both develop procedures and training, as well as provide adequate tools for personnel to manage and access data in a manner that protects PHI/PII and data integrity. The process includes guidance that can be used at the initial stages of a project, standardizing interoperability and auditability of data across the Center, and establishing a central resource and authority on issues of data management. By including metadata describing required protections and intended use, data are less likely to be mishandled.

[Note: This action plan is associated with Privacy Act data handling requirements].

7.2.3 Longer-Term Communication Action Plans

► Prepare for new digital service development (Communication Strategy Gaps)

- Investigate cross-channel content management strategies.
- Perform comparative analysis* for all new digital services.

As APHC moves forward, it will need to become more efficient and selective in the way it creates and manages digital services, as new and redesigned services will need to meet customer-focused requirements outlined in the 21st Century IDEA Act.

[*Comparative analysis involves researching other similar digital services while looking for a competitive edge or to fill a gap in available services.¹⁴ The IDEA Act specifically requires that new government digital services do not duplicate existing services].¹

► Improve timely release of information to primary audiences (Communication Timeliness Gaps)

- Collaborate with proponents of content approval processes to improve turnaround time.
- Initiate a feedback program for internal customers to help quantify issues with internal business processes and inform improvement efforts.

Getting up-to-date information to target audiences quickly is vitally important to public health and to the reputation of our organization.³ This Action Plan looks to investigate factors contributing to delays during content development through to content approval in order to streamline these processes as much as possible.

► Improve and expand audience research and communication evaluation capabilities (Communication Research/Evaluation Gaps)

- Collaborate with PHAD to expand capabilities and make audience research findings from their efforts available to authorized personnel via a searchable system for use in communication planning.*
- Collaborate with PHAD to expand communication evaluation capability.*

It is important to learn as much as possible about target audiences in order to better match communication products or services with their needs.^{11,12} This need is especially important for APHC as we communicate with both expert and non-expert audiences. Audience members typically have many options available and judge potential value of an information source within seconds, quickly abandoning those that do not address their needs or do not value their time.³ APHC must maximize its content to meet target audience needs in order to remain a relevant and reputable source of health information.

[*The APHC currently does very little audience research due to personnel constraints. Although not considered a foundational element, this plan is associated with meeting IDEA Act standards for new and redesigned digital services. It does not, however, impact legacy systems].

► **Improve research and evaluation methods for digital marketing (Digital Marketing Research/Evaluation Gaps)**

- Develop keyword research capabilities.
- Expand digital analytics marketing campaign tracking capabilities.

APHC currently does a limited amount of paid boosting of critical social media messaging. The addition of keyword research to select quality keywords would help make these efforts more effective,¹⁵ while social media management and analysis software would help automate routine tasks; combined, they would provide social media insights to more Divisions within our organization. The DHA currently uses Sprout Social[®] software for this purpose.

► **Expand usability testing and human-centered design capabilities (Communication Planning/Design Gaps)**

- Develop PHRB umbrella plans for standard usability testing methods and user research (user research is information technology requirements gathering from end-users).^{11,16,*}
- Incorporate human-centered design methods into content development and media design processes.*

User experience (consisting of user research, human-centered design, and usability testing) focuses on understanding and delivering a target population's needs and values while taking into consideration inherent abilities and limitations they might have.¹⁶ Human-centered design is a methodology based on human factors that impact a person's ability to use an information system and includes cognition, memory, learning, attention, and perception.¹¹ Testing prototypes of a digital system for usability with end users during the design and/or development process allows for required changes to be made when they are easiest and most cost-effective.

[*The APHC currently does very little usability testing due to personnel constraints. Although not considered a foundational element, this Action is associated with meeting IDEA Act standards for new and redesigned digital services. It does not, however, impact legacy systems].

► **Expand digital analytics capabilities (Digital Analytics Gaps)**

- Expand reach of digital analytics services (including data dashboards to deliver real time communication metrics).*
- Incorporate digital analytics measurement plans and campaign tracking into the communication planning process.

Digital analytics provides information on how audiences use digital services such as web sites, social media channels, and mobile applications.¹ Such information can help guide

communication planning and digital marketing efforts.¹⁷ Although APHC has digital analytics tools, the human resources needed to use them and to interpret/apply findings effectively are limited.

[*The APHC currently uses Google Analytics® and participates in the Federal Digital Analytics Program funded by GSA. The Center is limited in the amount and level of analysis it can perform due to personnel constraints. Although not considered a foundational element, digital analytics capabilities are associated with meeting IDEA Act standards for new and redesigned digital services. It does not, however, impact legacy systems].

[NOTE: According to the 21st Century IDEA Act, DOD will be evaluating all digital services between now and 20 June 2020 in order to determine which are most viewed, utilized by the public, or are otherwise important for public engagement.¹ It would be in APHC's best interest to track performance and maximize factors that might boost performance of digital services. Factors include: mobile compatibility, page load speed, accessibility, substantive content, and adherence to Web standards].

► **Improve and expand customer satisfaction monitoring (Customer Feedback Gaps)**

- Participate in customer satisfaction workgroup in order to make the survey more actionable (including for communication planning purposes), and incorporate other methods of customer feedback (including digital analytics).*
- Collaborate with the QSARC Office to make customer satisfaction findings available to authorized personnel via a searchable system for use in communication planning.

Customer experience can be defined as the sum of all experiences a customer has with an organization.¹⁶ Since the government is often a sole-source provider, customer experience is even more critical when providing services. A mechanism must be put into place to collect customer satisfaction data and feedback in a way that allows for actionable results. It is important to foster a culture that promotes positive customer experience to improve how APHC delivers services and information to the public.

[*Customer Satisfaction evaluation is required by QSARC for APHC accreditation. Currently, the survey response rate is low, and those responses received have not provided actionable results. This is complicated by use of additional customer feedback methods with data formats which cannot be easily tracked and analyzed (e.g., email communications, telephonic communications, and other informal customer satisfaction querying methods)].

7.3 Action Plan Prioritization and Considerations

A risk-benefit analysis and APHC stakeholder input were used to prioritize the Digital First action plans.

7.3.1 Risk-Benefit Analysis Findings

The action plan certainty value served as the x-axis on the decision matrix and represents the number of best practices and lessons learned incorporated into a particular action plan. Each lessons-learned idea was multiplied by the number of agencies that have successfully implemented it within their organizations.

The following list of action plans (Table 16) and the corresponding decision matrix (Figure 7) illustrate the relative Benefit and Certainty of each Action Plan.

Table 13. Action Plan Titles Listed Alphabetically

Category	ID	Description
Formative Research/Process-Outcome Evaluation	FR/PO1	Improve and expand audience research and communication evaluation capability
Formative Research/Process-Outcome Evaluation	FR/PO2	Improve and expand customer satisfaction monitoring
Formative Research/Process-Outcome Evaluation	FR/PO3	Improve research and evaluation methods for paid digital marketing
Quality Assurance/Process-Outcome Evaluation	QA/PO1	Expand usability testing and human-centered design capabilities
Quality Assurance/Process-Outcome Evaluation	QA/PO2	Improve timely release of information to primary audiences
Quality Assurance/Quality Control	QA/QC1	Improve quality assurance/quality control processes for digital content
Quality Assurance/Quality Control	QA/QC2	Improve data safeguards
Strategic Planning/Digital Analytics	SP/DA1	Expand digital analytics capabilities
Strategic Planning/Quality Control	SP/QC1	Align data quality with intended use
Strategic Planning/Resource Utilization	SP/RU1	Expand digital communication resources and transition to digital formats
Strategic Planning/Resource Utilization	SP/RU2	Develop and deploy digital skills training
Strategic Planning/Resource Utilization	SP/RU3	Prepare for new digital service development
Strategic Planning/Resource Utilization	SP/RU4	Expand ability to convey insights from data
Strategic Planning/Resource Utilization	SP/RU5	Better manage access to data
Strategic Planning	SP1	Align enterprise data management with FDS

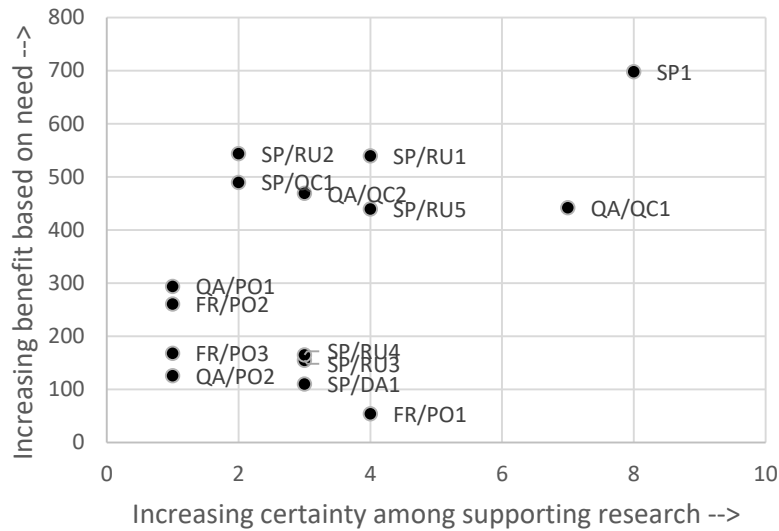
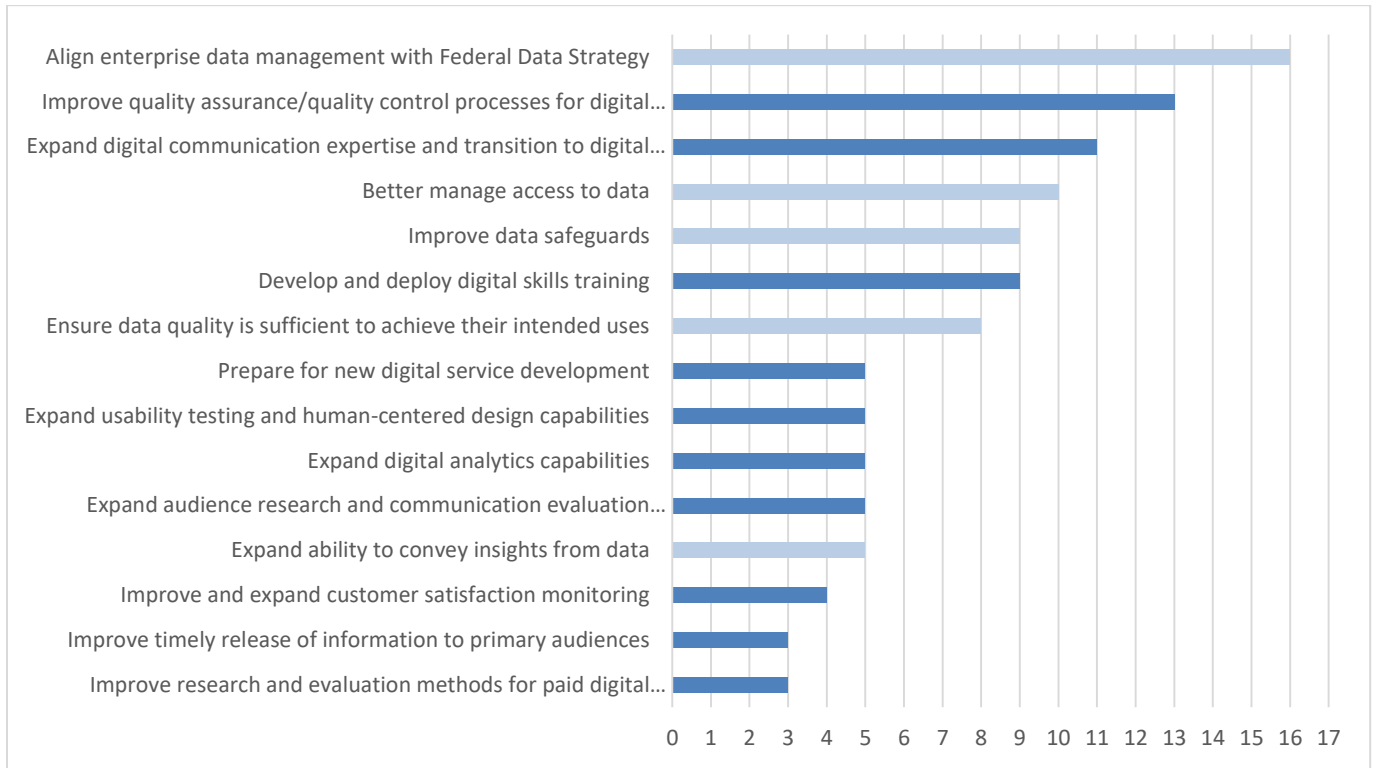


Figure 8. Digital First Action Plan Decision Matrix

7.3.2 Action Plan Ranking

After plotting the decision matrix, benefit values were divided into eight ranges to equalize Benefit and Certainty values. Rankings were then assigned by adding together each action plan’s Benefit and Certainty values. The higher the combined values, the higher the action is ranked.



Note: Data-related plans are displayed in light blue and Communication-related plans in dark blue.

Figure 9. Digital First Action Plan Ranking

Following the initial ranking depicted in Figure 8, the Digital First planning team held a 2-day offsite that resulted in gaining participants' input on priority ranking of the 11 longer-term action plans. Based on that input, the following longer-term action plan rankings were established.

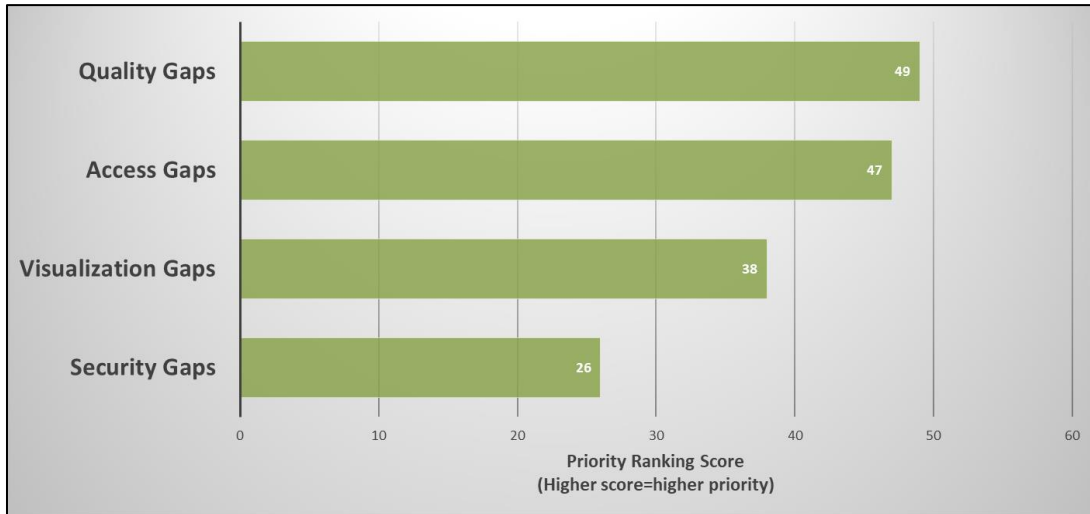


Figure 10. Longer-Term Data Action Plan Ranking

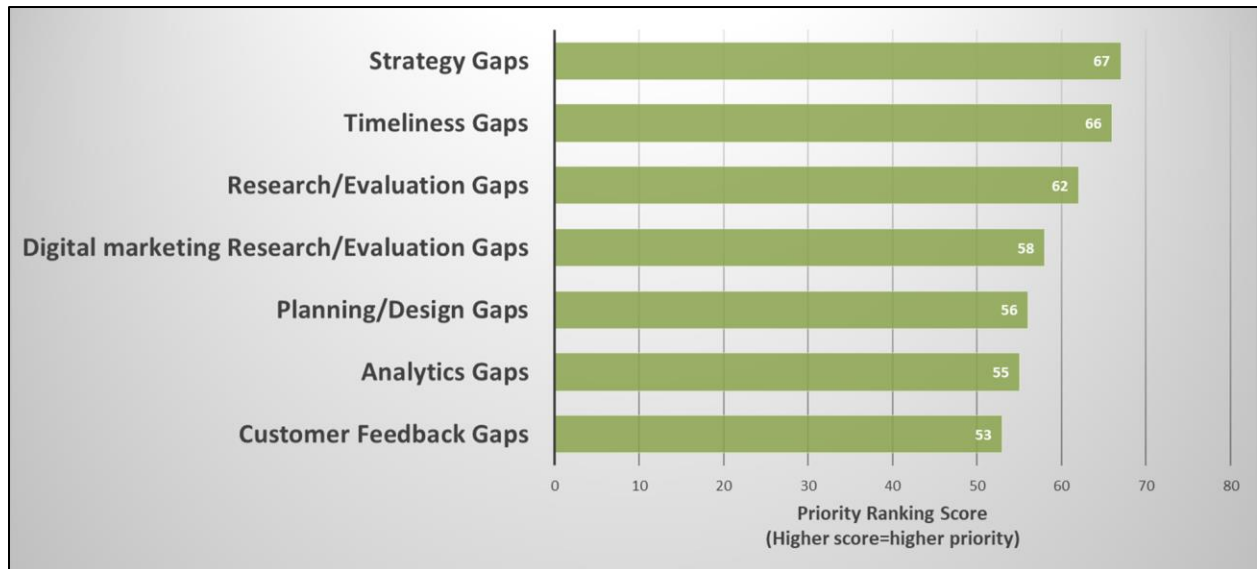


Figure 11. Longer-Term Communication Action Plan Ranking

7.4 Foundational Action Plan Considerations

As part of the Digital First offsite, participants were asked to answer the following five questions for each foundational action plan:

1. Who should be involved in implementation planning?
2. Who are the decision makers throughout various stages of planning and implementation?
3. Who are the influencers we should engage throughout the various stages of planning and implementation?
4. Are there any projects being worked right now that support or align with this action plan?
5. What additional projects should we be doing that would support or align with this action plan?

The data were analyzed to summarize participant input into future planning and implementation of the four foundational action plans. See Appendix G to view the results of this activity.

8 Discussion

8.1 Conclusions

Currently, APHC relies on an outdated approach to communication; exhibits document-centric thinking; lacks strategic planning, coordination, and technological sophistication. The Center is not meeting industry standards with regards to communication planning, practices, and technology.

There is a desire throughout the Center to improve its data, communication, content management, and marketing capabilities in order to more effectively educate primary audiences and inform decisions related to policy, priorities, and funding. The recommendations provided in this report are designed to pave the road toward accomplishing these goals.

Communication and content management efforts at APHC rely on a large number of high-level employees for execution. Moving forward, the workload to support these efforts will increase dramatically as the Center transitions from document-based formats—an estimated 48% of its content—to digital formats in order to align with the 21st Century IDEA Act¹ and increase the reach of information through digital marketing. Potentially, full-time, dedicated teams of communication personnel could accomplish these tasks more efficiently and cost-effectively, returning time to scientists, engineers, and other subject matter experts to focus on the work they were hired to do.

8.2 Analysis Limitations

A number of limitations were associated with the Digital First Analysis largely due to time, resource, and data collection methodology constraints.

8.2.1 Data Collection Limitations

Below is a list of limitations associated with the data collection tools and processes:

- As the survey and data call were anonymous, there was no way to determine if the same individuals responded to both and/or if they also participated in stakeholder meetings. This prevented further investigation into discrepancies in the data.
- Respondent eligibility for the online needs assessment survey was limited to APHC military and Civilian personnel who produce materials for public release. Accordingly, contractors and those who work exclusively on products for limited distribution were unable to participate. As a result, input into the survey may not have been representative of the sentiments and experiences of the entire Center.
- Survey and data call responses were reliant upon self-reporting methodologies, which may not be entirely accurate due to bias.
- Meetings were not transcribed verbatim; therefore, data may have been lost due to interpretation and the ability of the note taker to capture interviewees' comments.
- A portion of the data collection for this project occurred during the Thanksgiving and winter holidays, which combined with time constraints, prevented scheduling meetings far in advance. As a result, meeting attendance was not optimal in all cases, and Division-level representation during meetings was not uniform across the Center.
- While Directorate-level representation was very good at the offsite, key stakeholders from IMD were not in attendance and did not provide feedback after the fact. This resulted in action plan prioritization without input from IM/IT subject matter experts.

8.2.2 Gap Analysis Limitations

Below is a list of limitations associated with the gap analysis:

- Time and resource constraints limited the ability to thoroughly explore and address each discrepancy identified between the quantitative survey data and the qualitative data contained in free-text survey responses and internal meeting comments.
- Current states do not share as close a relationship with action plans as do desired states since gap frequency was inferred from each gap's appearance for desired states.
- In the action plan decision matrix (Figure 8), gap frequencies were inferred from the number of times that gap appeared for desired states across all current state entries. Since it was probable that more than one desired state theme was assigned to each current state entry, and since current state entries were counted only once, it is possible that the way in which gap frequency was determined may have skewed the benefit of action plans linked to multi-faceted, current-state data entries.

8.2.3 Risk-Benefit Analysis Limitations

Below is a list of limitations associated with the risk-benefit analysis:

- The gap analysis results were used to rank the relative benefit of action plans in the action plan decision matrix (Figure 8); however, it was important to also consider the quantitative survey analysis results when evaluating the action plans. This was accomplished to the best of our ability during the 2-day offsite meeting with Digital First stakeholders.

8.3 Defense Health Agency Uncertainty

A large degree of uncertainty regarding the future of APHC within the DHA existed throughout FY19 Digital First activities. The analysis and development of recommendations occurred without a clear understanding of the direction or future plans for DHA's organizational structure, the availability of resources and technologies, and the shifting focus from Army to DOD public health missions and priorities. Once decisions and a clear path ahead are outlined, it may be necessary to adjust course. Future flexibility will be required.

8.4 Budget Activity Group 4 (BAG4) Constraints

The BAG4 covers IM/IT funding at APHC.¹⁸ In FY19, a deficit in BAG4 funding resulted in constraints being applied to IM/IT resources at the Center. A large portion of Digital First involves modernization and innovation in IM/IT capabilities. The implications of the BAG4 deficit for the success of Digital First are still unknown and may shape the future of strategic objective implementation.

9 Recommendations

9.1 Establish Oversight and Organizational Structure Needed to Implement Foundational Action Plans

The Digital First planning team generated the following immediate-term recommendations in order to establish the oversight, proponentcy, and accountability needed to facilitate implementation of the foundational action plans.

9.1.1 Data

► **Manage data at the enterprise level as a strategic resource for APHC.**

- Establish a Data Governance Office.
- Designate an APHC Chief Data Officer.
- Establish a diverse Data Working Group.

9.1.2 Communication Strategy and Expertise

► Increase APHC’s capacity to effectively and efficiently communicate with its customers.

- Ensure sufficient communication resources exist to execute communication activities and provide requested services.
- Ensure communication efforts align with best practices and standards.
- Ensure sufficient adherence to best practices and SOPs and that quality assurance occurs during the communication content lifecycle.

9.1.3 Communication Evaluation

► Integrate formative research and evaluation into communication planning and efforts.

- Strengthen collaboration between HCS and PHAD to ensure formative research and evaluation data are collected, available, and actionable during communication planning, development, and dissemination activities.

9.1.4 Content Management

► Establish content management lifecycle planning and processes to meet APHC’s content management, records management, and knowledge management needs.

- Initiate collaboration between the Digital First and Knowledge Management Strategic Objectives, the PMD and IMD Divisions, and the APHC Information Architect to investigate planning and technology-independent processes that will provide management of content throughout the content lifecycle.

9.1.5 External Collaboration

► Maintain visibility of standards, best practices, and the priorities of, and foster collaboration with, other Federal agencies and communities of practice.

- Designate personnel to actively participate in each identified community of practice relevant to data, communication, content management, and knowledge management.
- Establish a working group of APHC and DHA communication, content management, and data management subject matter experts to keep lines of communication open and to discuss plans, strategies and collaboration opportunities.

9.2 Implement Foundational Action Plans in FY20

Given needs assessment analysis findings and current resources, financial considerations, and uncertainties regarding the future of APHC within DHA and BAG4 funding, the Digital First planning team generated the following recommendations for FY20:

- Identify appropriate action officers to lead development of implementation plans for each of the four foundational action plans.
- Develop implementation plans, incorporating feasibility and business case analyses findings and DHA considerations, for each of the four foundational action plans.
- Implement the four foundational action plans.
- Prepare for FY21 and beyond by planning for and thoroughly documenting resources and processes established during FY20 efforts.

9.3 Implement Longer-Term Action Plans over the Next Five Years (FY21–FY25)

The Digital First planning team recommends that appropriate action officers be identified to implement the longer-term action plans using a phased approach.

Data Action Plans:

- Ensure data quality is sufficient to achieve intended uses (Data Quality Gaps)
- Better manage access to data (Data Access Gaps)
- Expand ability to convey insights from data (Data Visualization Gaps)
- Improve data safeguards (Data Security Gaps)

Communication Action Plans:

- viii. Prepare for new digital service development (Communication Strategy Gaps)
- ix. Improve timely release of information to primary audiences (Communication Timeliness Gaps)
- x. Improve and expand audience research and communication evaluation capabilities (Communication Research/Evaluation Gaps)
- xi. Improve research and evaluation methods for digital marketing (Digital Marketing Research/Evaluation Gaps)
- xii. Expand usability testing and human-centered design capabilities (Communication Planning/Design Gaps)
- xiii. Expand digital analytics capabilities (Digital Analytics Gaps)
- xiv. Improve and expand customer satisfaction monitoring (Customer Feedback Gaps)

Appendix A

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Appendix B

Digital First Needs Assessment Survey

Digital First Needs Assessment [English (United States)]

Welcome:

This survey is being conducted as part of the Digital First Strategic Objective. This objective represents an opportunity for APHC to improve the supporting infrastructure and resources needed to more effectively and efficiently communicate with our diverse audiences. To achieve this, and to ensure that everyone's needs are considered, we must first identify communication capabilities and requirements for each APHC Division/Office. The information collected in this survey will help define APHC communication gaps, goals, and priorities as they relate to meeting current and future public health challenges.

Your participation in this survey is voluntary, and you can stop at any time. It should take approximately 10–15 minutes to complete and must be completed in one sitting. There are no known risks associated with participating in this survey. The Digital First evaluation team at APHC will be the only individuals who access the data, which will be kept private and confidential and housed on a protected secure server. To protect your identity, only group (aggregate) responses will be reported. Your individual responses will never be reported. Thank you for your time!



Demographics**Please select the option that best describes you.**

1. What is your affiliation?

- Civilian
- Military
- Contractor

2. What is your work schedule?

- Full-Time
- Part-Time

3. In which directorate or office do you work?

- Clinical Public Health & Epidemiology (CPHE)
- Environmental Health Sciences & Engineering (EHSE)
- Health Promotion & Wellness (HPW)
- Laboratory Sciences (LS)
- Occupational Health Sciences (OHS)
- Public Health Communications (PHCOM)
- Toxicology (TOX)
- Veterinary Services & Public Health Sanitation (VPHS)
- Business Operations
- Office of the Director (OOD), excluding PDM and QSARC
- Product Management (PDM)
- Quality Systems and Regulatory Compliance Office (QSARC)

This Question is Conditionally Shown if: (4 = Clinical Public Health & Epidemiology (CPHE))

4_CPHE. In what division do you work?

- Army Hearing
- Army Public Health Nursing
- Behavioral and Social Health Outcomes Practice
- Disease Epidemiology
- Environmental Medicine
- Graduate Medical Education
- Injury Prevention
- Occupational Medicine
- Surety Medicine
- Vision Conservation and Readiness
- Other

This Question is Conditionally Shown if: (4 = Environmental Health Sciences & Engineering (EHSE))

5_EHSE. In what division do you work?

- ATSDR Liason
- Entomological Sciences
- Environmental Health Engineering
- Environmental Health Risk Assessment

- Environmental Health Sciences
- Other

This Question is Conditionally Shown if: (4 = Health Promotion & Wellness (HPW))

5_HPW. In what division do you work?

- Army Wellness Centers Operations
- Health Education & Application
- Health Promotion Operations
- Public Health Assessment
- Other

This Question is Conditionally Shown if: (4 = Laboratory Sciences (LS))

5_Lab. In what division do you work?

- Analytical Division – Inorganic
- Analytical Division – Organic
- Biosurveillance
- Client Services
- Environmental Health
- Industrial Hygiene
- Laboratory Manager
- Operations
- Other

This Question is Conditionally Shown if: (4 = Occupational Health Sciences (OHS))

5_OHS. In what division do you work?

- Health Hazard Assessment
- Health Physics
- Industrial Hygiene Field Services
- Industrial Hygiene Program Management
- Nonionizing Radiation
- Other

This Question is Conditionally Shown if: (4 = Public Health Communications (PHCOM))

5_PHCOM. In what division do you work?

- Health Communication Science
- Health Risk Communication
- Public Affairs & Marketing
- Public Health Preparedness and Response
- Publication Management
- Visual Information & Digital Media
- Other

This Question is Conditionally Shown if: (4 = Toxicology (TOX))

5_TOX. In what division do you work?

- Health Effects Research
- Toxicity Evaluation

- Toxicologic Pathology
- Other

This Question is Conditionally Shown if: (4 = Veterinary Services & Public Health Sanitation (VPHS))

5_VET. In what division do you work?

- Food Protection and Public Health Sanitation
- Global Veterinary Medical Practice
- One Health
- VET Metrics
- Veterinary One Health (Animal Health)
- Other

Destination: **Survey Submitted** (Set in 1 (Contractor))

Branch to: **Survey Submitted** (1 = Contractor)

(End of Page 2)

Please consider the following scope when answering the remaining survey questions.

In Scope:

The focus of FY19 Digital First is UNCLASSIFIED public health mission-related information (content, data, and products/materials) intended for external audiences (e.g., target audiences and customers outside of APHC).

Out of scope:

Any content, information, product, platform, communication information system intended for APHC personnel:

1. Business operations products, dashboards and administrative products for use by external customers or requests for support.
2. Training content, delivery, platforms, and technology.
3. Knowledge Management products.
4. Technical reports.
5. Collaboration platforms.
6. Intranet site.

6. Does your work support development of UNCLASSIFIED public health mission-related information (content, data, and products/materials) intended for external audiences (e.g., target audiences and customers outside of APHC)?

- Yes
- No

Destination: **Survey Submitted** (Set in 5 (No))

Branch to: **Survey Submitted** (6 = No)

(End of Page 3)

Communication Efforts

This Text Block is Conditionally Hidden if: ()

Please only consider UNCLASSIFIED public health mission-related materials intended for external audiences when answering the following questions.

7. In FY18, which communication materials did you work on or produce for broad dissemination to audiences outside APHC? Select all that apply

- None
- Briefing Materials
- Broadcast Media (Public Service Announcements, etc)
- eBooks
- Email Communication Campaigns
- Fact Sheets, Brochures
- Graphic Training Aids/Health Information Products
- Guides, Pamphlets, Manuals, Book Chapters
- Instructional Materials
- Manuscripts, Journal Articles
- Marketing Exhibits
- Marketing Print Materials
- Mobile Applications
- Multimedia, Animation, and Video
- Newsletters, Periodicals
- Removable Media (CD, DVD, etc.)
- Web sites, etc.)
- Displays, Slide Decks, Multimedia & Animation, Video)
- Reports, Summaries
- Social Media
- Technical Poster Sessions
- Web-Based Applications
- Web pages/Web sites
- Other, please specify _____

Branch to: **Communication Tasks and Support** (6 (None) = Selected)

(End of Page 4)

Communication Efforts

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

This Page is Conditionally Shown if: (6 (Briefing Materials) = Selected);

Briefing Materials

Please estimate the following using whole numbers (ie., 7 communication materials, 23 hours, 3 colleagues).

7_brm_num. Please estimate the number of **Briefing Materials** you contributed to/prepared in FY18.

7_brm_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Briefing Material**

7_brm_col. Please estimate the average number of colleagues contributing to each **Briefing Material**

(End of Page 5)

This Page is Conditionally Shown if: (6 (Broadcast Media (Public Service Announcements, etc.)) = Selected)

This Section is Conditionally Hidden if: ()

Broadcast Media

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_BM_num. Please estimate the number of **Broadcast Media (Public Service Announcements, etc)** you contributed to/prepared in FY18.

7_BM_hr. Please estimate the average time (in hours) you spent contributing to/preparing each item of **Broadcast Media (Public Service Announcements, etc.)**

7_BM_col. Please estimate the average number of colleagues contributing to each item of **Broadcast Media (Public Service Announcements, etc.)**

(End of Page 6)

This Page is Conditionally Shown if: (6 (eBooks) = Selected)
Ebooks

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

25. Please estimate the number of **eBooks** you contributed to/prepared in FY18.

26. Please estimate the average time (in hours) you spent contributing to/preparing each **eBook**

27. Please estimate the average number of colleagues contributing to each **eBook**

(End of Page 7)

This Page is Conditionally Shown if: (6 (Email Communication Campaigns) = Selected)
Email Communication Campaigns

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_ecc_num. Please estimate the number of **Email Communication Campaigns** you contributed to/prepared in FY18.

7_ecc_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Email Communication Campaign**

7_ecc_col. Please estimate the average number of colleagues contributing to each **Email Communication Campaign**

(End of Page 8)

This Page is Conditionally Shown if: (6 (Fact Sheets, Brochures) = Selected)

Fact Sheets, Brochures

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_fsb_num. Please estimate the number of **Fact Sheets/Brochures** you contributed to/prepared in FY18.

7_fsb_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Fact Sheet/Brochure**

7_fsb_col. Please estimate the average number of colleagues contributing to each **Fact Sheet/Brochure**

(End of Page 9)

This Page is Conditionally Shown if: (6 (Graphic Training Aids/Health Information Products) = Selected)

Graphic Training Aids/Health Information Products

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_gtahip_num. Please estimate the number of **Graphic Training Aids/Health Information Products** you contributed to/prepared in FY18.

7_gtahip_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Graphic Training Aid/Health Information Product**

7_gtahip_col. Please estimate the average number of colleagues contributing to each **Graphic Training Aid/Health Information Product**

(End of Page 10)

This Page is Conditionally Shown if: (6 (Guides, Pamphlets, Manuals, Book Chapters) = Selected)

Guides, Pamphlets, Manuals, Book Chapters

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_gpmbc_num. Please estimate the number of **Guides, Pamphlets, Manuals, Book Chapters** you contributed to/prepared in FY18.

7_gpmbc_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Guide, Pamphlet, Manual, Book Chapter**

7_gpmbc_col. Please estimate the average number of colleagues contributing to each **Guide, Pamphlet, Manual, Book Chapter**

(End of Page 11)

This Page is Conditionally Shown if: (6 (Instructional Materials) = Selected)

Instructional Materials

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_im_num. Please estimate the number of ***Instructional Materials*** you contributed to/prepared in FY18.

7_im_hr. Please estimate the average time (in hours) you spent contributing to/preparing each ***Instructional Material***

7_im_col. Please estimate the average number of colleagues contributing to each ***Instructional Material***

(End of Page 12)

This Page is Conditionally Shown if: (6 (Manuscripts, Journal Articles) = Selected)
Manuscripts, Journal Articles

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_man_num. Please estimate the number of **Manuscripts/Journal Articles** you contributed to/prepared in FY18.

7_man_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Manuscript/Journal Article**

7_man_col. Please estimate the average number of colleagues contributing to each **Manuscript/Journal Article**

(End of Page 13)

This Page is Conditionally Shown if: (6 (Marketing Exhibits) = Selected)
Marketing Exhibits

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_mm_num. Please estimate the number of **Marketing Exhibits** you contributed to/prepared in FY18.

7_mm_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Marketing Exhibit**

7_mm_col. Please estimate the average number of colleagues contributing to each **Marketing Exhibit**

(End of Page 14)

This Page is Conditionally Shown if: (6 (Marketing Print Materials) = Selected)

Marketing Print Materials

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_MM_num. Please estimate the number of **Marketing Materials** you contributed to/prepared in FY18.

7_MM_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Marketing Material**

7_MM_col. Please estimate the average number of colleagues contributing to each **Marketing Material**

(End of Page 15)

This Page is Conditionally Shown if: (6 (Mobile Applications) = Selected)

Mobile Applications

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

28. Please estimate the number of **Mobile Applications** you contributed to/prepared in FY18.

29. Please estimate the average time (in hours) you spent contributing to/preparing each

Mobile Application

30. Please estimate the average number of colleagues contributing to each **Mobile Application**

(End of Page 16)

This Page is Conditionally Shown if: (6 (Multimedia, Animation, and Video) = Selected)
Multimedia, Animation, and Video

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_mav_num. Please estimate the number of **Multimedia Animation and Video** you contributed to/prepared in FY18.

7_mav_hr. Please estimate the average time (in hours) you spent contributing to/preparing each item of **Multimedia Animation and Video**

7_mav_col. Please estimate the average number of colleagues contributing to each item of **Multimedia Animation and Video**

(End of Page 17)

This Page is Conditionally Shown if: (6 (Newsletters, Periodicals) = Selected)
Newsletters, Periodicals

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_np_num. Please estimate the number of **Newsletters/Periodicals** you contributed to/prepared in FY18.

7_np_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Newsletter/Periodical**

7_np_col. Please estimate the average number of colleagues contributing to each **Newsletter/Periodical**

(End of Page 18)

This Page is Conditionally Shown if: (6 (Removable Media (CD, DVD, etc.)) = Selected)
Removable Media

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

31. Please estimate the number of **Removable Media** you contributed to/prepared in FY18.

32. Please estimate the average time (in hours) you spent contributing to/preparing each item of **Removable Media**

33. Please estimate the average number of colleagues contributing to each item of **Removable Media**

(End of Page 19)

This Page is Conditionally Shown if: (6 (Reports, Summaries) = Selected)
Reports, Summaries

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_RS_num. Please estimate the number of **Reports/Summaries** you contributed to/prepared in FY18.

7_RS_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Report/Summary**

7_RS_col. Please estimate the average number of colleagues contributing to each **Report/Summary**

(End of Page 20)

This Page is Conditionally Shown if: (6 (Social Media) = Selected)

Social Media

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_smp_num. Please estimate the number of **Social Media Posts** you contributed to/prepared in FY18.

7_smp_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Social Media Post**

7_smp_col. Please estimate the average number of colleagues contributing to each **Social Media Post**

(End of Page 21)

This Page is Conditionally Shown if: (6 (Technical Poster Sessions) = Selected)

Technical Poster Sessions

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_tp_num. Please estimate the number of **Technical Posters** you contributed to/prepared in FY18.

7_tp_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Technical Poster**

7_tp_col. Please estimate the average number of colleagues contributing to each **Technical Poster**

(End of Page 22)

This Page is Conditionally Shown if: (6 (Web-Based Applications) = Selected)

Web-based Applications

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_wba_num. Please estimate the number of **Web-based Applications** you contributed to/prepared in FY18.

7_wba_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Web-based Application**

7_wba_col. Please estimate the average number of colleagues contributing to each **Web-based Application**

(End of Page 23)

This Page is Conditionally Shown if: (6 (Web pages/Web sites) = Selected)
Web pages/Web sites

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_Web_num. Please estimate the number of **Web pages/Web sites** you contributed to/prepared in FY18.

7_Web_hr. Please estimate the average time (in hours) you spent contributing to/preparing each **Web page/Web site**

7_Web_col. Please estimate the average number of colleagues contributing to each item **Web page/Web site**

(End of Page 24)

This Page is Conditionally Shown if: (6 (Other, please specify) = Selected)

Other Communication Materials

Please estimate the following using whole numbers (i.e., 7 communication materials, 23 hours, 3 colleagues).

7_ocm_. Please estimate the number of **Other Communication Materials** you contributed to/prepared in FY18.

7_smp_hr. Please estimate the average time (in hours) you spent contributing to/preparing each item of **Other Communication Material**

7_smp_col. Please estimate the average number of colleagues contributing to each item of **Other Communication Material**

(End of Page 25)

Communication Tasks and Support

These data will be used to identify the current communication work and activities being performed at APHC to ensure that all efforts are considered when defining the Center’s needs and requirements.

Please select the button under yes or no that applies to each task. If you completed the task in FY18, enter whole hours in the box in the right column. If you did not complete the task in FY18, enter "0" in the box in the right column.

10. During FY18, did you perform the following tasks? Please consider only materials that were publicly releasable and intended for audiences outside of APHC.

Task	Yes	No	Average number of hours in a given month
Write and visually represent content and data (create charts, graphs, diagrams, or mathematical/scientific notation)	<input type="checkbox"/>	<input type="checkbox"/>	
Conduct technical review of materials.	<input type="checkbox"/>	<input type="checkbox"/>	
Review and approve materials through the Center Review and Clearance (CRC) application.	<input type="checkbox"/>	<input type="checkbox"/>	
Submit materials to ARIMS (Army Records Information Management System), NARA (National Archives and Records Administration), or DTIC (Defense Technical Information Center).	<input type="checkbox"/>	<input type="checkbox"/>	
Add materials to an internal document library or other repository for routine reuse.	<input type="checkbox"/>	<input type="checkbox"/>	
Review materials for retention, revision, or archiving.	<input type="checkbox"/>	<input type="checkbox"/>	
Retire/remove materials from repositories when they are no longer needed.	<input type="checkbox"/>	<input type="checkbox"/>	
Research/develop communication strategy or communication campaigns.	<input type="checkbox"/>	<input type="checkbox"/>	
Adapt materials or develop new content for specific media channels. (print, Web, social media, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	
Manage content across multiple media channels. (print, Web, social media, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	
Design and/or produce communication media products. (print products, Web pages/sites, social media posts, public service announcements, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	
Task	Yes	No	Average number of hours in a given month
Post, publish, or launch communication material on Web platforms.	<input type="checkbox"/>	<input type="checkbox"/>	
Post, publish, or launch communication material on mobile applications.	<input type="checkbox"/>	<input type="checkbox"/>	

Task	Yes	No	Average number of hours in a given month
Post, publish, or launch communication material on social media outlets.	<input type="checkbox"/>	<input type="checkbox"/>	
Post, publish, or launch communication material for print or electronic PDFs).	<input type="checkbox"/>	<input type="checkbox"/>	
Manage digital media assets (separate graphics, photos, videos, etc.) used in the production or communication media.	<input type="checkbox"/>	<input type="checkbox"/>	
Collect, analyze, and report performance, audience usage data, and social media metrics.	<input type="checkbox"/>	<input type="checkbox"/>	
Manage, organize, and/or analyze dataset(s) used to create public health content.	<input type="checkbox"/>	<input type="checkbox"/>	
Design and format products using graphic design methodologies.	<input type="checkbox"/>	<input type="checkbox"/>	

Communication Tasks and Support

11. Please indicate your level of agreement with the following statements.

Statement	1- Strongly Disagree	2	3	4- Neither Agree nor Disagree	5	6	7- Strongly Agree
Communicating information to audiences outside APHC is critical to my Division's mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Communicating information to external audiences is a priority for my Division.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have the skills to effectively communicate information to the various target audiences we need to reach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have sufficient time to effectively communicate information to audiences outside APHC.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have access to training to improve my Division's ability to communicate information to audiences outside APHC.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing the materials we produce to external audiences is critical to my Division's mission.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Marketing the materials we produce to external audiences is a priority for my Division.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have the skills to effectively market our materials to audiences outside APHC.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have sufficient time to effectively market our materials to audiences outside APHC.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am comfortable using technology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The software available to me is sufficient to create communication materials for audiences outside APHC.

12. I have access to the data I need in order to complete my work.

- 1- Strongly Disagree
- 2
- 3
- 4- Neither Agree nor Disagree
- 5
- 6
- 7- Strongly Agree

This Question is Conditionally Shown if: (12 = 1- Strongly Disagree OR 12 = 2 OR 12 = 3)

13. What data management platforms or features would you like to have access to but are currently unavailable at APHC? Please select all that apply. List specific features in the box.

- To manage data
- To analyze data
- To visualize data
- Other, please specify _____
- Not sure
- None

This Question is Conditionally Shown if: (11 (To manage data) = Selected)

12_manage. What specific features would you like to have access to in order to **manage data**? If you don't know specifics, please type "not sure".

This Question is Conditionally Shown if: (11 (To analyze data) = Selected)

12_analyze. What specific features would you like to have access to in order to **analyze data**? If you don't know specifics, please type "not sure".

This Question is Conditionally Shown if: (11 (To visualize data) = Selected)

12_visualize. What specific features would you like to have access to in order to **visualize data**? If you don't know specifics, please type "not sure".

This Question is Conditionally Shown if: (11 (Other, please specify) = Selected)
12_other. What other specific features would you like to have access to for data
management platforms? If you don't know specifics, please type "not sure".

(End of Page 27)

14. Is there anything you would like to be able to do better with regards to your **Division's** communication to audiences outside APHC?

(End of Page 8)

15. Is there anything you would like to be able to do better with regards to your **Division's** ability to market information and materials to audiences outside APHC?

(End of Page 9)

Communication Processes and Collaboration

16. In FY18, which APHC entities outside your **Division** did you coordinate with when producing communication materials?

- None
- Center Review and Clearance (CRC)
- Foreign Disclosure Office
- Health Communication Science (HCS)
- Human Protections Office
- Lawyer
- Marketing
- Medical Advisor
- Operations Security Program
- Public Affairs Officer (PAO)
- Publication Management (PMD)
- Risk Communication
- Scientific Advisor
- Visual Information and Digital Media (VID)
- Other, please specify _____

This Question is Conditionally Shown if: (16 (Center Review and Clearance (CRC)) = Selected)

17. Is there anything you would like to see changed with the current review/clearance processes?

Answer the following questions about your **Division's** work on communication materials.

18. In FY18, which external entities did your **Division** coordinate with when producing communication materials?

- None
- Other Department of Defense agencies
- Other Federal agencies
- State government agencies
- Local government agencies
- Non-government organizations (e.g., not-for profit, academic)
- Other, please specify _____

19. Is there anything you would like to see changed about your **Division's** current content development processes in the future?

(End of Page 10)

Target Audiences

20. Are there any audiences you would like your **Division** to better be able to reach and/or target content for?

(End of Page 11)

Communication Resources

21. What resources would be needed for your **Division** to optimally communicate findings to its target audiences? (people, software, technology, infrastructure, training, etc.)

(End of Page 12)

Appendix C

Digital First Data Call

APHC's ability to effectively and efficiently communicate findings and health information to its customers is critical to the success of its public health missions. APHC has an opportunity to improve this material, from its development and management through to its effectiveness and reach. The aim of the Digital First Strategic Objective is to develop a digital transformation road map, including recommendations for technology, resourcing and implementation strategies to better meet the needs of APHC personnel and their customers.

Specifically, Digital First seeks to improve our ability to apply data and information to public health challenges by—

1. Increasing access to and versatility of our data and information so we can utilize them efficiently.
2. Improving our understanding of the information needs and communication styles of our target audiences to communicate with them effectively—reaching them how, when, and where they are most receptive to public health information.
3. Improving our ability to communicate technical information to our target audiences.
4. Increasing the reach and speed at which we disseminate information.
5. Defining and justifying the recommended way forward.

The first step in moving towards the development of a digital transformation road map is to determine the current state (baseline) and needs (requirements) of APHC in terms of capabilities, implementation, and resourcing related to managing digital content, cross-channel media, and data. The information collected in this survey, in combination with a data call and series of meetings, will help to define the communication goals and priorities at APHC and what the different Divisions at APHC are currently doing, what their current needs are, and what they would like to be able to do and/or improve in the future. Having a clear picture of these items will ensure that the recommendations generated as part of the road map meets the current and future needs of APHC Divisions as fully as possible.

Please compile answers to the following questions and complete the online form for **each Division** and/or **Office** in the Directorate. You will have the ability to save the form and come back to it at a later time—just be sure to submit the form once complete.

1 Which directorate do you support?

- BUSOPS (Business Operations)
- CPHE (Clinical Public Health & Epidemiology)
- EHSE (Environmental Health Sciences & Engineering)
- HPW (Health Promotion & Wellness)
- LAB (Laboratory Sciences)
- OHS (Occupational Health Sciences)
- OOD (Office of the Director – to include PDM and QSARC)
- PHCOM (Public Health Communication)
- TOX (Toxicology)
- VPHS (Veterinary Services & Public Health Sanitation)

This Question is Conditionally Shown if: (1 = CPHE (Clinical Public Health & Epidemiology))

2_CPHE. What division do you support?

- Army Hearing
- Army Public Health Nursing
- Behavioral and Social Health Outcomes
- Disease Epidemiology
- Environmental Medicine
- Graduate Medical Education
- Injury Prevention
- Occupational Medicine
- Surety Medicine
- Vision Conservation and Readiness
- Other

This Question is Conditionally Shown if: (1 = EHSE (Environmental Health Sciences & Engineering))

2_EHSE. What division do you support?

- TSDR Liaison
- Entomological Sciences
- Environmental Health Engineering
- Environmental Health Risk Assessment
- Environmental Health Sciences
- Other

This Question is Conditionally Shown if: (1 = HPW (Health Promotion & Wellness))

2_HPW. What division do you support?

- Army Wellness Centers Operations
- Health Education & Application
- Health Promotion Operation

- Public Health Assessment
- Other

This Question is Conditionally Shown if: (1 = LAB (Laboratory Sciences))

2_LAB. What division do you support?

- Analytical Division – Inorganic
- Analytical Division – Organic
- Biosurveillance
- Client Services
- Environmental Health
- Industrial Hygiene
- Laboratory Manager
- Operations
- Other

This Question is Conditionally Shown if: (1 = OHS (Occupational Health Sciences))

2_OHS. What division do you support?

- Health Hazard Assessment
- Health Physics
- Industrial Hygiene Field Services
- Industrial Hygiene Program Management
- Nonionizing Radiation
- Other

This Question is Conditionally Shown if: (1 = OOD (Office of the Director))

2_OOD. What division/office do you support?

- Advisors
- Product Management
- Quality Systems & Regulatory Compliance
- Soldier Readiness Element
- Other

This Question is Conditionally Shown if: (1 = PHCOM (Public Health Communication))

2_PHCOM. What division do you support?

- Health Communication Science
- Health Risk Communication
- Public Affairs & Marketing
- Public Health Preparedness & Response
- Publication Management
- Visual Information & Digital Media
- Other

This Question is Conditionally Shown if: (1 = TOX (Toxicology))

2_TOX. What division do you support?

- Health Effects Research
- Toxicity Evaluation
- Toxicologic Pathology
- Other

This Question is Conditionally Shown if: (1 = VPHPS (Veterinary Services & Public Health Sanitation))

2_VPHPS. What division do you support?

- Food Protection & Public Health Sanitation

- Global Veterinary Medical Practice
- One Health
- VET Metrics
- Veterinary One Health (Animal Health)
- Other

3. Which of the following audiences need and/or would benefit from knowing about the findings generated by your Division? For what purpose(s) do you communicate with these audiences? Select all that apply.

Audience	Purpose for communicating with these audiences							
	Health Education	Provider Education	Influence Policy	Influence SOP Development	Inform Priorities	Contribute to Academic Literature	Inform Funding Decisions	Other, please specify
<input type="checkbox"/> General Soldier Population	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> NCOs	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Officers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Medical Providers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Other Public Health Professionals within DOD	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Other Public Health Professionals within the Federal Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Other Public Health Professionals outside the Government	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<input type="checkbox"/> Other, please specify _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
-								

4. Prioritization based on importance (on a scale of 1-8 with 1 being most importance).

<input type="checkbox"/> General Soldier Population
<input type="checkbox"/> NCOs
<input type="checkbox"/> Officers
<input type="checkbox"/> Medical Providers
<input type="checkbox"/> Other Public Health Professionals within DOD
<input type="checkbox"/> Other Public Health Professionals within the Federal Government
<input type="checkbox"/> Other Public Health Professionals outside the Government
<input type="checkbox"/> Other, please specify _____

5. Does your Division collect data about audience characteristics (context, trust, capacity, perception and motivation) to support decisions about appropriate communication channels and messaging to use?

- Never
- Rarely
- Occasionally
- Sometimes
- Often
- Very Often

6. In FY18, did you obtain feedback from your target audience regarding the effectiveness of your communication materials?

- No
- Yes, how so? _____

7. In your opinion, what is preventing your Division from collecting these data?

8. What organizations does your Division/Office use as a role model for what you would like to achieve in your communication goals? Select all that apply.

- None
- CDC
- EPA
- Other DOD organizations please specify _____
- Other, please specify _____

This Question is Conditionally Shown if: (8 (CDC) = Selected)

9. How does your Division use the **CDC** as a benchmark for its communication materials? Select all that apply.

- Measure effectiveness or quality
- Ability to reach target audiences
- Speed at which they disseminate new/updated information
- Methods used to manage customer relations
- Other, please specify _____

This Question is Conditionally Shown if: (8 (EPA) = Selected)

9. How does your Division use the **EPA** as a benchmark for its communication materials? Select all that apply.

- Measure effectiveness or quality
- Ability to reach target audiences
- Speed at which they disseminate new/updated information
- Methods used to manage customer relations
- Other, please specify _____

This Question is Conditionally Shown if: (8 (Other DoD, please specify) = Selected)

9. How does your Division use the **Other DOD** as a benchmark for its communication materials? Select all that apply.

- Measure the effectiveness or quality

- Ability to reach target audiences
- Speed with which they communicate with target audiences
- Other, please specify _____

This Question is Conditionally Shown if: (8 (Other, please specify) = Selected)

9. How does your Division use the **Other** as a benchmark for its communication materials?

Select all that apply.

- Measure the effectiveness or quality
- Ability to reach target audiences
- Speed with which they communicate with target audiences
- Other, please specify _____

10. What **process/performance metrics** does your Division use to evaluate its communication efforts?

- Customer feedback
- Document downloads
- HIP eCatalog order statistics
- Product/service request statistics
- Social media metrics
- Web site metrics
- Clear Communication Index
- Usability Heuristics
- Other _____
- None

a. [Conditional if respondent chooses anything but None] How do you use the communication metrics you collect?

- Evaluate how many people requested or received the product. (Example number of email subscribers, number of downloads, request for information, etc.)
- Evaluate how audiences use content. (Example: If they are using the product for general awareness or if the product is used to inform a mission critical task. Do audience read the whole product or scan a small section?)
- Evaluate a change in knowledge, attitudes, beliefs, and/or behavior change. (Example: Conduct a formal or informal evaluation of the product.)
- Evaluate media reach and audience engagement and make improvements to content, products, or communication strategy based on findings.
- Other _____

Databases:

11. For what purpose(s) does your Division access data?

- Healthcare encounters
- Surveillance (e.g., Environmental, Disease, etc.)
- Personnel (Including operations)
- Forecasting/Projections
- Other _____

12. What APHC databases does your Division use to access/manage data?

- DOEHRs
- Army Behavioral Health Integrated Data Environment (ABHIDE)
- General Fund Enterprise Business System (GFEBS)
- SQL®
- MS Access®
- ROVR
- Other _____
- None

13. What databases from outside APHC does your Division use to access/manage data?

- Military Health System Data Repository (MDR)
- Interactive Personnel Electronic Records Management System (iPERM)
- Defense Medical Surveillance System (DMSS)
- Defense Manpower Data Center (DMDC)
- MHS GENESIS®
- Defense Technical Information Center (DTIC)
- Other _____
- None

14. What data storage solutions are needed but are currently unavailable to your Division?

- SQL
- SAP
- Other _____
- None

15. How does your Division share data with other entities within and/or outside APHC?

- Network file system (e.g., S: drive)
- SharePoint
- Email attachments
- Shared database system
- AMRDEC SAFE file exchange
- Other _____

16. What data management platforms and software does your Division use to access, manage, and analyze data?

- SMS
- SAP Business Objects
- Tableau
- Excel
- Access
- Visio
- SPSS
- SAS
- Python
- R
- Nvivo

- Verint
- Other _____
- None

17. Are there any data management platforms and software that having access to would improve your Division's data capabilities? Please specify _____

18. What **software and other technology** does your Division use to create communication materials?

- Microsoft Office Suite®
- Adobe PDF
- Other Adobe products
- SharePoint
- Visio
- SMS
- Tableau
- Other _____
- None

19. Are there any software and other technology that having access to would improve your Division's communication capabilities?
Please specify _____

20. Are there any **standing operating procedures (SOPs)** that guide and/or document your communication activities/processes? Y/N:
Please specify _____

21. What **policy and/or official guidance** govern your public health field and influence your external communication strategies, tools/channels, and data management platforms/databases?

- a. DOD, Army, and APHC policies, federal laws, and other guidance? Please specify _____
- b. Approved software and governance? Please specify _____
- c. Policies for external organizations that create opportunities or constraints? Please specify _____
- d. Other _____

22. Select the FY18 **WBS elements** that were used to capture time spent supporting the development and management of content intended for audiences outside APHC. Select all that apply.

For those WBS elements that were selected, please indicate the estimated percentage of time charged to that element that directly supports content development or management.

WBS Element and Description			26-50% of time charged to this WBS directly supports content development or management	51-75% of time charged to this WBS directly supports content development or management	>75% of time charged to this WBS directly supports content development or management
Sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Sample	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix D

APHC Stakeholder Meeting Guides

APHC Director Meetings—Facilitator Guide

Introduction

Hello, my name is [FACILTATOR NAME] and these are my colleagues, [NOTE TAKERS and CO-FACILITATORS NAMES]. We are members of the Digital First Strategic Objective team. At APHC we are developing a roadmap for implementing a Digital First strategy for our content, data, and communication activities. The purpose of this effort is to improve APHC's ability to apply data and information to public health challenges. Specifically we hope to—

1. **Increase access to and versatility of our data and information** in order to utilize them efficiently.
2. **Improve our ability to communicate technical information** to our target audiences.
3. **Improve our understanding of information needs and communication styles** of our target audiences in order to reach them where and when they are most receptive.
4. **Increase the reach and speed** at which we disseminate information.
5. **Define and justify the recommended way forward.**

We were able to collect quite a bit of information about your Directorate's communication and data management practices via the data call tasker and survey. The purpose of this meeting is to allow us to get more detailed information and to clarify what found via our other efforts. Today, we would like to talk to you about your vision for communicating with target audiences/customers and the resources you need to accomplish that vision.

We would like to record our discussion today. The recording will allow us to ensure that we capture your input accurately and to transcribe quotes that will be helpful in informing the implementation of our Digital First strategy.

Are you OK with us recording our conversation?

Do you have any questions before we begin?

[START RECORDERS – State and Write Date, Time and Directorate]

***If Director objects to being recorded, but consents to the discussion, just take notes.**

1. Can you describe your Directorate's external communication goals?
Probe: What would you say are the top priorities for your Directorate?
2. Are you experiencing any issues with implementing your external communication strategy?
3. What are other organizations doing with their external communication and/or marketing that you wish you could be doing?
4. What external communication and/or marketing needs do you foresee in the future?
Probe: What audiences do you think we'll need to reach in the future?
5. Are there any individuals in your Directorate that we should talk to about communication efforts, content management, data access, and/or data management?

Thank you very much for your time and input. We are working to meet with as many APHC folks as possible as we define the Center's Digital First requirements and come up with recommendations for the future.

[STOP RECORDERS]

APHC Division and Branch Chief Meetings—Facilitator Guide

Introduction

Hello, my name is [FACILTATOR NAME] and these are my colleagues, [NOTE TAKERS and CO-FACILITATORS NAMES]. We are members of the Digital First Strategic Objective team. At APHC we are developing a roadmap for implementing a Digital First strategy for our content, data, and communication activities. The purpose of this effort is to improve APHC's ability to apply data and information to public health challenges. Specifically we hope to:

1. **Increase access to and versatility of our data and information** in order to utilize them efficiently.
2. **Improve our ability to communicate technical information** to our target audiences.
3. **Improve our understanding of information needs and communication styles** of our target audiences in order to reach them where and when they are most receptive.
4. **Increase the reach and speed** at which we disseminate information.
5. **Define and justify the recommended way forward.**

We were able to collect quite a bit of information about your Directorate's communication and data management practices via the data call tasker and survey. The purpose of this meeting is to allow us to get more detailed information and to clarify what found via our other efforts.

Today, we would like to talk to you about your vision for communicating with target audiences/customers and the resources you need to accomplish that vision. For today's meeting, we are focusing on UNCLASSIFIED public health mission-related information (content, data, and products/materials) intended for external audiences (e.g., target audiences and customers outside of APHC).

We would like to record our discussion today. The recording will allow us to ensure that we capture your input accurately and to transcribe quotes that will be helpful in informing the implementation of our Digital First strategy. Are you OK with us recording our conversation? Do you have any questions before we begin?

**[Diagram Table to identify participants and Division/Branch]
[START RECORDERS—State and Write Date, Time and Directorate]**

***If Chief objects to being recorded, but consents to the discussion, just take notes.**

Communication Strategy

[Pull the list of content types from this Division's data call/survey responses.]

1. Please describe your strategy regarding Web content?

Probe: Does your Division do any work on the Web site?

 - a. What planning and review are involved in these efforts?
2. Please describe your strategy regarding social media content?

Probe: Does your Division work with PHCOM to get social media messaging out on any topics or efforts?

b. What planning and review are involved in these efforts?

3. Please describe your strategy regarding print content (including PDFs, Microsoft Office documents, etc.)?

Probe: How often does your division produce these types of print materials?

a. What planning and review are involved in these efforts?

[Pull the list of audiences from this Division's data call responses.]

4. In your experience, how do these external audiences prefer to receive their information?
[Allow for un-prompted responses. Use examples below if respondents seem stuck, or if you need to clarify a response.]

- Web
- print
- mobile apps
- social media

a. Are there any specific materials that you have found to be effective with certain audiences?

b. How do you gauge effectiveness?

5. What are other organizations doing with their communication and/or marketing that you wish you could be doing for your Division's products/work?

Content Management

6. Does your Division use any content management systems? These include document libraries, SharePoint collaboration and public sites, extranet pages, milSuite/AKO pages where documents or other content are stored and managed.

7. If so, what system(s) do you use?

8. Does your Division have a system or repository for images, videos, or audio files?

9. If so, how do you manage them?

10. Do you collect usage data on Web sites or applications? These can include Web logs, search logs, downloads, Google Analytics.

11. If so, how do you manage them?

12. Do any of the systems or repositories you've told us about share information, auto populate content, or serve as a dashboard that automatically updates when the data source is updated.
13. If so, which ones?
14. How do these systems/repositories work together?
15. Does your Division use the same content across multiple channels (Web, social media, print, apps, etc.)?
16. If yes, how do you manage it and keep things up to date?
 - a. When you update one medium, do you update all?

Data Management

Now we would like to discuss how your Division uses data.

1. Does your Division generate/collect its own data? If so, what methods and tools do you use to generate/collect data?
2. Does your Division access data from external sources?
 - c. Which external sources do these data come from?
 - d. What channels do you use to access these data?
3. How would you describe your Division's/Branch's access to needed data?
[Look at Data Call responses]
 - a. Are you able to access the data you need?
 - b. Are you able to access needed data in a timely manner?
 - c. How easy or difficult is the process to gain access to needed data?
 - d. How would you like to change the process for data access?
4. How would you describe your Divisions'/Branch's ability to share data with others, both internal to APHC and externally?

[Look at Data Call responses]

Probe: How do you typically share data with others?

Probe: What's working well?

Probe: Do you have any suggestions for ways to improve data sharing?

5. What are the processes or steps that take place before you analyze data or use it in products for external audiences (e.g., PHRB, QC, data scrubbing)?

Closing:

6. Are there any other individuals in your Directorate that we should talk to about communication efforts, content management, data access and/or data management?

Internal Communities of Practice Meeting

Facilitator Guide

Introduction

Hello, my name is [FACILTATOR NAME] and these are my colleagues, [NOTE TAKERS and CO-FACILITATORS NAMES]. We are members of the Digital First Strategic Objective team. At APHC we are developing a roadmap for implementing a Digital First strategy for our content, data, and communication activities. The purpose of this effort is to improve APHC's ability to apply data and information to public health challenges. Specifically we hope to—

1. Increase access to and versatility of our data and information in order to utilize them efficiently.
2. Improve our ability to communicate technical information to our target audiences.
3. Improve our understanding of information needs and communication styles of our target audiences in order to reach them where and when they are most receptive.
4. Increase the reach and speed at which we disseminate information.
5. Define and justify the recommended way forward.

Today, we would like to talk to you about the processes and steps you take when managing data and developing content and media. We would like to record our discussion today. The recording will allow us to ensure that we capture your input accurately and to transcribe quotes that will be helpful in informing the implementation of our Digital First strategy. Are you OK with us recording our conversation? Do you have any questions before we begin?

[Diagram Table to identify participants and Division/Branch]

[START RECORDERS – State and Write Date, Time and Directorate]

***If individuals objects to being recorded, but consents to the discussion, just take notes.**

General

1. What are other organizations doing with their communication and marketing that you wish you could be doing for your products/work?

Data Management

Now we would like to discuss how your Division uses data.

2. Does your Division generate/collect its own data? If so, what methods and tools do you use to generate/collect data?
3. Does your Division access data from external sources?
 - a. Which external sources do these data come from?
 - b. What channels do you use to access these data?
4. How would you describe your Division's/Branch's access to needed data? **[Look at Data Call responses]**
 - a. Are you able to access the data you need?
 - b. Are you able to access needed data in a timely manner?
 - c. How easy or difficult is the process to gain access to needed data?
 - d. How would you like to change the process for data access?
5. How would you describe your Divisions'/Branch's ability to share data with others, both internal to APHC and externally?

[Look at Data Call responses] Probe: How do you typically share data with others?

Probe: What's working well?

Probe: Do you have any suggestions for ways to improve data sharing?

6. Of the data sources indicated by your Division in the data call, which do you work on?
7. What are the pros and cons of those data sources?
 - a. Data access, untapped potential, limitations, and strengths/weaknesses of data themselves?
 - b. What are the capabilities/functionalities of those platforms?
 - c. As a content developer, what do you view as the pros of using this platform? What about the cons? As a user, what do you view as the pros of using this platform? What about the cons?

[Look at Data Call responses] Probe: How do you typically share data with others?

Probe: What's working well?

Probe: Do you have any suggestions for ways to improve data sharing?

8. What are the processes or steps that take place before you analyze data or use it in products for external audiences (e.g. PHRB, QC, data scrubbing)?

Processes Related to the Media Lifecycle
[Look at Data Call to tailor questions]

Could you provide process-related information about the media channels you use to communicate with external customers?

9. What media channels does your Division/Branch use?
- Probe: Examples of media channels: Broadcast, Chat, Direct Mail, Email, Messaging, Mobile, Print, Social, Web, Removable Media (CD, DVD, USB devices)
 Probe: Which channels would you be able to answer questions about?
10. Describe your Division/Branch's approach or process to the lifecycle of your communication materials?
- Probe: Which methods or standards does your Division/Branch use for this process?
11. What performance and quality measures does your Division use to monitor this media channel?
12. What knowledge, skills or abilities help you to work on this media throughout its lifecycle?
13. Do you estimate cost per unit? If so, what is your average cost per unit?
14. Can you describe the lifecycle of this media channel? Examples of media lifecycle stages: Content/Media Integration (develop communication strategy; adapt, update, and manage content across multiple media channels), Media Development (design, develop and produce media), Media Publishing (distribute content via media channels), Digital Asset Management (manage assets used in digital media development), Digital Analytics (collect, analyze, and report media performance and audience usage data), etc.
- What order do your stages follow? What stages, if any, run concurrently?
 - What inputs are required? In what formats?
 - Who (job function) or what (system) provides input?
 - What outputs are required? In what formats?
 - Who (job function) or what (system) receives output?
 - What is the typical cycle time for each stage?
 - What bottlenecks do you encounter?
 - What software tools are used? What are the advantages and disadvantages of using this software?

Processes Related to the Content Lifecycle
[Look at Data Call to tailor questions]

15. What content types does your Division/Branch produce? Examples of content types: Applications (mobile or Web-based); Briefing Materials; Public Service Announcements; eBooks; Fact Sheets, Brochures; Guides, Pamphlets, Manuals, Book Chapters; Instructional Materials; Manuscripts, Journal Articles; Marketing Exhibits; Marketing Print Materials; Multimedia, Animation, and Video; Newsletters, Periodicals; Reports, Summaries; Technical Poster Sessions.

16. Could you provide information about the lifecycle of the major content types you use to communicate with external customers?

Probe: Note: Several content types may share a similar lifecycle. Could you provide information about a single representative from each distinct content type lifecycle?

17. Do you apply any industry standards or methodology during the lifecycle of this content type?

Probe: If so, what standards or methodology do you apply?

18. What performance and quality measures do you apply to this content type?

19. What knowledge, skills or abilities help you to work on this media throughout its lifecycle?

20. Do you estimate cost per unit? If so, what is your average cost per unit?

21. Can you describe the process involved in the lifecycle of this content type?

Probe: Examples of content lifecycle stages: Content Development (write, edit and illustrate content); Review and Clearance (review content for technical integrity, clearance, and distribution); Records Management (archive and manage regulated materials); Content Publishing (publish content for routine use in media development); Periodic Review (review subject matter for retention, revision, archiving or destruction); Archive/Remove (archive or destroy content no longer needed); etc.

- a. What order do your stages follow? What stages, if any, run in parallel?
- b. What inputs are required? In what formats?
- c. Who (job function) or what (system) provides input?
- d. What outputs are required? In what formats?
- e. Who (job function) or what (system) receives output?
- f. What is the typical cycle time for each stage?
- g. What bottlenecks do you encounter?
- h. What software tools are used? What are the advantages and disadvantages of using this software?
 - 1) What technology (software and systems) are used during this process?
 - 2) What inputs and outputs are required?
 - 3) What deliverables are generated? In what file formats?
 - 4) What technological advances are associated with this process?

Closing:

Lastly, we'd like to hear any other thoughts you have based on this conversation or your experience with Digital First.

22. What communication and marketing needs do you foresee in the future?

Probe: What audiences do you think we'll need to reach in the future?

Thank you for sharing your ideas and experiences with us! All the information you shared today will help us as we design the roadmap for our way ahead with Digital First!

Appendix E

External Agency Meeting Guides

External Partner: Communication Meeting Guide

Identify who is on the line/in the room.

Introduction

Hello, my name is [FACILTATOR NAME] and these are my colleagues, [NOTE TAKERS and CO-FACILITATORS NAMES]. We are members of the Digital First Strategic Objective team at the U.S. Army Public Health Center (APHC) at Aberdeen Proving Ground in Maryland. At APHC we are developing a roadmap for implementing a Digital First, or Digital Transformation, strategy for our content, data, and communication activities. The purpose of this effort is to improve APHC's ability to apply data and information to public health challenges.

Today, we would like to talk to you about your experiences and lessons learned during your Digital Transformation. The information you provide during this meeting will help us identify best practices and standards for our own transformation.

We would like to confirm that you agree to participate in this discussion. Do you agree to participate? We would like to record our discussion today. The recording will allow us to ensure that we capture your experiences accurately and to transcribe helpful quotes. We may reference your organization as a benchmark against which to measure our success; however, we will not be evaluating your processes or outcomes. Are you OK with us recording our conversation? Do you have any questions before we begin? This is our first meeting using this set of questions, so please let us know if you have any feedback!

[START RECORDERS – State and Write Date, Time and Organization]

***If organization objects to being recorded but consents to the discussion, then just take notes.**

Mission, Goals, and Resourcing

Since this meeting is taking place via TCON, we ask that you please identify yourself before providing input?

First, we'd like to learn a little about your organization.

1. Can you tell us about your mission? [If not available from Web site]
 - a. Is there a specific vision that you have for your organization's communication efforts?
2. What are your organization's communication goals with regards to external customers?

We are working to identify and meet with a number of organizations that have been successful in implementing a digital strategy.

3. Are there any organizations with similar communication goals that you believe are doing a good job at meeting those goals? Which organizations?

Now, we'd like to know about the resources your organization uses to reach your communication goals.

4. What is the make-up of your communication staff?

Probe: Is there an organizational chart with job titles that you could share with us?

Probe: What educational backgrounds or credentials do you find valuable to your communication personnel?

Probe: What credentials do you like for your communication personnel to have?

Probe: Are there personnel whose time is solely dedicated to completing communication tasks?

Probe: Are there any executive level, management, or planning positions that you find critical to the success of your digital strategy?

5. Can you tell us about your communication budget?

Probe: Is your budget broken out by personnel, software, materials, or contracts?

Probe: Is there a budget report that you would be willing to share with us?

Probe: What services do you typically contract out? What are the benefits or drawbacks of doing so?

Probe: Do you perceive the budget to be sufficient to support your communication goals?

Probe: What additional resources, if any, would be needed to reach your goals? (people, software, technology, infrastructure, training, etc.)

Communication Strategies and Practices

Next, we'd like to learn about your organization's communication strategies, audiences, and what you've found to be most successful for getting your information out to your audiences.

6. What strategies do you have for developing and disseminating content to your external audiences?

Probe: What is your strategy regarding Web content?

Probe: What is your strategy regarding social media content?

Probe: What is your strategy regarding print content?

7. Are these strategies based on any models or frameworks?
8. How would you categorize the types of communication materials your organization produces for broad dissemination to its audiences? These are the products that you consistently use to get your information out, things that you produce on a regular basis.

[Allow for un-prompted responses. Use examples below if respondents seem stuck, or if you need to clarify a response.]

- Briefing Materials
- Broadcast Media (Public Service Announcements, etc.)
- eBooks
- Email Communication Campaigns
- Fact Sheets, Brochures
- Guides, Pamphlets, Manuals, Book Chapters
- Instructional Materials
- Manuscripts, Journal Articles
- Marketing Exhibits
- Marketing Print Materials
- Mobile Applications
- Multimedia, Animation, and Video
- Newsletters, Periodicals
- Removable Media (CD, DVD, etc.)
- Reports, Summaries
- Social Media
- Technical Poster Sessions
- Web-Based Applications
- Web pages/Web sites

9. What are the primary audiences your organization works to reach?

[For each audience they list, ask them if that audience is considered a high, medium, or low priority.]

Probe: Are there any specific age groups, sex, or other characteristics that you use to segment this audience?

[Ask the following questions for each audience identified.]

10. What is the purpose for communicating with this audience? What are you trying to achieve through your communication with them? **[Allow for un-prompted responses. Use examples below if respondents seem stuck, or if you need to clarify a response.]**

- informational/educational
- marketing/awareness
- customer support
- decision support

11. What data does your organization collect about this audience's characteristics to support decisions about appropriate communication channels and messaging to use?

Probe: What types of data do you collect? **[Allow for un-prompted responses. Use examples below if respondents seem stuck, or if you need to clarify a response.]**

- knowledge, attitudes, beliefs (KAB)
- motivations
- preferences

Probe: How often do you collect these types of data? Do you collect them before campaign or material development, during implementation, or afterwards?

12. In your experience, how does this audience prefer to receive their information? **[Allow for un-prompted responses. Use examples below if respondents seem stuck, or if you need to clarify a response.]**

- Web
- print
- mobile apps

Probe: Are there any specific materials that you have found to be effective?

13. What feedback does your organization obtain from this audience regarding the effectiveness of your communication materials?

a. If none, then in your opinion, what is preventing collection of these data?

Probe: How do you go about collecting this feedback?

Probe: How do you use this feedback with regards to your communication strategy, approach, and materials?

14. What software and other technology does your organization use to create communication materials? **[Allow for un-prompted responses. Use examples below if respondents seem stuck, or if you need to clarify a response.]**

- Microsoft Office Suite
- Adobe PDF
- Other Adobe products
- SharePoint
- Visio
- SMS
- Tableau

Probe: Can you give examples of the product types you use this software for?

Probe: What are the advantages and disadvantages of these software?

Closing:

As we plan ahead with our digital transformation, we want to set realistic expectations for what to expect!

15. Can you briefly describe your digital transformation journey?

Probe: How long did it take you to get to this place in your digital transformation?

Probe: What steps would you recommend to someone starting this journey?

16. What were the top three lessons learned from your digital transformation efforts?

17. Do you have any additional information you think would be helpful to another organization looking to develop and implement a Digital First Strategy?

18. Is there anyone else it would be helpful to talk to about communication best practices at your organization?

19. Where do you see the future of communication goals, target audiences, and content development/dissemination practices and needs for the industry?

20. Do you have any questions for us?

Thank you for sharing your ideas and experiences with us! All the information you shared today will help us as we implement a Digital First strategy for our content, data, and communication activities! Please feel free to contact us with any additional questions or input at a later date...if you're amenable, we may also reach out to you for some follow-up.

[STOP RECORDERS]

**External Partner: Communication Media and Content Management
Meeting Guide**

Identify who is on the line/in the room

Introduction

Hello, my name is [FACILTATOR NAME] and these are my colleagues, [NOTE TAKERS and CO-FACILITATORS NAMES]. We are members of the Digital First Strategic Objective team at the U.S. Army Public Health Center (APHC) at Aberdeen Proving Ground in Maryland. At APHC we are developing a roadmap for implementing a Digital First, or Digital Transformation, strategy for our content, data, and communication activities. The purpose of this effort is to improve APHC's ability to apply data and information to public health challenges.

Today, we would like to talk to you about your experiences and lessons learned during your Digital Transformation. The information you provide during this meeting will help us identify best practices and standards for our own transformation.

We would like to confirm that you agree to participate in this discussion. Do you agree to participate? We would like to record our discussion today. The recording will allow us to ensure that we capture your experiences accurately and to transcribe helpful quotes. We may reference your organization as a benchmark against which to measure our success; however, we will not be evaluating your processes or outcomes. Are you OK with us recording our conversation? Do you have any questions before we begin?

This is our first meeting using this set of questions, so please let us know if you have any feedback!

[START RECORDERS – State and Write Date, Time and Organization]

***If organization objects to being recorded but consents to the discussion, just take notes.**

Supporting IT Systems

First I'd like to discuss the IT systems that support your agency's digital communication strategy regarding external customers.

There are a few terms I want to define so we share the same meaning when we discuss them.

- **Audio-visual media** include files such as photos (JPG), audio (MP3), video (MP4), and graphics (PNG).
- **Content** is information about a topic. It consists of text but may also contain audio-visual media.
- **Managing data and content** includes organizing, storing, retrieving and using data and content.
- **Media channels** are methods used to distribute content to external customers. They include Broadcast, Chat, Direct Mail, Email, Messaging, Mobile, Print, Social, Web, Removable Media (CD, DVD, USB devices).
- **Mobile media** are mobile applications that are installed on a mobile device. They may connect to an external data source but do not require that connection to function. These applications are usually distributed through commercial and/or non-commercial mobile app stores.
- **Platforms** are multi-purpose computer software upon which other applications are built, applications often include Web sites, Web applications, and mobile applications.
- **Software** usually serves a single or related set of functions.
- **Systems** include software and platforms.
- **Web media** are Web sites, including mobile-friendly Web sites, and Web-based applications.
- If at any time during our discussion the meaning of any term or concept is unclear, please stop me, and I will be happy to clarify.

1. What is your strategy for creating and managing content?
 - a. What systems does your agency use for managing content? These systems are often called content management systems. By manage, I mean you are able to store, search, and deliver content intended for one or more media channels. Examples include SharePoint, WordPress®, Adobe Experience Manager, and Sitecore®. They also include any proprietary systems your agency may have built especially for this purpose.
 - b. How does this system fit into your strategy?
 - c. Does this system share data or information with other systems? If so, how?

If interviewee does not have an answer, ask if we could follow-up to obtain the information.

2. What is your strategy for managing customer data?
 - a. What systems does your agency use for managing customer data? These systems are often called customer relationship management systems. Examples include: Customer

feedback/survey data bases and Sales Force software. They also include any proprietary systems your agency may have built especially for this purpose.

- b. How does this system fit into that strategy?
- c. Does this system share data or information with other systems? If so, how?

If interviewee does not have an answer ask if we could follow-up to obtain the information.

3. What is your strategy for managing digital audio-visual files used in communication content?
 - a. What systems does your agency use for managing digital audio-visual files used in communication content? These systems are often called digital asset management systems. Examples include Brandfolder®, MediaValet™, and Bynder. Digital Asset Management [DAM] may also be built in to a platform such as Adobe Experience Manager. They also include any proprietary systems your agency may have built especially for this purpose.
 - b. How does this system fit into that strategy?
 - c. Does this system share data or information with other systems? If so, how?

If interviewee does not have an answer ask if we could follow-up to obtain the information.

4. What is your strategy for analyzing media channel usage?
 - a. What systems does your agency use to analyze media channel usage? These systems are often called digital analytics systems. Examples include Weblogs, search logs, Google Analytics, Adobe Analytics, and Facebook Insights and Instagram Insights. They also include any proprietary systems your agency may have built especially for this purpose.
 - b. How does this system fit into that strategy?
 - c. Does this system share data or information with other systems? If so, how?

If interviewee does not have an answer ask if we could follow-up to obtain the information.

5. Does your agency use other software to manage communication with external customers that I have not mentioned?
 - a. What is the purpose of this system?
 - b. What is your strategy for (the purpose of this system)?
 - c. How does this system fit into that strategy?
 - d. Does this system share data or information with other systems? If so, how?

If interviewee does not have an answer ask if we could follow-up to obtain the information.

Information about Communication Media Lifecycles

Now, we'll discuss the processes involved in the lifecycles of communication media your agency uses to communicate with external customers. We'll start with the media channels you've found to be most successful.

Use responses from Communication interview if available.

6. What media channels does your agency use? Examples include: Broadcast, Chat, Direct Mail, Email, Messaging, Mobile, Print, Social, Web, Removable Media (CD, DVD, USB devices).

Ask the following for each media channel identified:

7. Have you formalized guidelines for managing the lifecycle of this media channel? An example of formal guidelines is an SOP document.
 - a. If so, would you be willing and able to share those guidelines with us at a later time?
8. Do you apply industry standards, models or methodologies during the lifecycle of this media channel? If so which standards do you use? Examples include human-centered design principles, user research, Agile® or Waterfall® development methods.
9. What system performance and media usage metrics do you use to monitor this media channel?
10. What knowledge, skills and abilities are useful for personnel engaged in the lifecycle of this media channel?
11. Do you estimate cost per unit for this media channel?
 - a. If so, would you be able to provide that information at a later time.
12. Do you estimate cycle times for stages in the lifecycle of this media channel?
 - a. If so, would you be able to provide that information at a later time.

Process Stages

13. Now, I would like to learn a little about the lifecycle of this media channel. If this information is covered in the formal guidelines you offered to share with us, we'll move on. (Skip to Policy section)

I'll list a series of typical lifecycle stages and I'd like you to tell me if your agency shares similar or different lifecycle stages for this media channel. For each stage I'd like to know the following:

- a. Title or brief description
- b. The name of the job function or system that provides input? The input format?

- c. The name of the job function or system that receives output? The output format?
 - d. What issues/pain points do you encounter during this stage?
14. Develop a communication strategy.
 15. Write, edit, and illustrate content.
 16. Review content for subject matter integrity and public release.
 17. Publish/disseminate content for use in media development.
 18. Conduct Records Management duties (if applicable).
 19. Periodic review of subject matter for retention or revision.
 20. Remove obsolete content from circulation.
 21. Adapt content to selected media channels.
 22. Design and produce communication media.
 23. Manage audio-visual files used in digital media development.
 24. Publish/Distribute content via media channels.
 25. Collect, analyze, and report communication media usage and performance data.

Policy and Procedure Documentation

26. Are there any federal or agency policies that influence how you communicate with external customers?

For each policy identified, ask the following:

- a. What are the policy names?
- b. What type of policy are they? Federal, agency, SOP, or other?
- c. What do the policies govern?
- d. Would you be willing to share any of these documents with us?

Closing:

Lastly, we'd like to hear any other thoughts you have based on this conversation or your experience with content and media management.

27. Do you have any additional information you think would be helpful to another organization looking to develop and implement content and media management strategies like yours?

28. Do you have any questions for us?

Thank you for sharing your ideas and experiences with us! All the information you shared today will help us as we implement a Digital First strategy for our content, data, and communication activities!
[STOP RECORDERS]

External Partner: Data Meeting Guide

Identify who is on the line/in the room.

Introduction

Hello, my name is [FACILTATOR NAME] and these are my colleagues, [NOTE TAKERS and CO-FACILITATORS NAMES]. We are members of the Digital First Strategic Objective team at the U.S. Army Public Health Center (APHC) at Aberdeen Proving Ground in Maryland. At APHC we are developing a roadmap for implementing a Digital First, or Digital Transformation, strategy for our content, data, and communication activities. The purpose of this effort is to improve APHC's ability to apply data and information to public health challenges.

Today, we would like to talk to you about your experiences and lessons learned during your Digital Transformation. The information you provide during this meeting will help us identify best practices and standards for our own transformation.

We would like to confirm that you agree to participate in this discussion. Do you agree to participate? We would like to record our discussion today. The recording will allow us to ensure that we capture your experiences accurately and to transcribe helpful quotes. We may reference your organization as a benchmark against which to measure our success; however, we will not be evaluating your processes or outcomes. Are you OK with us recording our conversation? Do you have any questions before we begin? This is our first meeting using this set of questions, so please let us know if you have any feedback!

[START RECORDERS – State and Write Date, Time and Organization]

***If organization objects to being recorded, but consents to the discussion, just take notes.**

First we would like to learn a little about you and your role at [organization].

Probe: What is your role?

Probe: What are your responsibilities?

Probe: What is your role?

Probe: What are your responsibilities?

Data Management

This first set of questions will cover your data needs and the systems and software you use to manage data. Now we're going to talk about how your organization use data.

1. Does your organization generate its own data?

If so, what tools (such as software/hardware deployment strategies) do you use to generate and collect data?

Probe: Do you conduct surveys? Scientific analysis? Literature reviews?

2. Does your organization access data from external sources?

If so, where do these data come from? What channels do you use to access these data?

3. How would you describe your access to data that you do not directly manage?

Probe: Do you have sufficient access to the data/databases you need to complete your mission?

Probe: Are you able to access data in a timely manner?

Probe: How easy is it to access data?

Probe: Is there anything you can think of that would improve your access to data?

4. Which data management platforms and software do you use?

Probe: Do you use a consistent database platform?

Probe: Is it cloud-based and remotely accessed?

[Allow for un-prompted responses. Use examples below if respondents seem stuck, or if you need to clarify a response.]

- SMS
- SAP Business Objects
- Tableau
- Excel
- Access

- Visio
- SPSS
- SAS
- Python
- R
- Nvivo
- Verint

Ask the following questions for each platform/software identified.

5. What purposes do you use this platform/software?
6. What was the intended goal or solution provided by this software? What design goals were intended to be met by using this platform/software?

Probe: Do you use the platform/software to manage, analyze, visualize, and/or communicate data?
Probe: How useful is this platform/software for achieving that purpose? Why?
7. Does this platform/software feed data to any other platform or system?

Probe: Is it interoperable with any content management systems? (Ex: SharePoint)
8. What are the key capabilities/functionalities of this platform/software?
 - a. Which features do you find most important and/or useful?

Probe: What is your daily or routine use like?
9. Can you describe the licensing for this platform/software?

Probe: Who owns the license?
Probe: How did you access the license? Is it shared with anyone else?
Probe: How often does the license need to be renewed?
Probe: Are there any difficulties with the renewal process? If so, what are they?
10. How do the startup and maintenance states of this platform/software compare to one another?
Probe: What are the initial vs. maintenance costs associated with the platform/software?

Probe: What kinds of training did your personnel undergo?
11. Who is using this platform/software? What are their roles?

So the next questions are going to be about the pros and cons of this platform/software.

12. What are the pros of this platform/software?

Probe: From a content developer perspective?

Probe: From an end user perspective?

Probe: From an implementation perspective (e.g., speed and required resources and training).

13. What are the cons of this platform/software?

Probe: From a content developer perspective?

Probe: From an end user perspective?

Probe: From an implementation perspective (e.g., speed and required resources and training).

Next, I'd like to talk about data sharing.

14. How do you share data with other entities within and/or outside your organization?

Probe: Do you publish datasets and dynamic visualizations?

Probe: Who has access to this information (public, restricted, by request, etc.)?

Probe: Where is it available (see examples below)?

[Allow for un-prompted responses. Use examples below if respondents seem stuck, or if you need to clarify a response.]

- Network file system
- SharePoint or other similar system
- Email attachments
- Shared database system
- AMRDEC SAFE file exchange

15. How are data cleared for visualization or analytics (particularly for external clients)?

Probe: Is there a formal process for clearing data for use in visualization or analytics?

Probe: If you use the Cloud, are there special considerations given its use for storing and accessing data?

General, Policies, and Standing Operating Procedures

These next questions will help us to identify policies and procedures we need to investigate moving forward.

16. What Federal policies govern your use of data?

17. What agency policies or SOPs govern your data management activities? Would you be willing to share any agency procedure guides?

We are working to identify and meet with a number of organizations that have been successful in implementing a digital strategy.

18. Are there any organizations with similar data management needs or goals that you believe are doing a good job at meeting those goals? Which organizations?

Probe: Do you benchmark against any other Organizations or groups?

Probe: How have they influenced your strategies?

Closing:

Lastly, we'd like to hear any other thoughts you have based on this conversation or your experience with Digital First.

19. How long did it take you to get to your current place in your digital transformation?
20. What steps would you recommend to someone starting this journey?
21. What are the top three lessons learned you have found during this journey?
22. Do you have any additional information you think would be helpful to another organization looking to develop and implement a Digital First Strategy?
23. Is there anyone else it would be helpful to talk to about data management best practices at (name of the organization)?
24. Do you have any questions for us?

Thank you for sharing your ideas and experiences with us! All the information you shared today will help us as we implement a Digital First strategy for our content, data, and communication activities!

Appendix F: Desired State Common Themes and Frequency

Alphabetical List of Desired State Common Themes

1. Communication guidance provides basic, clear standards which help maintain quality across all forms of communication.
2. Communication resources are sufficient to serve the organization's digital communication needs.
3. Communication staff are able to support all who require their expertise.
4. Content and digital media are mobile-friendly.
5. Content approval (technical, copyright & release) deadlines for time-sensitive content are met.
6. Content approval processes provide for multi-disciplinary review.
7. Content authoring methods facilitate cross-channel content development and management.
8. Content development and media development are integrated to deliver final products efficiently.
9. Content expiration notifications inform content owners when content is expired and due to be removed.
10. Content is designed for digital media platforms first and document-based formats afterwards.
11. Content is designed for quick download speeds.
12. Content is Section 508 compliant.
13. Content management for limited distribution content is secure and efficient.
14. Content management processes support efficient use of storage.
15. Content optimization (media channel requirements) deadlines for time-sensitive content are met.
16. Content quality assurance is part of the content management process.
17. Content quality assurance prevents related internet compliance issues.
18. Content update cycles are aligned to the needs of public health disciplines within records management requirements.
19. Content update process follows human centered design principles.
20. Customer questions/answers are managed in a system that enables tracking.
21. Customer satisfaction data and findings are available to authorized personnel as needed.
22. Customer satisfaction data are shared with communication personnel when assisting with related communication efforts.
23. Customer satisfaction survey program contributes actionable data for product/service improvement efforts.
24. Customer satisfaction/feedback data systems facilitate aggregate data analysis.
25. Customer satisfaction/feedback survey vehicles are customized to return actionable results.
26. Data access and sharing meets requirements for the work being performed.
27. Data Agreements are coordinated and monitored at the enterprise level.
28. Data entry and transformation meet requirements for the work being performed.
29. Data quality meets requirements for the work being performed.
30. Data quality standards are established and monitored.
31. Data regulations for PII/PHI handling are enforced by leadership.

32. Data systems meet requirements for the work being performed.
33. Data turnaround time meets requirements.
34. Data visualization resources meet the needs of those who require them.
35. Data workers have the necessary skills to perform routine analyses and consult with data subject matter experts for statistical and advanced analysis strategies as needed.
36. Digital analytics data and findings are made available to personnel who need them.
37. Digital asset management systems are sufficient to support a multi-channel communication strategy.
38. Digital marketing support is available when needed.
39. Information management resources support application development and routine maintenance.
40. Information management systems facilitate cross-channel content development and management.
41. Information storage options meet requirements for the work being performed.
42. Information systems (S drive) are DOD-accredited and sufficient to accommodate PII/PHI storage volume.
43. Information systems are designed for speedy access.
44. Information systems that need to share data are interoperable.
45. Large file transfer options are available when needed.
46. Methods for releasing interim findings are investigated.
47. Multimedia can be embedded on Web-based media.
48. Multimedia development support is available when needed.
49. Personnel understand the importance of target population characteristics when developing communication media.
50. Product/service design and improvement are based on customer feedback and human-centered design.
51. Software and supporting infrastructure for statistical analysis meets requirements for the work being performed.
52. Software licensing is monitored at the enterprise level.
53. Software used to communicate findings to target audiences meets requirements for the work being performed.
54. Strategic planning and coordination of content management is accomplished at the enterprise level.
55. Strategic planning and coordination of customer satisfaction program is accomplished at the enterprise level.
56. Strategic planning and coordination of data management is accomplished at the enterprise level.
57. Strategic planning and coordination of digital analytics across all media platforms is accomplished at the enterprise level.
58. Strategic planning and coordination of digital media is accomplished at the enterprise level.
59. Strategic planning for content management ensures required content is easily accessible.
60. Training about data collection tools and methodologies is available to all personnel.
61. Training about data visualization is available to all personnel.
62. Training about PII/PHI and PHRB requirements and resources is provided to all personnel.
63. Training about social media messaging, channels, and planning is available to all personnel.

64. Training on Verint software is provided prior to receiving permission to use the software.
65. Training to help build digital marketing skills is available to all personnel.
66. Training to help build knowledge about digital media channel capabilities is available to all personnel.
67. Training to help build skills needed to communicate effectively with external audiences is available to all personnel.
68. User research and human centered design are part of the digital media development process.
69. Web content managers have the necessary skills to create quality content and consult with Web subject matter experts (SMEs) as needed.
70. Web site navigation is based on user research to meet the needs of target populations.

List of Desired State Common Themes in Order of Frequency

FREQ	DESIRED STATE COMMON THEME
49	Communication staff are able to support all who require their expertise.
27	Content approval (technical, copyright, & release) deadlines for time-sensitive content are met.
27	Strategic planning and coordination of data management is accomplished at the enterprise level.
26	Information systems that need to share data are interoperable.
24	Customer satisfaction survey program contributes actionable data for product/service improvement efforts.
22	Data access and sharing meets requirements for the work being performed.
22	Training to help build knowledge about digital media channel capabilities is available to all personnel.
21	Data quality meets requirements for the work being performed.
21	Digital marketing support is available when needed.
21	Strategic planning for content management ensures required content is easily accessible.
20	Data visualization resources meet the needs of those who require them.
18	Training to help build skills needed to communicate effectively with external audiences is available to all personnel.
17	Communication resources are sufficient to serve the organization's digital communication needs.
16	Information management systems facilitate cross-channel content development and management.
16	Strategic planning and coordination of content management is accomplished at the enterprise level.
16	Training to help build digital marketing skills is available to all personnel.
15	Customer questions/answers are managed in a system that enables tracking.
15	Information management resources support application development and routine maintenance.
15	Training about data visualization is available to all personnel.
14	Content authoring methods facilitate cross-channel content development and management.
14	Multimedia development support is available when needed.
14	Software and supporting infrastructure for statistical analysis meets requirements for the work being performed.
14	Training about social media messaging, channels, and planning is available to all personnel.
13	Personnel understand the importance of target population characteristics when developing communication media.

FREQ	DESIRED STATE	COMMON THEME
11	Digital analytics data and findings are made available to personnel who need them.	
11	Software used to communicate findings to target audiences meets requirements for the work being performed.	
10	Customer satisfaction/feedback survey vehicles are customized to return actionable results.	
10	Data Agreements are coordinated and monitored at the enterprise level.	
9	Customer satisfaction/feedback data systems facilitate aggregate data analysis.	
9	Product/service design and improvement are based on customer feedback and human-centered design.	
9	User research and human centered design are part of the digital media development process.	
8	Data entry and transformation meet requirements for the work being performed.	
8	Information storage options meet requirements for the work being performed.	
7	Communication guidance provides basic, clear standards which help maintain quality across all forms of communication.	
7	Software licensing is monitored at the enterprise level.	
6	Content management processes support efficient use of storage.	
6	Content quality assurance is part of the content management process.	
6	Training on Verint software is provided prior to receiving permission to use the software.	
5	Customer satisfaction data and findings are available to authorized personnel as needed.	
5	Large file transfer options are available when needed.	
5	Training about PII/PHI and PHRB requirements and resources is provided to all personnel.	
4	Data quality standards are established and monitored.	
4	Data regulations for PII/PHI handling are enforced by leadership.	
4	Methods for releasing interim findings are investigated.	
4	Strategic planning and coordination of customer satisfaction program is accomplished at the enterprise level.	
4	Strategic planning and coordination of digital analytics across all media platforms is accomplished at the enterprise level.	
3	Content approval processes provide for multi-disciplinary review.	
3	Content development and media development are integrated to deliver final products efficiently.	
3	Content is designed for digital media platforms first and document-based formats afterwards.	
3	Content is designed for quick download speeds.	
3	Content management for limited distribution content is secure and efficient.	
3	Content update cycles are aligned to the needs of public health disciplines within records management requirements.	
3	Content update process follows human centered design principles.	
3	Data workers have the necessary skills to perform routine analyses and consult with data SMEs for statistical and advanced analysis strategies as needed.	
3	Digital asset management systems are sufficient to support a multi-channel communication strategy.	
3	Information systems are designed for speedy access.	
3	Strategic planning and coordination of digital media is accomplished at the enterprise level.	

FREQ	DESIRED STATE COMMON THEME
3	Web content managers have the necessary skills to create quality content and consult with Web SMEs as needed.
3	Web site navigation is based on user research to meet the needs of target populations.
2	Content expiration notifications inform content owners when content is expired and due to be removed.
2	Content is Section 508 compliant.
2	Content optimization (media channel requirements) deadlines for time-sensitive content are met.
2	Training about data collection tools and methodologies is available to all personnel.
1	Content and digital media are mobile-friendly.
1	Content quality assurance prevents related internet compliance issues.
1	Data systems meet requirements for the work being performed.
1	Data turnaround time meets requirements.
1	Information systems (S drive) are DOD-accredited and sufficient to accommodate PII/PHI storage volume.
1	Multimedia can be embedded on Web-based media.

Appendix G: Digital First FY19 Offsite Findings - Foundational Action Plan Word Clouds



Foundational Action Plans

Action plans were derived from needs assessment analysis, best practices identified in the literature, and lessons learned from Federal partners who had successfully implemented their own digital transformations.

These four action plans represent foundational capabilities and resources which are prerequisites to attempting to implement subsequent Digital First Action Plans.

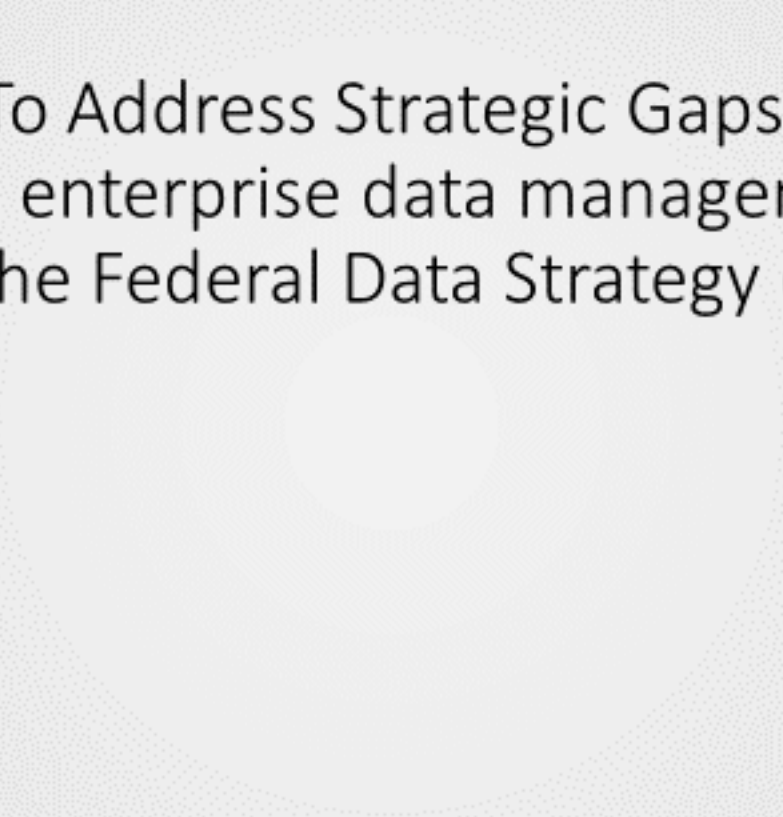
Short Title	Description
1. Quality Gaps	Improve quality assurance/quality control processes for digital content
2. Resource Gaps	Expand workforce and identify needed (IM/IT) solutions to support transition to digital formats
3. Training Gaps	Develop & deploy digital skills training
4. Strategic Gaps	Align enterprise data management with Federal Data Strategy

Day Two of the Digital First Offsite - 18 July

As part of the Digital First offsite, participants were asked to answer the following five questions for each foundational action plan:

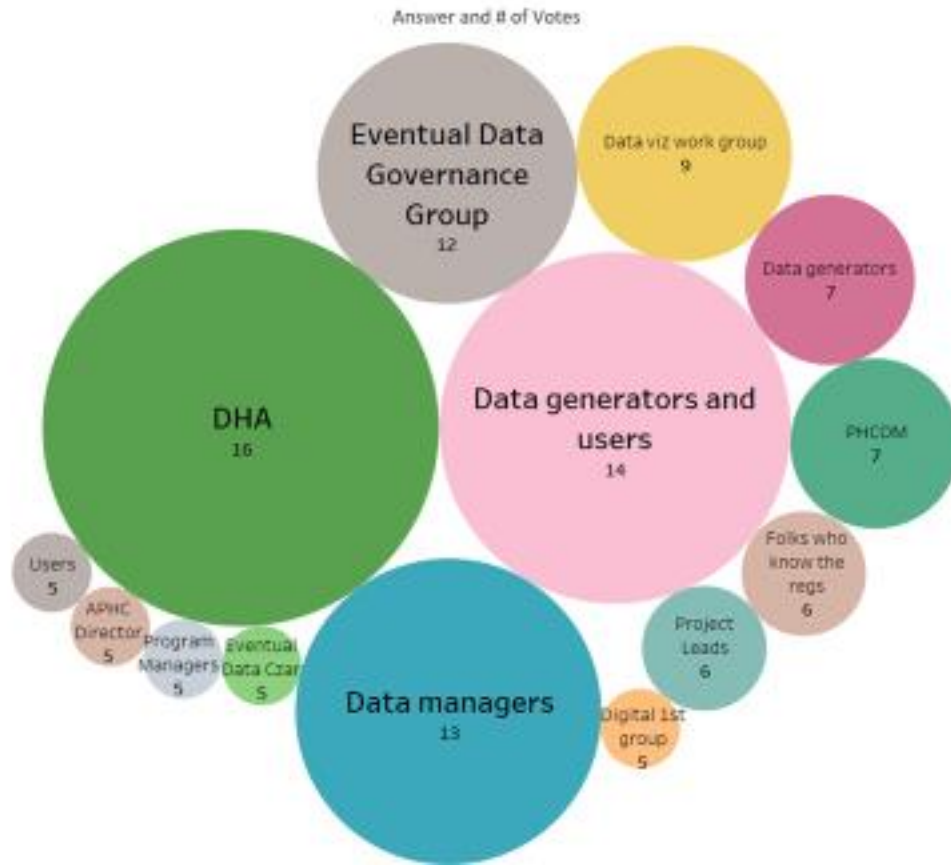
1. Who should be involved in implementation planning?
2. Who are the decision makers throughout various stages of planning and implementation?
3. Who are the influencers we should engage throughout the various stages of planning and implementation?
4. Are there any projects being worked right now that support or align with this action plan?
5. What additional projects should we be doing that would support or align with this action plan?

The data were analyzed to develop word clouds, which summarize participant input into future planning and implementation of the four foundational action plans. There are three word clouds per foundational action plan. The first cloud combines questions 1-3, the second summarizes input for question 4, and the third compiles input from question 5.



To Address Strategic Gaps:
Align enterprise data management
with the Federal Data Strategy (Data)

People who should be engaged throughout the various stages of planning and implementation for:
Align enterprise data management with Federal Data Strategy

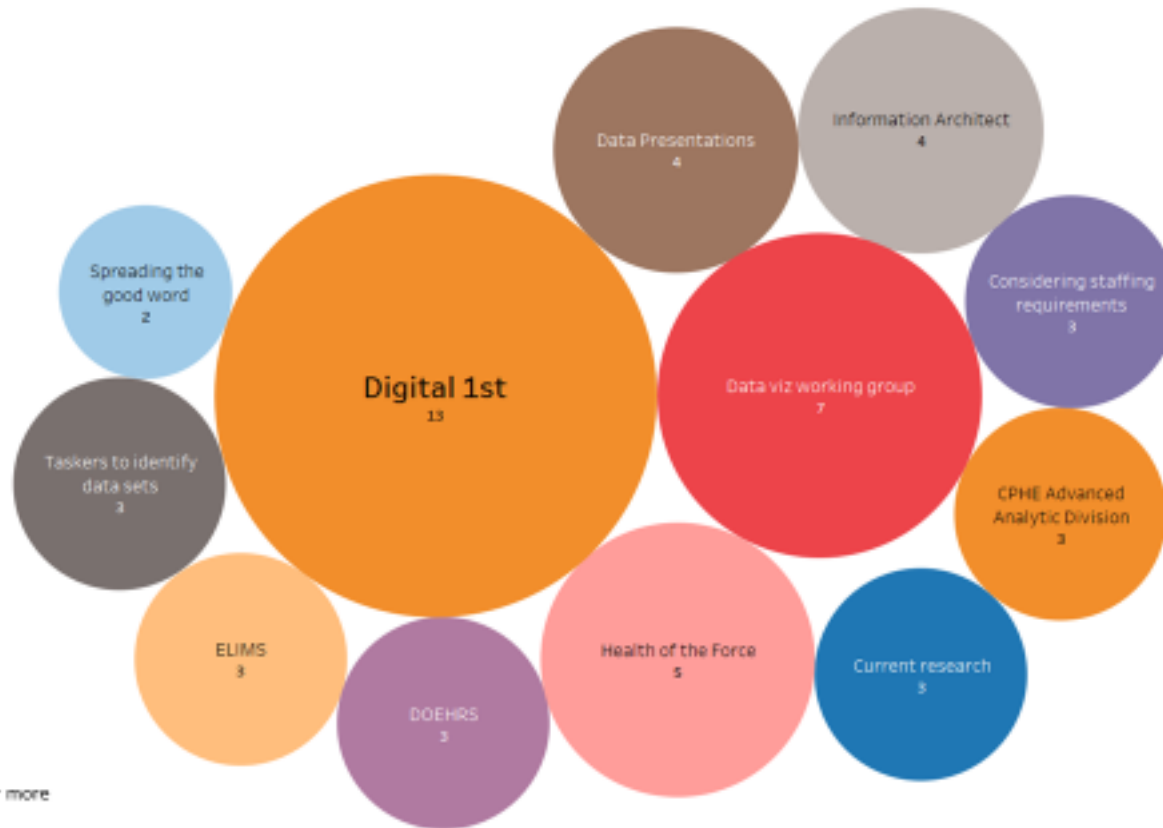


Only answers with 5 or more votes shown

*Questions 1-3 were combined

Projects being worked right now that support or align with:
Align enterprise data management with Federal Data Strategy

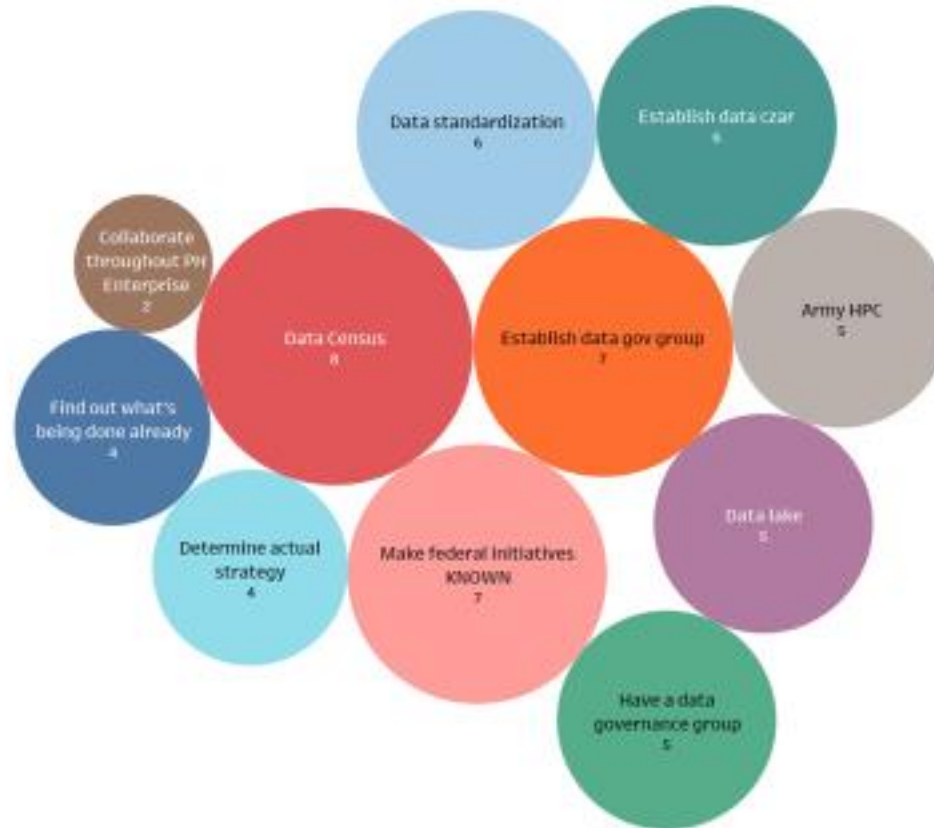
Answer and # of Votes



Only answers with 2 or more votes shown

Additional activities that we should be doing that would support or align with:
Align enterprise data management with Federal Data Strategy

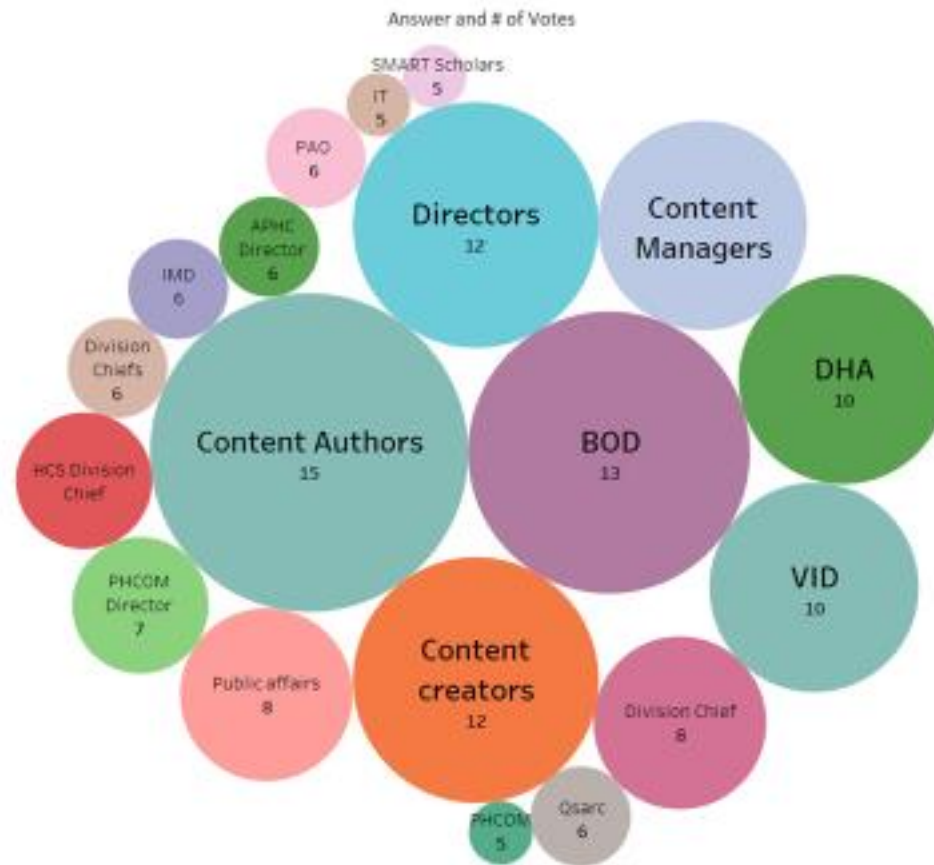
Answer and # of Votes



Only answers with 2 or more votes shown

To Address Quality Gaps:
Improve quality assurance/quality control
processes for digital content (Communication)

People who should be engaged throughout the various stages of planning and implementation for:
Improve quality assurance/quality control processes for digital content

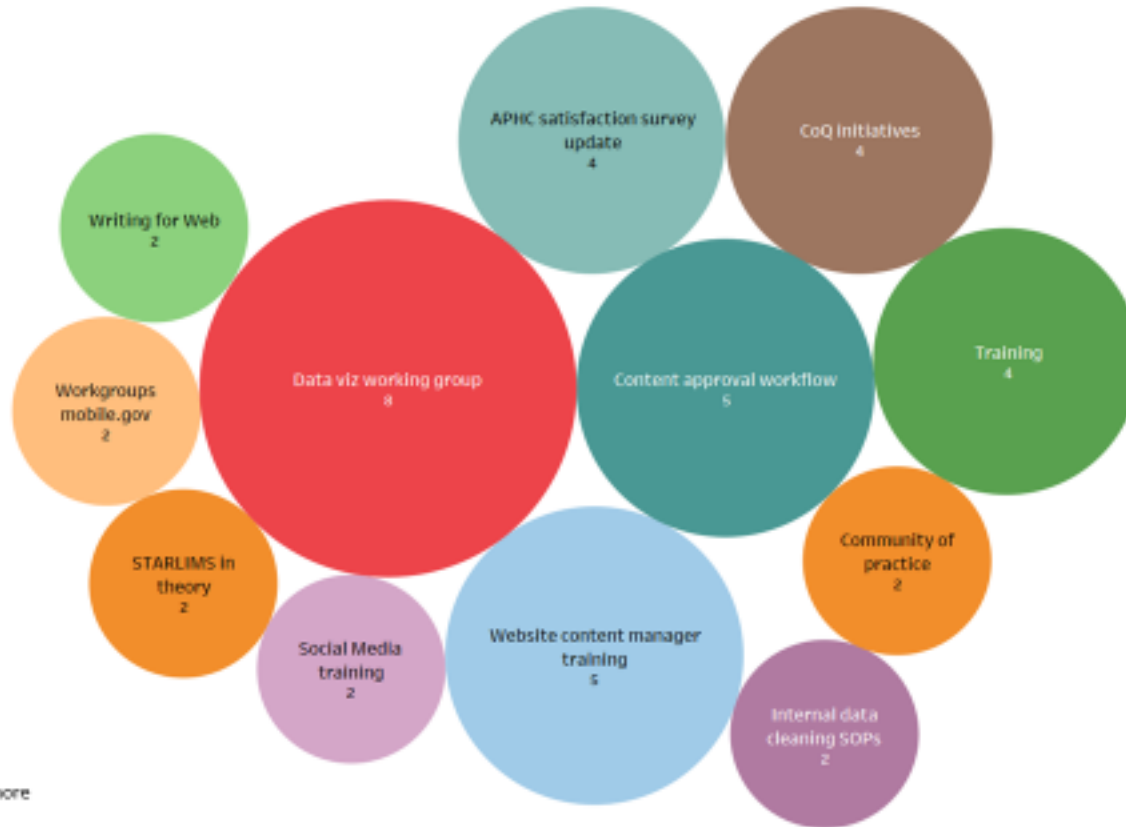


Only answers with 5 or more votes shown

*Questions 1-3 were combined

Projects being worked right now that support or align with:
Improve quality assurance/quality control processes for digital content

Answer and # of Votes



Only answers with 2 or more votes shown

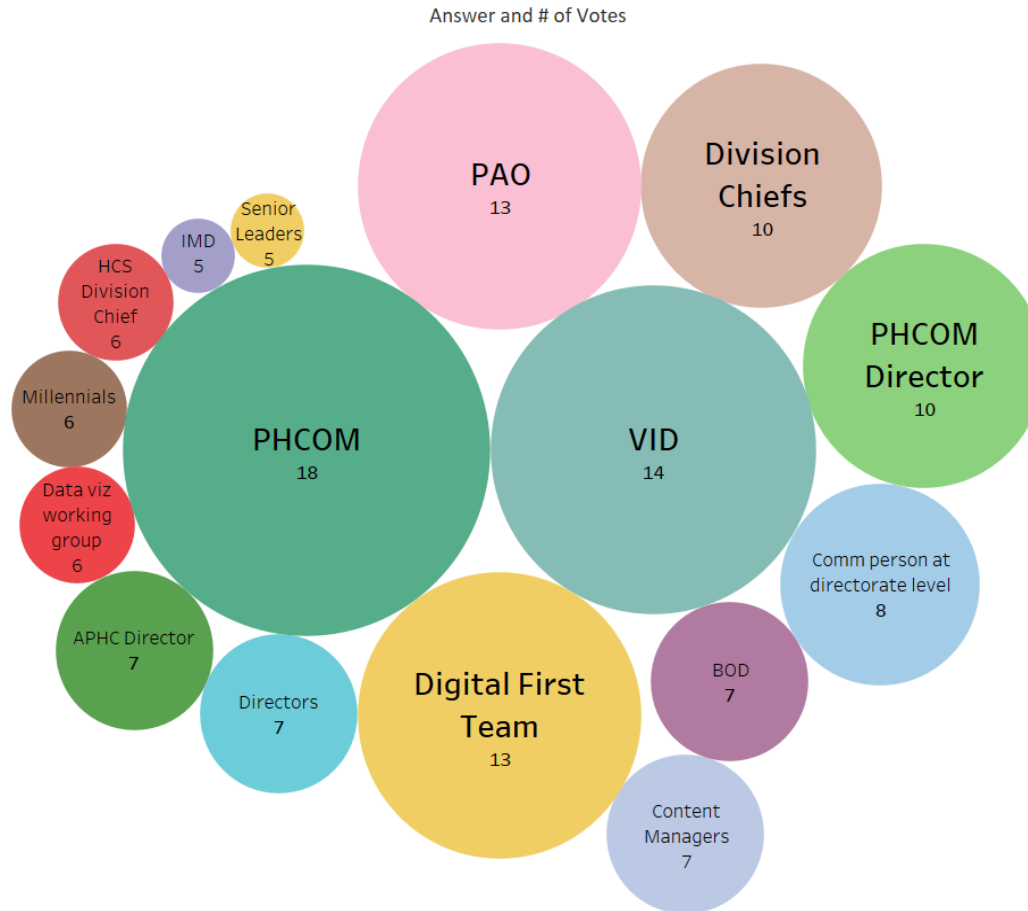
Additional activities that we should be doing that would support or align with:
Improve quality assurance/quality control processes for digital content



Only answers with 4 or more votes shown

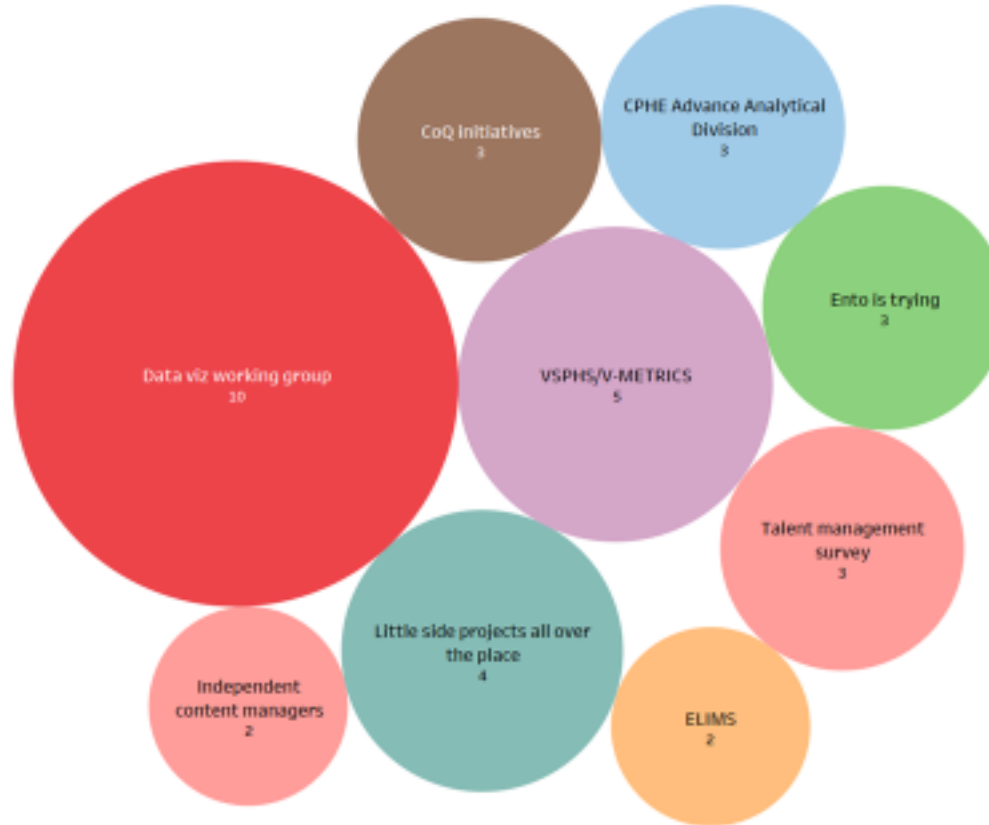
To Address Resource Gaps:
Expand workforce and identify needed IM/IT
solutions to support transition to digital formats

People who should be engaged throughout the various stages of planning and implementation for:
Expand workforce and identify needed IM/IT solutions to support transition to digital formats



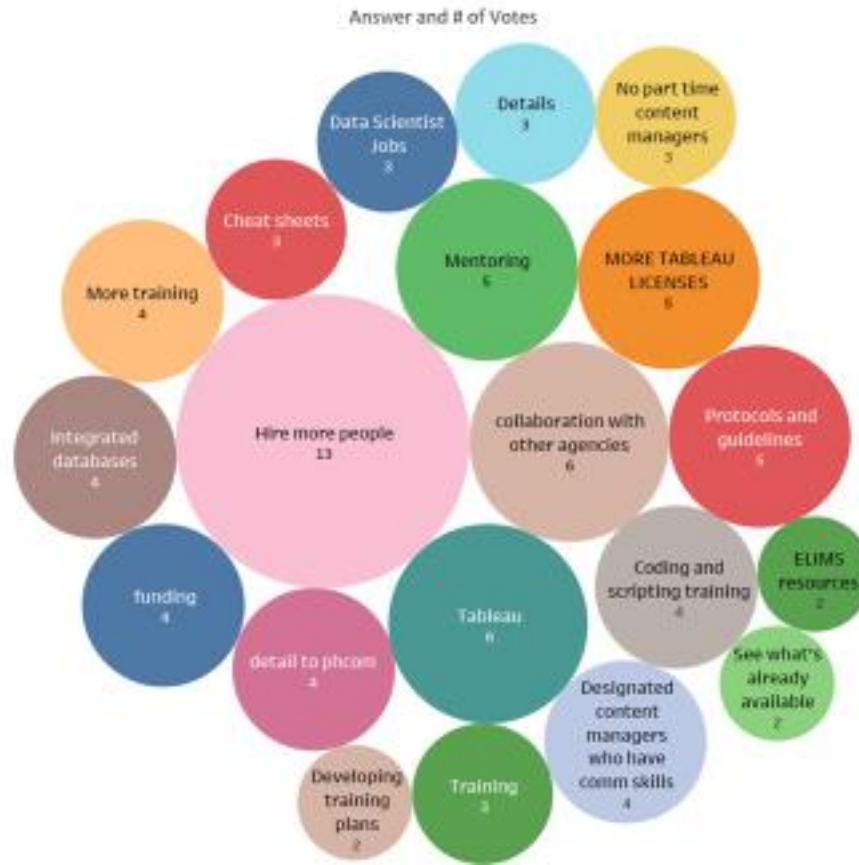
Projects being worked right now that support or align with:
Expand workforce and identify needed IM/IT solutions to support transition to digital formats

Answer and # of Votes



Only answers with 2 or more votes shown

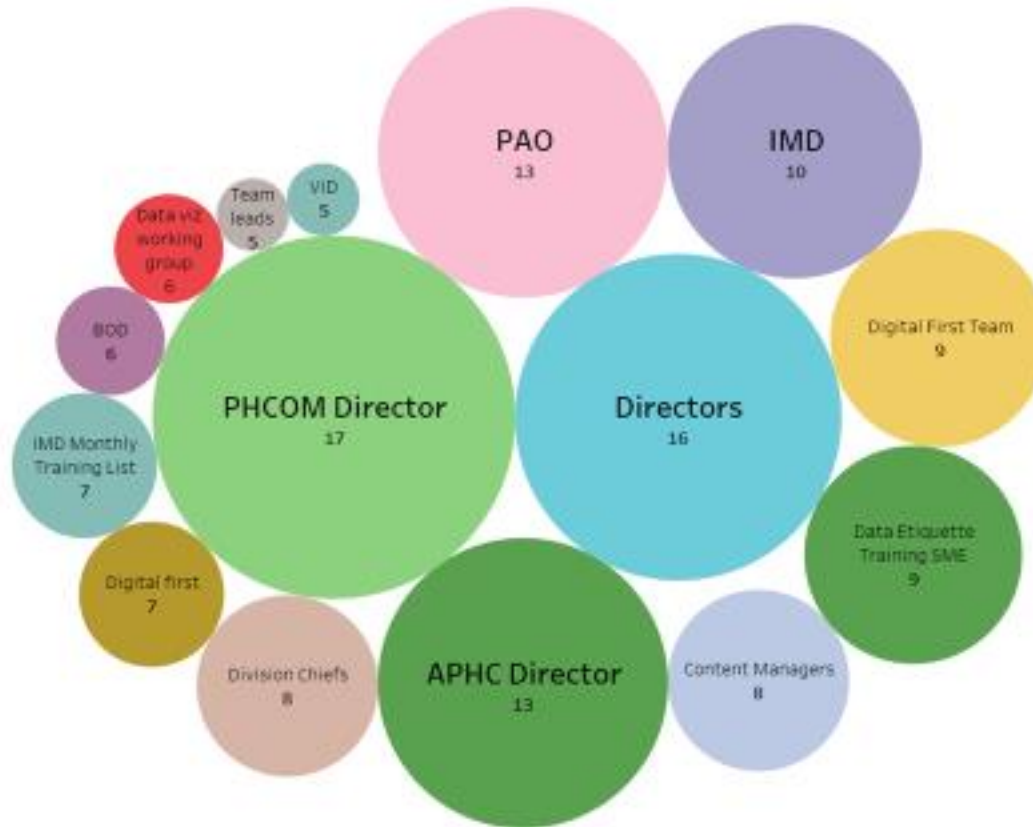
Additional activities that we should be doing that would support or align with:
Expand workforce and identify needed IM/IT solutions to support transition to digital formats



To Address Training Gaps:
Develop & deploy digital skills training
(Communication)

People who should be engaged throughout the various stages of planning and implementation for:
Develop and deploy digital skills training

Answer and # of Votes

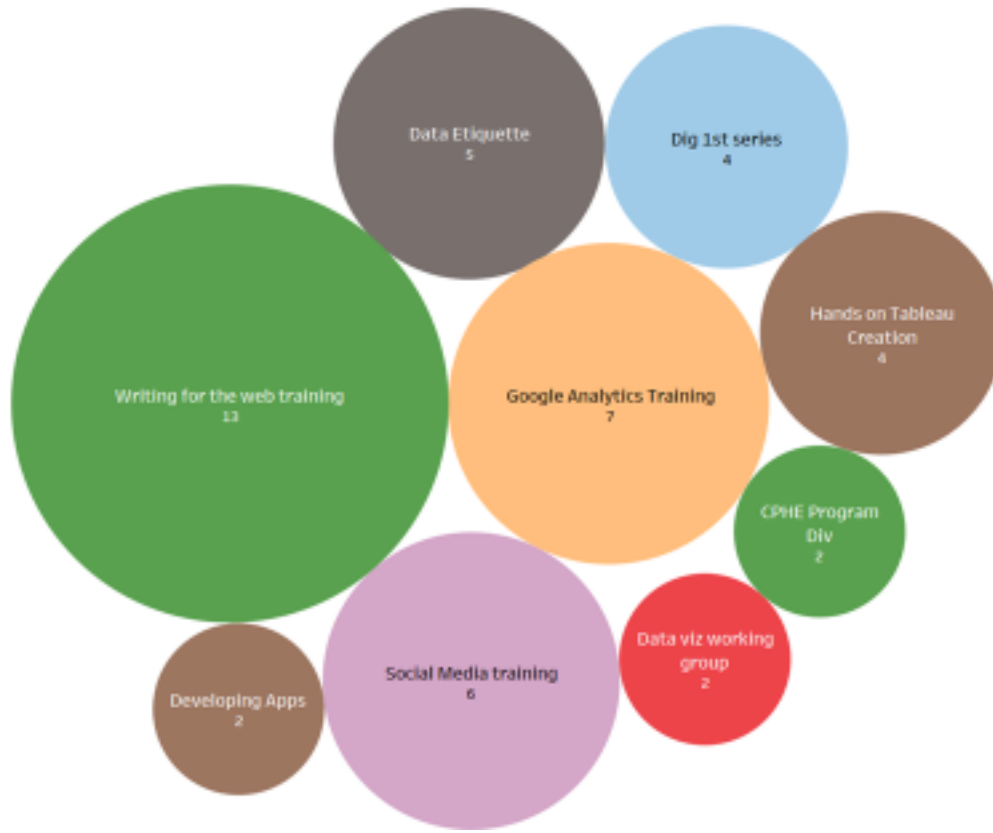


Only answers with 5 or more votes shown

*Questions 1-3 were combined

Projects being worked right now that support or align with:
Develop and deploy digital skills training

Answer and # of Votes



Only answers with 2 or more votes shown

Additional activities that we should be doing that would support or align with:
Develop and deploy digital skills training

Answer and # of Votes



Only answers with 4 or more votes shown

Glossary

ABHIDE

Army Behavioral Health Integrated Data Environment

ADM

Army Design Methodology

APHC

Army Public Health Center

ATAAPS

Army Time and Attendance Production System

BAG

Budget Activity Group

BUSOPS

Business Operations Directorate

CDC

U.S. Centers for Disease Control and Prevention

CPHE

Clinical Public Health and Epidemiology Directorate

DHA

Defense Health Agency

DOD/DoD

Department of Defense

DOEHRS

Defense Occupational and Environmental Health Readiness System

EHS

Environmental Health Sciences Division

EHSE

Environmental Health Sciences and Engineering Directorate

EPA

U.S. Environmental Protection Agency

FDS

Federal Data Strategy

FTE

Full-Time Equivalent

FY

Fiscal year

GFEBs

General Fund Enterprise Business System

GSA

General Services Administration

HCS

Health Communication Science Division

HEA

Health Education and Application Division

HPW

Health Promotion and Wellness Directorate

IDEA

Integrated Digital Experience Act

IMD

Information Management Division

IM/IT

Information management and information technology

LS

Laboratory Sciences Directorate

NCO

Noncommissioned officer

NCI

National Cancer Institute

OHS

Occupational Health Sciences Directorate

OOD

Office of the Director

PDM

Product Management Office

PHAD

Public Health Assessment Division

PHCOM

Public Health Communication Directorate

PHI/PII

Protected health information/personally identifiable information

PHRB

Public Health Review Board

PMD

Publication Management Division

QSARC

Quality Systems and Regulatory Compliance Office

ROVR

Remote Online Veterinary Record

SEO

Search Engine Optimization

SME

Subject matter expert

SOP

Standard operating procedure

TOX

Toxicology Directorate

U.S.

United States of America

USDA

U.S. Department of Agriculture

VHPHS

Veterinary Services and Public Health Sanitation

WBS

Work breakdown structure

WCM

Web content manager