

Human-centered design

Creating easier, more engaging health care experiences



In a technology-driven world, it's important to not lose sight of the human element. Human-centered design builds technology and programs that are easy and intuitive for consumers to use. This approach puts the consumer's needs in the center of the design and conceptualization, while also considering the business objectives.

Federal government agencies work to bring the same seamless experience to the populations they serve that many private sector businesses bring to their end users. Several government initiatives have paved the way for this transformation, such as the 21st Century Integrated Digital Experience Act (IDEA), which calls for modernization of websites, digitizing services and forms, accelerating the use of e-signatures and improving the consumer experience.¹ Applying human-centered design in the federal space helps the government offer the public a consumer experience that is similar to what they receive from their favorite private sector brands.

The principles of human-centered design

According to Gartner, 40% of all data analytics projects will relate to an aspect of customer experience in 2020.² That puts even more pressure on the federal government to keep up with the private sector to ensure the trust and satisfaction of their constituents. In order to find ways to improve human-centered design, it is important to first understand the primary principles.



About Optum Serve

Optum Serve is the federal health services business of Optum and UnitedHealth Group (NYSE: UNH). We are proud to partner with the Departments of Defense, Health and Human Services, Veterans Affairs and other organizations to help modernize the U.S. health system and improve the health and well-being of those we collectively serve.

Human-centered design primary principles include³:



Equitable use

The design does not disadvantage or stigmatize any group of users.



Flexibility in use

The design accommodates in a wide range of individual preferences and abilities.



Simple intuitive use

Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills or current concentration level.



Perceptible information

The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.



Tolerance for error

The design minimizes hazards and the adverse consequences of accidental or unintended actions.



Low physical effort

The design can be used efficiently and comfortably, and with a minimum amount of fatigue.



Size and space for approach and use

Appropriate size and space is provided for approach, reach, manipulation and use, regardless of the user's body size, posture or mobility.

The U.S. Digital Service, a unit within the Executive Office of the President, created the Digital Services Playbook to increase the success rate of government digital services projects. It takes into consideration the principles of human-centered design by focusing on the needs and inclusiveness of the populations served. The Digital Services Playbook outlines 13 key “plays” drawn from successful use cases in both the private and public sectors.⁴ As a partner of federal agencies, Optum Serve executes the 13 key plays to consistently deliver easy-to-use technology to the constituents we support.

The Digital Services Playbook 13 key plays:

1. Understand what people need
2. Address the whole experience, from start to finish
3. Make it simple and intuitive
4. Build the service using agile and iterative practices
5. Structure budgets and contracts to support delivery
6. Assign one leader and hold that person accountable
7. Bring in experienced teams
8. Choose a modern technology stack
9. Deploy flexible hosting environment
10. Automate testing and deployments
11. Manage security and privacy through reusable processes
12. Use data to drive decisions
13. Default to open

Oftentimes, when people think of human-centered design, they immediately think about digital experiences. While digital experiences are extremely important, human-centered design is also crucial during the creation and implementation of government programs. Beneficiaries of government health care programs expect intuitive processes as they navigate these systems, such as eligibility determination, care plan development and service delivery – to name a few. Developing programs through the lens of a beneficiary helps generate better overall program results and provides beneficiaries with a better health care experience.

Aligned to assist federal agencies

Optum Serve can help federal agencies meet their digital health care and programmatic goals using human-centered design. Optum has matured this approach over many decades, producing numerous best practices to share and leverage with our federal customers.

For example, listening, interpreting, acting and monitoring the needs of consumers improves health care technology and programs based on the feedback and requests from end users.



Optum Serve also implements the following human-centered design approaches:

Prototypes: Leveraging prototypes within the design process allows key stakeholders throughout the process to visualize the transformation of key program requirements into interactive user flows. Prototypes guide design teams on a singular vision for seamless translation of the program or technology's value to a user's motivations and abilities. Prototypes are foundational tools for client and business alignment and consumer validation through usability tests.

Usability testing: By testing technology on users prior to complete implementation, Optum Serve successfully validates assumptions on how consumers will interact with the product and consume critical call-to-action information. Tracking missteps in the test cases allows us to iterate on the designs with minimal impact to the overall cost of the product. By testing early and often, Optum Serve elevates the experience with minimal adverse impact to the broad population once fully released.

Personas: Using research and data, Optum Serve creates consumer personas to help understand an end user's expectations, needs, behaviors, demographics and goals. These characteristics are ultimately reflected in the design of technology and process to generate positive user experiences.

Health care's complexity makes it important to produce programs and technology that lessen not only complexity for those receiving care, but also those delivering the care. Within the health care system, considering the multiple end users through quality, data-driven personas can help agencies decipher where to alter process or design at various points in the health care journey.

Prototype and usability testing past performance:

In support of a digital product design for a federal agency, Optum Serve produced **site maps** and conducted **card sorting exercises** to establish the site's information architecture. **Wireframes and interactive prototypes** were then created to further visualize the site and its user interactions, followed by **user testing and surveys** to validate and iterate on design decisions.

Persona past performance:

Optum Serve conducted **interviews with staff** of a federal agency client in order to better understand their day-to-day operations and possible abrasion points. This helped us create a persona that was used to **educate our development and implementation** teams supporting that particular agency project.

Journey mapping: The exercise of journey mapping helps place ourselves in the shoes of those we serve by visualizing every step in a process as experienced by the end user. By defining the perceptions and feelings of the constituent throughout their journey, pain points that may have a detrimental effect on the constituent's health, well-being and overall experiences can be discovered. With this knowledge in hand, deliberate action can be taken to improve existing programs or develop new programs. Optum Serve collaborates with federal partners to create and leverage journey maps to help improve the programs we support.

Use cases: Use cases crosswalk our personas' points of view across the program journey and how they interact with the technology. Defining unique use cases drives the depth and breadth of the design, helping to make important actions more easily attainable and accessible to the user. Use cases drive the prototype designs and further act as the foundation for test scenarios in usability testing.

Simplifying health care

Optum Serve is built on the values of integrity, innovation, performance, relationships and compassion, and as technology continues to touch more aspects of our daily lives, we recognize the importance of creating human-centered technology and programs to meet the health care needs of those we serve. Human-centered design has the power to help simplify health care and create better consumer experiences, resulting in a healthier and happier population.

1. U.S. Digital Service. 21st Century Integrated Digital Experience Act. November 1, 2019. Accessed December 2, 2022.
2. Gartner. Gartner says 25% of customer service operations will use virtual customer assistants by 2020. February 19, 2018. Accessed December 2, 2022.
3. Institute for Human Centered Design. Principles. 2006. Accessed December 2, 2022.
4. U.S. Digital Service. Digital Services Playbook. Accessed December 2, 2022.

Journey mapping and use case past performance:

Optum Serve created **prospective journey maps** for a federal client to support the implementation of a health care delivery program. The journey maps focused on the engagement between patients and providers from the initial onboarding stage through the delivery of care to claims submission and prescription fulfillment. These visualizations of the patient and provider journey enabled the federal agency and Optum Serve to **identify potential abrasion points** and opportunities for additional communications with these constituents.

Learn how Optum Serve can help federal agencies create human-centered technology and programs.

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