

SPRING 2024

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DIGITAL SERVICE NETWORK

**PUBA 731: HUMAN RESOURCES
MANAGEMENT - STRUCTURES AND
BUDGETS OF DIGITAL SERVICE TEAMS**

beeckcenter
social impact + innovation



SCHOOL OF GOVERNMENT
Master of Public Administration

BACKGROUND

The structural and budgetary landscape of digital service teams (DSTs) is not well-documented outside of their internal organizations. This opacity hinders DSTs from learning from each other and adopting best practices, complicating efforts to improve efficiency and effectiveness. This study seeks to increase transparency in the operations of DSTs, providing a valuable foundation for existing and future teams to foster collaboration, drive innovation, and enhance digital service delivery in the public sector.

RESEARCH APPROACH

This research study analyzes the structural and budgetary layout of eleven US-based DSTs at the municipal, county, and state levels. In doing so, it sets out to answer the research question: “How are digital service teams structured and funded?”

To answer the research question, this study adopted a two-phased research approach. The first phase consisted of the creation of a 14-question Qualtrics survey divided into three sections: foundational documents, structural data, and budgetary data. The second phase comprised a series of 45-minute qualitative follow-up interviews with respondents to further analyze their survey responses, as well as the creation, structure, and budget of their DST. Afterward, survey and interview data were thematically analyzed using a structured coding system, which categorized recurring themes related to team creation, organization, composition, budget, challenges, and best practices.

LITERATURE REVIEW

Selden & Wooters identify three main organizational structures for DSTs: centralized, decentralized, and shared services (2011). In the centralized model, the DST provides standardized services across all agencies and departments within the organization. The decentralized model places DSTs within specific agencies or departments, offering specialized services tailored to those units. The shared services model features DSTs operating as semi-autonomous entities that provide specialized services to various departments as needed.

Sandoval-Almazán et al. explain that DSTs are funded through various sources, including general tax funds, intergovernmental transfers, charges for e-services, special programs, and public bonds (2017). Major expenditures for DSTs include payroll costs for staff, technology infrastructure expenses, and operating costs such as labor, energy, materials, and overhead. Additionally, significant capital and maintenance expenditures are incurred for the acquisition of technology, system design, engineering, upkeep, and installation.

Structuring a DST for success involves adopting agile methodologies for rapid and flexible digital service delivery through iterative development and continuous improvement. To support these practices, leadership must foster a culture of innovation and adaptability. Successful teams also promote collaboration within traditional bureaucratic structures by emulating start-up cultures with flat hierarchies and open communication channels. Furthermore, improving IT acquisition practices with agile procurement methods and fostering collaboration with external technology providers can introduce new perspectives and technologies, enhancing innovation and efficiency (Mergel 2016).

Sustainably funding DSTs requires diversifying funding sources to ensure financial stability and flexibility. Using a rating system to prioritize projects based on public value and efficiency helps allocate appropriate financial resources. Additionally, regularly evaluating and adjusting funding models in response to economic and political shifts is essential for long-term financial stability. (Sandoval-Almazán et al. 2017).

RESEARCH FINDINGS

The eleven survey results and six interviews conducted with Chief Digital Service Officers provided emerging insights into six core areas: catalyzing creationary factors, organizational structure, team composition, funding models and financial dynamics, common challenges facing teams, and best practices.

Catalyzing Factors: High-Level Mandates and Strategic Initiatives

Interviewees often described the creation of their DSTs as arising from strategic initiatives focused on modernizing services, enhancing citizen interactions with government, and improving operational efficiency. These strategic initiatives are critical, as they not only dictate

the operational scope of the DST but also provide an operational framework for integrating government goals. High-level mayoral, executive, and legislative mandates then establish these teams, providing critical legal authority, legitimacy, and immediacy.

Organizational Structure

The analysis of organizational data revealed the strategic integration of DSTs within the broader IT department, allowing teams to leverage institutional resources and expertise to enhance service delivery. This centralization fosters efficient resource management and cross-department collaboration. However, organizational charts may fail to capture the political and strategic considerations that influence daily operations, often leading to a complex dual-reporting system where strategic goals must be balanced with political directives.

Team Composition

Digital service teams are led by a centralized figure, typically a Chief Digital Service Officer (CDSO), who ensures a unified strategy and alignment with broader organizational goals. Teams are divided into specialized units, with a high degree of role specialization and cross-functionality to enhance flexibility and collaboration. Contractors may supplement the team by providing specialized expertise, though careful contract management is essential to avoid vendor lock-in.

Budgets: Funding Models and Financial Dynamics

DSTs operate under diverse funding models tailored to their organizational structure and government level, with models including direct government allocations, chargeback systems, and hybrid approaches. Major expenditures include employee compensation and technology infrastructure, with budget constraints often necessitating creative funding solutions and strategic financial management.

Challenges: Resistance to Change and Budget Constraints

Digital service teams face challenges from the government's risk-averse culture, leading to slow change and innovation. Significant budgetary constraints and reliance on temporary funding sources hinder their growth and project expansion. Additionally, communicating their impact, hiring skilled personnel, and developing leaders are ongoing difficulties, highlighting the need for strategic approaches to overcome these obstacles.

Best Practices: Cross-Functionality, Storytelling, and a Culture of Learning

Best practices for digital service teams include maintaining a cross-functional structure, mastering storytelling to articulate their value, and fostering a culture of continuous learning. Cross-functionality enhances problem-solving and resource efficiency, while storytelling helps secure support and funding. A culture of learning is facilitated through feedback loops and pilot projects, promoting adaptive and innovative teams.

EMERGING INSIGHTS BY LEVEL OF GOVERNMENT

The following summaries provide an overview of emergent findings from city, county, and state-level DSTs. These initial insights should be validated with more teams and as additional DSTs continue to form at each level of government.

City

Interviews with city-level DSTs revealed establishing mayoral mandates focused on modernization and user-centered design. They are funded through general city funds, IT department rates, and inter-bureau agreements. Notable achievements include the development of an affordable housing application system, the implementation of a digital permit application system, and the creation of a digital service playbook.

County

Interviews with county-level DSTs highlighted establishing strategic initiatives focused on eliminating inefficiencies, capitalizing on new technologies, and improving digital accessibility. Teams are typically influenced by the county board of commissioners and are funded through diverse models including general allocations, hybrid chargeback systems, grants, and private-sector partnerships. Notable achievements include cloud migration, modernization of legacy systems, and a pilot project using AI to detect street deficiencies.

State

Interviews with state-level DSTs revealed establishing executive and legislative mandates focused on streamlining services and meeting increased demand for digital services. Team placement varied by government, with funding models including general allocations, capital investment, and full and partial chargeback models. Notable achievements include redesigning the state's online portal and launching a chatbot to assist residents in navigating state services more efficiently.

LIMITATIONS

This study is limited by a small sample size, potential interview bias, and a narrow scope of data that primarily represents large, Democrat-governed areas. Additionally, the limited availability of existing literature on digital service teams restricted the depth of the analysis, highlighting the need for further research in this emerging field.

CONCLUSION

This study provided an emergent analysis of eleven US-based DSTs, highlighting their creationary factors, organizational structures, team composition, funding models, challenges, and best practices. To complement this report, the UNC MPA research team developed a public-facing database offering a detailed and organized view of the structural and budgetary frameworks of US-based DSTs. The maturing nature of digital service teams and the constantly evolving pace of technology will ensure that the insights from this study remain relevant well into the future.

Appendix 1: General Interview Framework

General:

1. Can you provide insights into the creation and evolution of your Digital Service Team, including the factors and considerations that led to its establishment?
2. Does your organization have a formalized strategic plan, and if so, how does it align with the broader organizational strategy?

Structure:

1. Can you provide insights into the growth trajectory of your team, including key milestones, outcomes, and adaptations made to accommodate expansion?
2. What mechanisms and processes guide decision-making on the organizational level concerning your Digital Service Team?
3. What specific aspects of your Digital Service Team do you perceive as functioning effectively? Please identify and elaborate on successful components in your answer.
4. What are some general/overarching challenges that your team has encountered or is currently facing?

Budget:

1. Within your organization or department's budget, how are priorities set, and are they reflected in how funds are distributed or allocated?
2. Does your organization or department have any financial or performance audits? Please describe them and how your organization uses that information.

Ending Questions:

1. From your perspective, what characteristics and accomplishments define a successful Digital Service Team?
2. Are there Digital Service Teams that your team looks to for inspiration, and if yes, could you provide insights into the specific qualities or achievements that your team finds particularly admirable in these examples?

Appendix 2: Quatrics Survey

Digital Service Teams Survey

Introduction & Contact Information

Introduction Primary Research Question: How are digital service teams structured and funded?

Introduction:

The Beeck Center for Social Impact + Innovation at Georgetown University, U.S. Digital Response, and the MPA research team at the UNC School of Government are collaborating to conduct research examining the organizational and budgetary structures of digital service teams. Your participation in the survey below will greatly contribute to our understanding of how digital service teams organize their structure and utilize their budget to fulfill their mission.

This survey will take approximately 5-10 minutes to complete. All responses will be aggregated for analysis in a publicly available final report shared by the Digital Service Network to enhance the practices of various digital service teams.

For any inquiries or detailed feedback regarding the survey, please contact keeganh@unc.edu.

To aid in our analysis, we kindly ask that you complete this form.

Name

First and last name of the person entering the data.

Title

Job title of person entering the data.

Jurisdiction & Agency

Jurisdiction and agency of respondent's Digital Service Team.

Zip Code

Zip Code of respondent's Digital Service Team.

Follow Up Interview

Can we contact you for a follow-up interview to learn more about your team?

- Yes
- No

Required Documents

Required Documentation:

We seek the following organizational and budgetary documentation to support our research.

Authorizing Dept Authorizing/Oversight Department

Name of the department respondent's Digital Service Team is embedded into or authorizing position.

Organizational Chart Organizational Chart

Current organizational chart detailing hierarchy and reporting lines within respondent's Digital Service Team. Include matrixed staff if applicable.

Government Models

Service management frameworks, policy guides, etc.

FTE Positions

Total number of full-time-equivalent Digital Service Team positions, filled or unfilled, approved for the fiscal year.

FTE Count

Total number of filled full-time-equivalent positions on your Digital Service Team.

Budget

Overall budget allocation for respondent's Digital Service Team for the current fiscal year.

Does your Digital Service Team operate as a chargeback/enterprise agency?

Agency provides specific services to other departments and charges for services rendered.

Structure

Is there anything creative or interesting about how your team is structured?

Optional Documents

We also seek these foundational documents (desired but not required)

Mission Statement

Documents describing the purpose, guiding principles, and strategic direction for the respondent's Digital Service Team.

- File Upload
- Hyperlink
- Additional Comments

Vision Statement

Documents describing long-term aspirations and desired impact for respondent's Digital Service Team.

- File Upload
- Hyperlink
- Additional Comments

Strategic Plan

Documents describing the goals, strategies for achieving those goals, and metrics for evaluating success for respondent's Digital Service Team.

- File Upload
- Hyperlink
- Additional Comments

Work Authorization

Where does your Digital Service Team receive work authorization?
Executive Order, agency mandate, etc.

Theory of Change

Documents detailing the framework, processes, and preconditions necessary to achieve long-term goals in respondent's Digital Service Team.

- File Upload
- Hyperlink
- Additional Comments

Effectiveness

Please share how you assess the effectiveness of a Digital Service Team. Please include accomplishments, results, or links to relevant documents.

- File Upload
- Hyperlink
- Additional Comments

Optional Documents

- Please attach any additional documents here.

Appendix 3: Qualitative Codebook

Code	Subcode	Description	Example
Team Creation		External factors or situations that influenced the creation of the DST.	The team was created in response to a 2017 mayoral mandate to consolidate IT services.
	Mandate	References to specific authorizations from government bodies or documents that led to the formation of the DST.	The team was formed due to a legislative requirement.
	Strategic Initiatives	References to strategic organizational changes brought about by the creation of the DST, aiming at broader impacts.	The team was designed to modernize digital services and integrate them across the city's departments.
Organizational Structure		Instances describing where the DST is positioned within the broader governmental structure.	The DST is positioned under the Department of Technology, which aligns with the city's strategic tech initiatives.
Team Composition		Captures specific job titles, team makeup, and responsibilities within the DST.	DST roles include web developers, software engineers, and UX designers, each with specific responsibilities outlined in the organizational charter.
	Cross-Functionality	Refers to instances where team roles are flexible and members might take on tasks outside their primary job descriptions.	Despite being hired as software developers, team members frequently engage in user research and design tasks.
Budget		References to overall budget figures, funding sources, and financial planning for the DST.	The DST has a budget of \$3.5 million with funding being secured through enterprise funds.
	Constraints	Details the limitations or challenges faced in the budgeting process of the DST.	Due to state budget cuts, the DST's funding was reduced by 10% this fiscal year.
	Funding Models	Describes how the DST is funded, including the types of funding and financial mechanisms used.	The DST relies primarily on grants from federal technology initiatives and partial funding from the city's general IT budget.
Challenges		Identifies various difficulties, obstacles, or barriers faced by the DST.	The DST faces challenges related to shrinking budgets and bureaucratic resistance.
	Culture	Focuses on the values, beliefs, and norms within the DST that influence its operations and effectiveness.	A risk-averse culture in the city government impacts the DST's ability to implement innovative projects.
	Stakeholders	References the internal and external groups that interact with or influence the DST.	DST managers regularly meet with city council members to align project goals with municipal priorities.
	Finance	Captures issues specifically related to the financial aspects of running the DST.	The team's budget has remained flat for the past three years, complicating efforts to expand services.
Best Practices		References to strategies that facilitate successful digital service teams.	The DST has been able to navigate political challenges through successful partnerships.
	Storytelling	Identifies strategies, methodologies, or actions that have proven effective for Digital Service Teams in enhancing their operational efficiency, fostering innovation, and delivering high-quality digital services.	The DST publishes quarterly reports highlighting successful projects and innovations to improve visibility and support.
	Culture of Learning	Emphasizes the practices within the DST that promote learning, adaptation, and feedback.	Monthly workshops and guest speaker sessions are part of the DST's learning culture to keep the team updated on the latest tech trends.
	Cross-Functionality	Similar to the code under Team Composition but focused here on best practices that enhance team collaboration and skill sharing.	Cross-functional teams are formed for major projects, allowing for a dynamic exchange of skills and ideas.

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