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Digital Government in Action: Ecosystem-Driven Co-creation

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Initiatives: Government Digital Transformation and Innovation

CIOs can accelerate their transition to digital government and deliver tangible benefits by partnering and collaborating with stakeholders on human-centered design and data reuse. A New York agency offers a successful digital approach that centers on design and ecosystem partnerships.

Overview

Key Challenges

- Government agencies don't have a sufficiently good understanding of the priorities of the stakeholders and leaders in the community being served.

- Government services created using an inside-out approach — where services are designed, developed and delivered in isolation — often fail to meet user needs and expectations, leaving them underwhelmed and, in many cases, frustrated.

- One-off or sporadic engagement of stakeholders for research or consultations purposes will undermine the success of the co-creation and will fail to identify shifting priorities and needs over time.

Recommendations

Government CIOs optimizing and innovating their IT operations and transitioning to a digital government should:

- Build a solid understanding of the ecosystem surrounding the primary service recipients by mapping the ecosystem and applying human-centered design (HCD) techniques to identify the needs and drivers of constituents and system users.

- Engage stakeholders in a discovery exercise to develop a complete picture of the information required and currently available across the ecosystem to ensure that the needs of all key stakeholder groups can be satisfied and duplication is minimized.

- Create a win-win model for stakeholder collaboration by establishing a co-creation practice based on a charter that clearly identifies the role of stakeholder advisors when it comes to

guidance on functions and priorities. This is so stakeholders can understand the benefits of collaborating on service design.

- Ensure co-creation is sustainable beyond the initial collaboration by maintaining the commitment to the consultation process throughout the design and improvement phases for new services and enhancements to existing services and demonstrating how the consultation has shaped the design.

Strategic Planning Assumption

By 2023, 60% of governments will have HCD techniques integrated into their digital service design techniques.

Introduction

Governments engaged in delivering services through an ecosystem, like those often seen as social programs and human services or public safety, must adopt collaborative and inclusive practices to drive their transition to digital government. Digital government requires that CIOs guide their organization and the ecosystem to bring the correct skills, technologies and approaches together to achieve their digital ambitions (see "Business Trends in Government, 2019-2020: Engaged Ecosystems" and "Business Trends in Government, 2019-2020: Collaborative Innovation").

Developing digital government services in a vacuum based purely on the government process results in an "inside-out" perspective and in services that often do not meet constituent needs and expectations. However, just taking an "outside-in" approach that looks at the service design from the user's perspective and uses empathy to determine the needs of the individual user does not guarantee success.

CIOs must engage constituents and stakeholders in the design and development process to drive beyond an outside-in approach to one that is constituent-value-focused and data-driven. Stakeholders and ecosystem partners provide both awareness of constituent interactions with services and a view of the data needed to effectively execute services and support providers across the ecosystem. Direct constituent involvement in the design and development of services makes systems more intuitive and provides a better experience and increases the chance of acceptance and adoption. Toward that end, digital is changing how governments deliver services, and the co-creation of services with constituents and stakeholders is essential to meeting their expectations.

Co-creation is a practice that combines constituent and stakeholder engagement and HCD to create or improve digital services. But this must be achieved in a structured way that creates a productive outcome from the collaboration (see Figure 1).

Figure 1. Steps to Follow When Co-creating With Ecosystem Partners

Steps to Follow When Co-creating With Ecosystem Partners

Understand the Ecosystem → **Engagement and Discovery** → **Create a Win-Win** → **Sustainable and Continuous**

Source: Gartner
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Engaging constituents and stakeholders from across the ecosystem to understand their needs and have them participate in the design and development process requires a continuous effort. CIOs must work with business leaders and the community to establish a clear understanding of expectations for those engaging in the co-creation process, and provide communication channels for seeking their feedback on the process. The New York City Department of Social Services is a real-world example of a government agency that has leveraged co-creation across the ecosystem to drive business outcomes through a new solution (see the Case Study section). [1] Constituent and stakeholder insights from visioning sessions, design reviews and testing provide a means to prioritize development efforts.

HCD is defined as an International Organization for Standardization (ISO) standard (ISO 13407:1999), but from a contemporary government perspective, HCD is an approach where people that use government services are involved in the actual design process (see "Government CIO Essentials: Use Human-Centered Design to Build Better Services"). In fact, many governments are already using life events to deliver proactive services to citizens and business (see "Digital Government in Action: 3 Practices to Transform Life Events Into Digital Civic Moments").

In response to the COVID-19 pandemic, governments have, with unprecedented skill and agility, launched many new digital services. The pandemic has emphasized the need for government to efficiently leverage the ecosystem in delivering services. As governments move through the recovery and renew phases after the pandemic, engaging with the ecosystems in co-creation is essential to ensure that these new services are efficient, effective and offer a quality experience. Governments that do so will take a large step in advancing their digital program.

Analysis

Benefits of Ecosystem-Driven Co-creation Across Government

Ecosystem-driven co-creation is applicable to all regions, tiers of government and many of the verticals within government. Many governments around the world are now doing user research as part of their service design. However, co-creation is rare, as few development projects are scoped with time allotted to working with partners in developing the solution. With the correct planning and ecosystem engagement, this improved means of developing solutions can be used by

governments at all tiers and in each subvertical (that is, public safety, tax and administration, health and human services, transport, and K-12 education).

Regions

The structure of government in different regions of the world may pose some unique nuances to co-creation. Governments that have a stronger top-down leadership structure may be in the position to more effectively direct departments or ministries to engage in co-creation. For these governments, the bigger challenge will be getting full commitment from the agencies to find the value of co-creation, not just providing it with a cursory acknowledgment. For governments with a coalition leadership structure, such as those using a parliamentary structure, CIOs will need to focus on "selling" the value of co-creation to the leaders of each ministry or department to maximize the use of co-creation across the government. This is often the focus of many of the efforts to identify and deliver improved experiences for key life events, as outlined in the case studies in "Digital Government in Action: 3 Practices to Transform Life Events Into Digital Civic Moments."

K-12 Education

There are plenty of opportunities for co-creation within the school sector. But they vary, depending on the structure of the education systems, and CIOs must balance efforts to partner effectively within student data privacy laws and considerations.

Central education departments are called on to co-create digital solutions with the schools that will be the consumer of the solution. For example, co-creation is essential when implementing a new learning management system aimed at supporting a wide range of schools with different needs and priorities.

But this is only the start of co-creation in K-12. The ecosystem surrounding education continues to grow more complicated. Public agencies frequently partner with school organizations to provide services to students, as it is often the only reliable way to find these students. This requires co-creation of systems that allow for sharing the data needed to streamline those services, and honoring existing data access limitations. For instance, a school counselor might partner with local private or hospital-based behavioral therapists to support students with emotional or behavioral disabilities. CIOs might lead co-creation efforts to create a meaningful interface to allowable school data by engaging therapists in the development effort.

Students, teachers, parents and guardians are all important stakeholders in the ecosystem. However, a complete view of the ecosystem includes other government departments, educational institutions and community organizations to name just a few.

Public Safety

As public safety is a broad ecosystem that extends from national, state and local governments; K-12 schools; private security firms; volunteer departments; and beyond, it presents numerous opportunities to engage partners in co-creation. As an example, government agencies that are

supporting and regulating volunteer forces can enhance operational collaboration efforts and the collection of data for more-effective service delivery through the implementation of mobile apps. In the U.S., there is support for such efforts through hackathons and other efforts offered through FirstNet and the major cellular carriers. By engaging with representatives of local first responder organizations, such as police, fire, ambulance and emergency medical services, in the development of these solutions, provincial or state emergency preparedness agencies can develop apps that support their efforts and those of the ecosystem partners.

Health and Human Services

The vast majority of social programs and human services are delivered within complex ecosystems of organizations centered around helping individuals in need. The role of any single government organization can vary from region to region, but can also vary from case to case or over time.

The case study later in this research focuses on a social program where the government funds, regulates and monitors the underpinning programs that include both government and community organizations.

Almost every social program and human services could be used as an example of where ecosystem co-creation can be used to improve the design of a solution. One area where there are examples that are being seen across the globe is focused on child safety. Multiple government organizations, community groups, schools and law enforcement are working together to design solutions built around data sharing that are aimed at identifying and protecting children at risk.

Build a Solid Understanding of the Ecosystem Surrounding the Primary Service Recipients by Identifying the Needs and Drivers of Constituents and System Users

To leverage co-creation across partners, it is essential to have a comprehensive understanding of the ecosystem (see "Government Ecosystem Maps Build Preparedness and Power Innovation During Disruption"). Failing to do so can create an imbalance in the competitive landscape of the ecosystem, resulting in increased isolationism and a less collaborative environment. To ensure an even or balanced playing field for participants in an ecosystem, it is essential to map those participants, define the rules of engagement, establish plans for common capabilities and identify the value each will achieve from the ecosystem.

Ecosystem mapping efforts must remain focused on the constituent or the target user for the service. This will provide both a means to drive common ideals related to citizen/customer experience through all ecosystem partners and also avoid any organization from being, mistakenly, seen as the center of the ecosystem. Any organization, including a government department, that sees itself as the center of the ecosystem can create a perceived imbalance in the co-creation efforts.

Government CIOs driving ecosystem development for co-creation must:

- Direct the development of a constituent-focused ecosystem map that identifies current participants, rules of engagement, common business and technology capabilities, and the value of participation, and how they impact the services delivered to the constituent.

- Keep participating organizations focused on the value created from participation in the ecosystem by regularly updating ecosystem maps and reporting on this value to participating organization leadership.

Engage Stakeholders in a Discovery Exercise to Develop a Complete Picture of the Information Required and Currently Available Across the Ecosystem

Information exchange is the underlying infrastructure of an ecosystem, and data is the ecosystem's primary asset. An early stage for co-creation activities is to create a common understanding of the data involved — this could include data collected by the individual stakeholders, government, or other open or even crowdsources — and plan for data orchestration. Unlocking the common potential for these is essential to driving co-creation within the ecosystem. This is necessary to establish transparency and trust among the various ecosystem partners.

Using a two-pronged approach to data can provide both current-state and desired future-state understanding among partners. Firstly, work toward a common data model and shared data orchestration that include the relevant data from across the ecosystem. Secondly, use design thinking techniques to identify business or mission opportunities that could be achieved by sharing data elements in the future. Regardless of whether you are exploring existing datasets or possible future shared data scenarios, both privacy and ethics considerations must be at the forefront of all involved in the co-creation.

When mapping existing datasets to establish a common data model, co-creation teams must develop a common understanding of the data and its perceived quality. Where possible, data quality issues must be addressed at the origin point, ensuring that all stakeholder needs can be satisfied, and duplication of data cleansing efforts is minimized.

Government CIOs leading ecosystem stakeholders in information discovery must:

- Guide partners in identifying and addressing data quality issues by emphasizing the essential nature of this primary ecosystem asset.

- Leverage data orchestration and ecosystem maps to identify potential new opportunities for value creation by evaluating the future impacts of potential opportunities and ecosystem disruptors.

Create a Win-Win Model Where Stakeholders Understand the Benefits of Collaborating on Service Design

Establish a co-creation practice based on a charter that clearly identifies the role of stakeholder advisors when it comes to guidance on functions and priorities. Define the regular updates that will be provided to leadership in participating organizations to include reporting on common key performance indicators and value created for the constituent and participants. Clear and regular communication is essential to ensuring that all parties understand the value they are creating and receiving through the participation in the co-creation process.

Co-creation provides an opportunity to increase the value for all ecosystem participants by defining the collective approach to developing common capabilities. Clear definition of how intellectual property created during the co-creation process will be managed and shared, and value from it captured and shared, if appropriate, promotes transparency in the processes. Leaders from participating organizations will need to understand this to ensure the development and continuation of trust in the process.

The co-creation process will also continue to reveal the needs and drivers of participating organizations. This information should be used to regularly update the ecosystem map and identify opportunities and risks that could impact the ecosystem and the co-creation process. Sharing this information, where confidentiality or competitive advantage will not be compromised, between ecosystem partners can be leveraged to strengthen all participating organizations through improved data-driven decision making.

Government CIOs leading stakeholders in understanding the benefits of co-creation service design must:

- Communicate value created through ecosystem participation to all stakeholder organizations' leadership through regular communication mapped to their goals and objectives.

- Establish a process for governing the development of intellectual property developed as part of the co-creation process.

Ensure Co-creation Is Sustainable Beyond the Initial Collaboration by Continuously Engaging the Community

Sustained participation in co-creation is essential to maximizing the value created for the constituent and the ecosystem (see "Eight Ways Ecosystems Supercharge Business Models"). Participating organizations must remain engaged through the design and improvement phases for new services and enhancements to existing services. Failing to do so increases the risk of failure for both existing projects and future endeavors.

Participants in the co-creation process must feel that they are listened to and that they are making an impact to continue to engage. Active participants in the co-creation process must have tools to foster collaboration and decision making, regardless of location and time. To begin engaging potential new participants, a clear way to solicit feedback and comment from those that are not

directly involved is needed. Leaders need to focus on closing communication loops for each set of participants to maximize their participation.

Regardless of efforts to keep individuals engaged, attrition should be anticipated. Individual and organization interests in an effort will wax and wane, participants will leave organizations or take on new roles, and priorities will shift. Leaders need to foster relations through networking with both current and potential ecosystem partners that will provide new participants for co-creation efforts.

Government CIOs driving efforts to sustain co-creation initiatives must:

- Promote collaboration and clear decision making through the use of workstream collaboration tools.

- Use networking opportunities to identify potential new participants in co-creation efforts by aligning individuals interests and skills with existing and new initiatives.

Case Study

This case study was developed through interviews with personnel of the New York City Department of Social Services from May 2019 through July 2019. [1]

New York City Leverages Digital Government Strategy to Improve Homeless Services

The New York City Department of Social Services (NYC DSS) is a real-world example of a government agency that embarked on an initiative using co-creation across the ecosystem, which produced a solution that is delivering results.

Launched in April 2016, Homeless Outreach & Mobile Engagement Street Action Teams (HOME-STAT) is a comprehensive street homeless outreach program through which hundreds of highly trained, not-for-profit outreach staff canvass the streets and proactively engage homeless New Yorkers.

As a part of the HOME-STAT initiative, the NYC DSS and NYC Department of Homeless Services (DHS) created StreetSmart, a case management system. It allows street outreach Providers [2] to access client case details, outreach progress and social services data while an individual is experiencing street homelessness and after they have accepted services, come indoors to a permanent or transitional setting, and/or are receiving aftercare. According to the DSS Commissioner, the partnership across city agencies that have engaged an expansive group of experts, data and technology has been critical in developing an innovative solution to a significant challenge for the city. [3]

The Situation

Before StreetSmart, the NYC DHS operated a manual system, coordinated through 311, which transmitted an outreach request to a Provider team, a process that was not capable of fulfilling the needs of multiple and disparate stakeholders quickly and efficiently.

This process was time-consuming and labor-intensive, relying primarily on phone calls and emails, leading also to delayed responses, reduced availability to handle incoming requests and data errors. It was arduous for outreach Providers during their proactive canvassing efforts.

Engagement Process

DHS recognized the need for a more-streamlined approach that involved:

- Requirements-gathering from IT, the business and stakeholders

- A focus on data standards and a common data model

- Agile development of the solutions, starting with a minimum viable product (MVP)

- The use of data analytics to drive value in the ecosystem

With a goal to be more collaborative in developing solutions with the business, IT rolled out enabling processes, such as agile and HCD, and expanded the organization's data program for homeless individuals.

The business, IT, the Mayor's Office of Operations and Providers were all involved in the design process. Engaging with end users drove an impactful solution and increased uptake.

The team focused on interoperability with the CARES system and Provider systems, ensuring that data and information can flow from one system to another, a key requirement for the business. This necessitated that they negotiate a common data model, requiring the stakeholders to compromise.

The robust engagement plan, built with two-way communications at its core, was essential to success in developing StreetSmart for the Providers. Biweekly meetings were held with Providers, the Mayor's Office of Operations and DHS to provide updates, get feedback and prioritize requirements. A substantial need that arose from these interactions was the importance of Provider access to the data, which led to the development of APIs in the system.

The process was not without difficulties. From a business perspective, StreetSmart's agile processes faced challenges with existing administrative procedures established to support waterfall methods. To overcome this, the team collaborated closely with the IT budget office, the Mayor's Office of Operations and others to manage the contract. This led to stronger governance processes overall. For IT, a key challenge was devising common ground among stakeholders as to what should be included in the MVP.

Delivering Results

In the end, the IT team developed an integrated solution that includes a suite of products. There are four major components: a case management system, APIs to enable real-time data sharing

between DHS and Providers, integration with the City's new 311 system and a Provider Response Mobile App. [2]

Dispatchers use the case management system to assign requests to specific outreach workers, depending on team location and current workload, a significant improvement in the efficiencies of the process.

APIs developed as part of the program enable the sharing of contextualized data between Providers and DHS. Providers have successfully used this data to respond to state and federal requests for data and applying for grants.

The integration with 311 has been a great overall benefit to the ecosystem of Providers. The Providers can now respond within an hour, with a one-button click to reach the teams.

The mobile app provides the outreach teams with the ability to record outcome data from the offer of assistance to a homeless person in real time that is contextualized by location.

One of the biggest benefits from the initiative is the collection, use and analysis of accurate, real-time data by the entire ecosystem. For example, metrics on concurrent users, canvassers and case workers engaged in counting and serving the homeless are available to IT, the business, 311 dispatch and the public. The data scientists developed capabilities to provide predictive and proactive recommendations related to homeless services' needs. The success of this program has fueled the business's belief in the power of being data-driven.

StreetSmart now offers its stakeholders a central record system for all Providers; consistent, electronic reporting to state and federal agencies and grant Providers; greater visibility into case history for Providers; and reporting by city agencies to the public.

The agency has seen the benefits from using agile and engaging in a collaborative approach. A key finding for DSS is that, although it is more investment, the business and constituents get a better product in the end when they engage with IT in this collaborative manner.

Evidence

[1] Sources for the case study with the New York City Department of Social Services included:

- Ricardo Browne, executive deputy commissioner/CIO

- Ijeoma Genevieve Mbamalu, assistant deputy commissioner for the Department of Homeless Services Technology

[2] The Street Homeless Solutions providers who worked on the co-creation of StreetSmart were Manhattan Outreach Consortium, Project Hospitality, BronxWorks, Breaking Ground and Bowery Residents Committee.

[3] "Mayor's Office for Economic Opportunity Launches New Cross-Agency Innovations to Improve Services for New Yorkers," NYC.

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