

DESIGN THINKING

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INTRODUCTION

What comes to mind when someone says to think like a designer? What steps are necessary to develop a solution? A designer would empathize with the user, define the problem, generate ideas, build prototypes, and conduct testing until he or she gets to the right solution. This is a perfect illustration of how a designer thinks in an effort to transform the way products, services, and processes are developed.

Design thinking is the formal process of creating new, innovative ideas and solving problems. According to [a Harvard Business Review](#) article, design thinking is a set of principles used as an approach for developing an open and flexible culture. These principles are empathy with users, discipline of prototyping, and tolerance for failure. This Tech Insight provides an introduction to design followed by a history and overview of design thinking and Human-Centered Design (HCD). It also includes a supplemental toolkit overview from the VA Center for Innovation's (VACI) "Toolkit for Human-Centered Design." Lastly, this Tech Insight explores how these concepts are being applied at the Department of Veterans Affairs (VA) and what future possibilities they hold for serving Veterans.

DESIGN AS A PROCESS

To start, consider what "design" means. In [Design a Better Business](#), design is defined as "a disciplined approach to searching, identifying, and capturing value." The key to design and tools is iteration. Designers move through a continuous and iterative approach as they observe the world, create and validate options, and execute the best solution. Design is about embracing uncertainty, focusing on solutions, and preparing via prototyping.

HISTORY OF DESIGN THINKING

Design thinking has been around since the 1960s. The cognitive processes for creativity arose from [Herbert A. Simon's](#) 1969 book *The Sciences of the Artificial*, which Simon devised three stages in rational decision-making: Intelligence, Design, and Choice (IDC). [Robert McKim's](#) 1973 book, *Experiences in Visual Thinking*, expanded upon Simon's ideas by focusing on the ways in which perceptual thinking skills can be observed, utilized, and improved. In the 1980s, [Rolf](#)

[Faste](#) expanded on McKim's work by defining and popularizing the concept of design thinking as a method of creative action to actualize concepts and ideas.

Design thinking was adapted for business purposes by Faste's colleague, [David M. Kelley](#), who founded the innovation and design firm [IDEO](#). IDEO's Chief Executive Officer (CEO) [Tim Brown](#) defines design thinking as "a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success."

OVERVIEW OF DESIGN THINKING & HCD

At the heart of IDEO's definition is the concept that the [customer drives](#) the current and future state of business. Design thinking "makes the customer the main focal point of design for any solution. It consistently applies the values embraced by this approach, such as empathy, diversity, and ambiguity." Design thinking incorporates these items into a repeatable and logical process.

What is the key difference between design thinking and HCD? Design thinking is referred to as the system approach that provides a methodology, while HCD is an overarching framework of processes that integrates a broad set of practices and tools to understand customers.

VACI's "A TOOLKIT FOR HUMAN-CENTERED DESIGN"

The [VA Center for Innovation](#) (VACI) describes HCD as a process for problem solving that focuses on human needs and takes an innovative and repetitive approach to finding new solutions. In 2015, VACI developed "A Toolkit for Human-Centered Design," which introduced the HCD process, goals, and activities that VA employees can use to design and deliver new programs, services, and products. VACI's Toolkit aims to put people at the heart of VA's innovation efforts by focusing on gaining a deeper understanding of customers by being open-minded, collaborative, and adaptive.

The Toolkit outlines a HCD process comprised of four main stages: Frame, Discover, Design, and Deliver. Within each stage there are four to five steps, related activities, and a checklist to ensure completion before the next stage. During the *Frame* stage, the team makes decisions regarding the project's boundaries. At the end of this stage, the team develops a problem statement and project plan or charter. During the *Discover* stage, the team engages with Veterans and stakeholders in an effort to better understand the problem and customers. Before moving to *Design*, the team produces a research findings report with contextual (i.e., trend analysis) and ethnographic (i.e., interviewee profiles) materials. In the *Design* stage, the team starts applying insights by brainstorming solutions, iterating on prototypes, etc. The

designers move to the final stage once the team knows how the prioritized concept plan will impact the customer. During the *Deliver* stage, the team finalizes a concept with a business case, roadmap, metrics, etc.

Each step provides guidance and tools to help support the designer. The Toolkit includes templates (i.e., Empathy Map and Customer Needs Assessment), additional resources, and case studies. The Toolkit also provides employees with a means for maintaining compliance with the Veteran-Focused Integration Process (VIP) and helps projects to remain customer focused.

HCD IN PRACTICE AT VA

VA's approach to improving the experience and care of Veterans is shaped by innovation and improvement approaches. HCD is how VA is designing better experiences and interactions between Veterans and VA employees. This also includes the care and services VA provides like using [mental health care intake forms](#), treating post-traumatic stress disorder (PTSD) patients, and designing patient experiences that address their needs. HCD practitioners at VA are focused on understanding Veterans' and employees' needs, desires, and values to shape potential solutions and prototypes. The process includes mapping out the current user experience and defining their touch points with service providers and stimuli. Then, gaps and pain points are identified, and a target state journey map is developed. The designer works directly with those affected Veterans to develop a solution around their pain points to improve their experience.

CONCLUSION

Now what comes to mind when someone says to think like a designer? How would a VA employee work to find innovative solutions by keeping Veterans at the forefront? Design thinking provides an approach for creating new and innovative ideas and solving problems. Thinking like a designer and leveraging VACI's Toolkit and HCD resources and practitioners can help to transform the way VA develops products, services, and processes for Veterans.

Read more about [VACI's Toolkit](#) and [Human-Centered Design VA Pulse page](#). If you have any questions about design thinking or HCD, do not hesitate to [ask TS](#) for assistance or more information.

TS TECH INSIGHT SERIES

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level overviews of technology issues that impact or will impact VA's Information Technology (IT) environment. Tech Insights introduce topics in an easily digestible fashion by presenting background information on the topic, clearly explaining its importance within VA, and providing recommendations for success from TS. View all TS Tech Insights [here](#).

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