

Facilitate a virtual technology development sprint that engages cross-sector collaborators to transform federal open data into digital tools that solve key national challenges at the heart of your agency's mission.



Before you start

Fill out an Interest Form to connect with us and get support!

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Introduction

What is the TOPx toolkit?

The Opportunity Project (TOP) brings technologists, government, and communities to rapidly prototype digital products—powered by federal open data—that solve real-world problems for communities across the country. TOPx is an adaptable toolkit for federal agencies, developed by the TOP team at the U.S. Census Bureau, that enables other federal agencies to facilitate virtual technology development sprints that address key national challenges. To learn about TOP, check out the Process and Roles pages.

Unlike an ordinary TOP sprint, which is facilitated by the team at the U.S. Census Bureau and focuses on challenges identified by multiple federal agencies, a **TOPx sprint allows federal** agencies to utilize the **TOP model and resources to**:

- ✓ Identify priorities at the heart of an agency's mission that require data and technology innovation
- ✓ Recruit cross-sector participants
- ✓ Facilitate a virtual technology development sprint on a flexible and modifiable timeline

What's included?

- √ Detailed step by step guide to facilitating a TOP sprint
- √ Each sequential step includes:

 - Downloadable templates (e.g. emails, outreach materials, facilitation guides)
- √ Technical assistance and collaboration from TOP team.

Why facilitate a TOPx sprint?

- ✓ Meet federal requirements to ensure reuse of your data
- ✓ Facilitate a lightweight, cost-effective, and modifiable virtual program
- √ Catalyze innovation within your agency
- Engage with data consumers and improve data quality

What's involved in facilitating a TOPx sprint?

- → Phase 1 Pre-Sprint Planning (~2-4 months)
 - □ Form a Facilitation Team Time: 2-4 weeks Effort: 2/4
 - Define Problem Statement(s) Time: 2-4 weeks Effort: 3 / 4
 - □ Recruit Sprint Participants Time: 1-2 months Effort: 4/4
 - □ Sprint Preparation Time: 2 weeks Effort: 2 / 4 effort level
- → Phase 2 Sprint Facilitation (~3 months)
 - Ongoing Tasks Time: 12-14 weeks Effort: 2/4
 - Kickoff Time: 1-2 weeks Effort: 1 / 4
 - User Research Time: 3-4 weeks Effort: 3 /4
 - Data Exploration Time: 2-3 weeks Effort: 3 / 4
 - □ Product Development Time: 5-6 weeks Effort: 1 / 4
 - □ Sprint Wrap-up Time: 2 weeks Effort: 2/4
- → Phase 3 Post-sprint (~2 months)
 - □ In-Person Event Time: 4 6 weeks Effort: 4/4
 - Post-Sprint Engagement Time: 2-4 weeks Effort: 1/4

Where to start?

- ✓ **Fill out an Interest Form.** The TOP team will reach out to give an overview of the process and provide a point of contact who can act as a resource and guide along the way
- ✓ **Explore our Glossary.** Facilitating a sprint requires no prior technology or product development knowledge, but for those new to the space it may be helpful to review some key terms
- ✓ Read the entirety of the toolkit before kicking off, as many of the steps are overlapping and require an understanding of the entire process



Phase 1: Pre-Sprint Planning

The first few months of TOPx involves pre-sprint planning. It will be important to form a team within your agency that will work on day-to-day operations, spread the word about TOPx within your agency, and identify a senior-level champion. Next, your team will engage others in the agency to define problem statement(s) for which sprint participants will develop solutions. After problem statement development, you will recruit sprint participants, who include tech teams, community leaders, advocates, individuals with direct lived experience, and data and policy experts from government.

Step 1: Form a Facilitation Team

Time: 2-4 weeks | Effort: 2/4

As you begin the process of planning a TOPx sprint, it is important to build a coalition around your sprint within the agency. *This step and the following (Define Problem Statements) can be done in any order, or concurrently.*

Key actions

- Spread the word about TOPx within your office and the broader agency
 - □ **Tip**: Consider holding an informational meeting, as well as utilizing agency newsletters, listservs, and broader communications. A modifiable information sheet is provided in Resources below
- Identify at least one senior agency official (up to your agency's Secretary, Administrator, etc.) who is aware and supportive of the sprint and can serve as your executive level champion
- Build a staff-level facilitation team. While a TOPx sprint may be facilitated by two people
 or eight depending on bandwidth, facilitating a TOPx sprint will require finding others
 within your agency to help you along the way
 - Tip: See Resources below for a list of roles, which may be combined or adapted to best meet your team's structure
- Begin meeting weekly as a facilitation team to efficiently distribute responsibility and share out progress

Resources

- → Introduction to TOPx Email
 - Modify this template email depending on the audience to spread the word about TOPx within your agency
- → <u>TOPx Overview for Agencies</u>
 Attach this information sheet when spreading the word about TOPx within your agency
- → TOPx Facilitation Team Potential Roles

 A list of potential roles for a TOPx facilitation team, which can be modified as needed

Step 2: Define Problem Statement(s)

Time: 2-4 weeks | Effort: 3/4

TOP aims to solve **real-world problems facing individuals and communities.** Problem statement development leverages your agency's unique policy expertise to **articulate specific national challenges requiring innovation,** for which tech teams develop solutions. Each problem statement will outline the **background and history** of the challenge, **potential end users** who would benefit from a digital product, as well as some **relevant data sets**. Be sure to review the Resources section below for guidelines, examples of past problem statements, and a template for writing your own.

Key actions

- Consider issue areas that are priorities for your agency, affect communities nationwide, and require data or technology innovation
- Develop 1-3 detailed problem statements
 - □ **Tip:** *To source problem statements, consider:*
 - √ Building a working group with representatives from across offices
 - ✓ Sending a broad request for statements to offices across the agency. Offices will submit problem statement proposals to the TOPx facilitation team
 - □ Each problem statement should include 1-3 points of contact/problem statement leads who will participate in sprint milestones, address policy and operational questions, and provide feedback on the products to tech teams
 - ✓ **Tip:** Problem statement leads are subject matter experts. They may be directors of policy offices, special advisors on policy areas, or others with expertise in the challenge

Resources

- → What Makes a Good Problem Statement

 Read guidelines for which problem statements are most effective and impactful
- → <u>Past TOP Problem Statements</u>

 Explore past problem statements to help you brainstorm and get a sense of the typical language
- → <u>Problem Statement Template</u>

 Use this template to draft problem statements

→ Problem Statement Support Form

Need support developing problem statements? Would you like the TOP team to read a draft of the statements? Once you fill out the form, a member of the TOP team will reach out

Step 3: Recruit Sprint Participants

Time: 1-2 months | Effort: 4/4

Collaboration is an essential part of the TOPx process. Each sprint includes technologists from industry and/or universities, data and policy experts from government, community leaders, and advocates. The recruitment process gets these collaborators on board to participate in the sprint. To get you started, we have provided essential outreach materials as templates under Resources below.

Key actions

- Identify start and end weeks for your sprint
 - □ **Tip**: To approximate a start date, consider that after you finish recruitment, you will need another 2-3 weeks to finalize sprint facilitation preparations. To decide on an end date, consider that a typical sprint is 12-14 weeks
- Create a detailed sprint timeline, including the number and frequency of milestones. See
 Resources below for a template
 - □ **Tip**: Some agencies will choose to increase the number of touch-points, for example by including a weekly check-in call, while others will have fewer touchpoints, for instance only two or three milestone calls
- Review explanations of sprint roles on the TOP website. A typical TOPx sprint will include policy experts (e.g., problem statement leads), data stewards, tech teams, and user advocates
 - **Tip:** Consider also identifying technologists from outside of government who can act as "product advisors" and offer tech teams product development and deployment expertise
- Modify the templates found under Resources to develop outreach emails and recruitment materials
- Develop a list of potential participants. See Resources for information on what to look for in potential participants
 - □ **Tip:** Engage your agency's partnerships team to leverage existing relationships

- Reach out to potential participants with relevant outreach emails and materials, including tech team or user advocate overview documents, problem statements and a timeline
- Engage with interested parties and share further information. Set up individual briefing calls
 - □ **Tip**: Consider also organizing a webinar or conference call to share information
- Begin developing a list of likely participants.
 - □ **Tip**: We recommend that a each problem statement include:
 - ✓ 3-4 tech teams
 - ✓ At least 2-3 user advocates
 - √ Where possible, 1 data steward for every data set
- Connect with problem statement leads within your agency to ensure they understand their role
 - □ **Tip**: Problem statement leads should be available to address policy and operational questions throughout the sprint and participate in all milestones
- Connect with data stewards to be sure they understand their role and identify additional data stewards as needed
 - □ **Tip**: Some data stewards were identified in the problem statement development step. Data stewards should be available to answer questions about data sets throughout the sprint and should plan to join the data exploration milestone, as well as both demos

Resources

→ Sprint Timeline Template

High-level timeline of the sprint, which you can modify to work best for your agency

→ Sprint Roles

Review the TOP website to learn more about each role in a sprint

→ <u>Tips for Identifying Potential Sprint Participants</u>

Information on what organizations sprint participants come from and what skills to look for

→ TOPx Recruitment Email

Modify this template email to recruit tech teams and user advocates

→ <u>Tech Team Role Overview</u>

Explain TOPx and outline the tech team role

→ User Advocate Role Overview

Explain TOPx and outline the tech team role

Step 4: Sprint Preparation

Time: ~2 weeks | Effort: 2/4

Once you have recruited sprint participants, take a few weeks to prepare before launching the sprint. Confirm participants and organize the communication methods you will use throughout the sprint.

Key actions

- Confirm participation of sprint collaborators
- Develop a technology communication infrastructure
 - ✓ Set up a digital communication platform. For agencies that approve its use, Slack allows users to share messages, tools, and files
 - ✓ Make sure you have access to a **phone dial-in** for facilitating milestone calls
 - ✓ Identify a video conferencing tool that is approved by your agency. Some check-ins (e.g., demos) are better facilitated by video conferences
 - **Tip:** If video conferencing is not an option within your agency, you may consider asking tech teams to tape a short video demo and send it in prior to the milestone
- Send a welcome email to all sprint participants. This email should include:
 - √ Sprint timeline
 - √ Finalized problem statements
 - ✓ A sprint participant contact list to encourage email communication between participants
 - □ **Tip**: Include all sprint participants, but also ask each organization to identify a main point of contact to make communication more streamlined
- Set a date for a kickoff call and send a calendar invitation to all sprint participants

Resources

→ <u>Slack Community Guidelines Template</u>

A set of standards to quide Slack communication during the sprint



Phase 2: Sprint Facilitation

Once you have developed problem statements, recruited participants, and spent some time preparing, you are ready to launch the sprint! In the next steps, you will find information on different phases of the sprint, including milestones, which are check-ins where facilitators and participants share resources and information, while tech teams provide progress updates and receive feedback. In addition to suggested timelines, we offer guidance of what to cover during each milestone and suggestions for how participants can use the time between calls.

Step 1: Ongoing Tasks

Time: 12-14 weeks | Effort: 2/4

This section outlines tasks that will be ongoing throughout the sprint that ensure the process runs smoothly. These tasks include scheduling and facilitating milestone calls, sending emails with key

actions sprint participants should be engaging in between milestones, and making connections between participants.

Key actions

- Read the entirety of the Sprint Facilitation Phase materials
 Send calendar invitations for milestone calls 1-2 weeks in advance

 Tip: Facilitating milestones at the same time and day of the week allows for the most effective cadence

 Develop a facilitation guide for each milestone call

 Tip: Use the template in Resources below and refer to the details in the following steps

 Facilitate milestone calls

 Tip: Assign a designated facilitator and note taker from your team

 Send emails and Slack posts with key actions sprint participants should be engaging in between milestones
- Connect tech teams with user advocates and data and policy experts

☐ **Tip**: Refer to details in the below sections for quidance

Monitor the progress of each tech team, and check in 1:1 as needed

Resources

→ Milestone Facilitation Guide Template

Use this template to develop facilitation guides for milestone calls

Step 2: Kickoff

Time: 1-2 weeks | Effort: 1/4

The kickoff call launches the sprint in the first week. This is an opportunity for all sprint participants to learn who else is participating, as well as to better understand the problem statements. During the kickoff phase, tech teams should be solidifying which problem statement they will be focusing on and beginning to develop a plan for their work during the sprint.

Key actions

Facilitate a kickoff call

✓ Sprint facilitators provide high-level information on the sprint process and timeline

✓ Sprint participants (e.g., TOPx facilitation team, tech teams, user advocates, problem statement leads) introduce themselves

□ **Tip:** It is not necessary for data stewards to attend this milestone

√ Agency problems statement leads offer background on each challenge

Resources

→ <u>Tips on Leading a Meeting with Remote Participants</u>

Explore this guide on best practices for leading meetings remotely

Step 3: User Research

Time: 3-4 weeks | Effort: 3/4

After the kickoff call, tech teams will begin user research. During this time, tech teams will connect with user advocates, who will offer insights into the communities they represent. A user research milestone call will provide an opportunity to check in with teams on their conversations with user advocates and others who can offer insights into the needs and challenges of potential end users. This phase of sprint facilitation is higher touch, as participants are just beginning to be onboarded and will likely require direction and introductions.

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Key actions

- Provide teams with resources on user research
 - **Tip:** Consider sharing some of the resources provided below
- Tech teams should begin connecting with user advocates to conduct user research and learn more about the needs and pain points of the communities they represent
 - √ Tech teams should also consider reaching out to additional advocacy organizations, service providers, or others with direct experience with the challenge
- Facilitate a user research milestone
 - ✓ Sprint facilitators emphasize that user research should be ongoing throughout the sprint
 - ✓ Tech teams share about their target end users, as well as plans for continued user research
 - ✓ Sprint facilitators, user advocates and problem statement leads provide feedback to each team, suggesting additional ways to reach potential end users

Resources

→ What is User Research

Offers an overview of user research, as well as additional resources to explore

→ How to Conduct User Interviews

Provides tips on how to develop interview questions and conduct user interviews

→ Empathy Isn't Enough

Written by a past TOP participant, this article is about the user research workshop, user interviews, and other methods they used to build a useful tool for youth experiencing homelessness

Step 4: Data Exploration

Time: 2-3 weeks | Effort: 3/4

After the user research phase, encourage tech teams to **begin exploring potential data sets**. A data exploration milestone offers teams an opportunity to **learn about relevant data sets from**

data stewards. Before and after the milestone, tech teams will begin connecting with data stewards via email and phone to learn more about available data sets and ask questions. This phase of sprint facilitation is higher touch, as participants are still being onboarded and will likely require direction and introductions.

Key Actions

Encourage tech teams to begin data exploration

- ✓ In addition to the data sets identified by the problem statement leads and data stewards, provide tech teams with additional resources to explore open federal data
 - **Tip**: Consider sharing the resources provided below
- ✓ In preparation for the data exploration milestone, tech teams can begin exploring the data sets and identifying questions they would like clarified by data stewards in the milestone call
 - □ **Tip**: Before the milestone, tech teams should have an understanding of what type of data they are looking for

Facilitate a data exploration milestone call

- ✓ Sprint facilitators emphasize requirement that products utilize open government data
- ✓ Data stewards provide introduction to data sets
- ✓ Tech teams give brief updates on what data they are looking for
- ✓ Q&A session facilitated by data stewards

Resources

→ Data.gov

Search over 200,000 data sets from federal agencies

→ Stack Exchange

A vibrant open data community, which is a great place to ask questions and find quick answers to your data and developer-related questions

Step 5: Product Development

Time: 5-6 weeks | Effort: 1/4

Over the course of the next 5-6 weeks, **tech teams will develop their products**. About 2 weeks into the product development phase, tech teams will **present initial demos of their product ideas**. **All sprint participants should join the demos** to offer each team feedback. *This phase of sprint facilitation becomes much lighter touch, as tech teams will be focused on product development*.

Key Actions

- Encourage tech teams to begin preparing for an initial demo by engaging in scoping,
 ideation, design and development
- Facilitate an Alpha Demo milestone
 - ✓ Sprint facilitators assign each tech team a short time slot during the milestone call, which is best facilitated via video conferencing. Tech teams share their initial progress
 - ☐ **Tip**: There will likely be significant variation in terms of progress and product maturity. Some teams may present powerpoint presentations with initial concepts, while others may have wireframes, mockups, or initial tools in progress
 - ✓ Sprint facilitators, user advocates, problem statement leads, data stewards, and other tech teams offer feedback to each team
- After the demo, encourage teams to:
 - ✓ Incorporate feedback from the demo
 - ✓ Begin testing their products. User advocates can help to identify potential end users who could serve as beta testers of the tools
 - ✓ Identify at least one key metric they plan to use for measuring usage and impact (e.g., number of downloads, number of users)
 - ✓ **Tip:** Consider sharing the resources provided below as tech teams continue product development, begin usability testing, and develop plans for measuring impact

Resources

→ TOP Product Development Toolkit

A resource that walks technologists through the TOP model for civic tech product development

→ How to Implement an Effective Usability Test

Key steps to effective testing include articulating a purpose, determining qualitative and quantitative metrics, choosing a comfortable setting, and recording sessions.

→ Analyzing Usability Testing Data

Analyze testing data by grouping insights into distinct categories and gather insights on your product.

→ <u>25 Actionable Mobile App Metrics You Should Track</u>

Suggestions for metrics to track when measuring impact of your tool

Step 6: Sprint Wrap-Up

Time: 2 weeks | Effort: 2/4

In the last two or so weeks of the sprint, start wrapping up the sprint. This will involve beginning to plan an end-of-sprint event or Demo Day, as well as facilitating final demos.

Key Actions

- Decide what kind of in-person event you will host after the sprint concludes
 - ✓ Tip: See the following phase for more detailed information
 - √ Set a date and time. Consider facilitating an event a few weeks after the end of the sprint
 - √ Identify a location. Typically Demo Days are held in auditoriums or conference rooms
 - □ Tip: An auditorium will be most conducive to offering each team a few minutes on stage to speak about their product ("lighting talks"), while a conference room is better suited for live demo tables, where each tech team is assigned a table with a screen to demo their product as attendees visit tables over the course of 1-2 hours
- Tech teams should begin to prepare for a Final Demo, where teams will present an MVP,
 or Minimum Viable Product, which has enough features to allow for testing

- Facilitate a Final Demo
 - ✓ Sprint facilitators assign each team a time slot during the milestone call. Each team will:

 - Walk through the user journey (the steps a user might take to interact with the tool)
 - Identify what federal data was incorporated during the sprint
 - ✓ Sprint facilitators, user advocates, problem statement leads, data stewards, and other tech teams offer feedback to each team
- After the demo, encourage tech teams to:
 - ✓ Incorporate feedback from the demo
 - ✓ With input from user advocates, continue to test their product
 - ✓ Develop plans for product development and deployment after the sprint
 - Tip: Tech teams can coordinate with user advocates and community organizations who can share the products with intended end users through their outreach platforms. Also consider sharing the resources provided below

Resources

- → <u>Knight Foundation Five Lessons From Investing in Civic Tech</u>

 Consider the importance of partnering with organizations that have existing heavy web traffic with your end users, as well as creating a strong physical presence in the community you seek to impact
- → <u>IDEO.org Start with People, Design for Partners</u>

 Consider some of these tips on developing impactful partnerships



Phase 3: Post-Sprint

Once teams have presented their final demos and the sprint has concluded, there are a variety of options for post-sprint engagement. We encourage agencies to host even a small in-person event to celebrate the conclusion of the sprint and the work that was done. There are also opportunities to continue engaging with participants after the sprint by tracking product metrics, offering funding opportunities, and connecting participants with the TOP Alumni Community.

Step 1: In-Person Event

Time: 4-6 weeks | Effort: 4/4

While the TOPx sprint is otherwise entirely virtual, hosting an in-person event is an opportunity to showcase and launch the tools developed through the sprint and allow participants to connect in person. This is optional but we encourage organizing even a small event that includes only sprint participants. If you have capacity, a larger event with outside stakeholders provides an opportunity for teams to share their products with a more diverse audience and to make connections that could help reach end users.

Note: The TOP team at the Census Bureau organizes an annual Demo Day to showcase the tools developed through the TOP sprints. On occasion, we are able to highlight a few tools developed through an agency TOPx sprint. If you would like tools developed through your sprint to be considered, please reach out to the TOP team at census.opportunityproject@census.gov.

Key actions

- Develop an invitation list. Include all sprint participants and key stakeholders within the agency
 - □ **Tip**: If you have the capacity to organize a larger event, some outside stakeholders to invite might include funders, community organizations, and representatives from other agencies or parts of government
- Set up and send your invitation. If it is permitted by your agency, Splashthat is a free option for well-designed templates and a good back-end RSVP management system
 - □ **Tip**: If your event is in a federal building, consider what information you need to collect from visitors for security purposes
- Identify a keynote speaker(s) who will kick-off the event and speak to the significance of the sprint. Keynote speakers could be members of the TOPx facilitation team or senior agency officials
- Identify sprint participants to speak about their experience or the products they built
- Coordinate with your agency's Communications team to ensure the event will be publicized and highlighted in agency communications, social media, etc.

 Ensure your location is equipped with the technology you will need (e.g., projector, screens for live demos, HDMI cords)

Resources

- Splashthat
 Instructions on how to set up an invitation page on Splashthat
- How to Make the Most of Demo Day
 Consider sharing these tips with tech teams to help them make the most of Demo Day

Step 2: Post-Sprint Engagement

Time: 2-4 weeks | Effort: 1/4

After hosting an in-person event, let teams know what their options are for staying in touch and continuing product development and deployment. The TOP team at the Census Bureau facilitates post-sprint opportunities, which TOPx participants can also become involved in.

Key actions

- Tell us about your methods and experience with TOPx. Answer a few questions about your methods and experience with TOPx
 - □ **Tip**: See Resources below for a short sprint summary form
- Develop ways for sprint participants to stay in touch with your agency and one another.
 This could include a Slack channel, email communications, and/or periodic check-in calls
 - ✓ **To track product impact**, ask tech teams to periodically report back to you on the metrics they collect (e.g., number of downloads, number of users)
- Consider opportunities to further support tech teams post-sprint, including launching a Prize Challenge within your agency, or offering grant or contract opportunities for promising products
- Connect participants with post-sprint opportunities facilitated by the Census Bureau TOP team. Fill out the Sprint Summary and Feedback Form under Resources below to express interest
 - Alumni Community: A quarterly newsletter and facilitated Slack channel offers past sprint participants an opportunity to stay connected and receive relevant resources and updates
 - **Prize Challenge:** Teams have the opportunity to compete for funding through an

America COMPETES prize challenge facilitated by the TOP team at the Census Bureau

□ **Tip**: If your agency would like to provide funding for the TOP team to create a separate category for participants from your TOPx sprint, that is an option

Resources

→ Sprint Summary and Feedback Form

Share your methods and experience with TOPx. The Opportunity Project team at Census would like to hear how the process went, what tools came out of the sprint, and how we can help amplify this work

→ America COMPETES Prize Authority Information

Agencies have the authority to conduct prize competitions in order to spur innovation, solve tough problems, and advance their core mission

Glossary

Below are some key terms that may be referenced in the toolkit, as well as through the sprint and in conversations with individuals in the civic tech community. Click the term for additional resources and the source of each definition.

End User: The person that a tech product is designed for

<u>Human-centered design</u>: A process of designing for people. HCD develops solutions to problems by involving the human perspective in all steps of the problem-solving process

Minimum Viable Product (MVP): A product with enough features to attract early-adopter customers and validate a product idea early in the product development cycle

Mockup: A sketch that represents the way a product will look

<u>User Experience (UX) Design:</u> The process design teams use to create products that provide meaningful and relevant experiences to users. This involves the design of the entire process of acquiring and integrating the product, including aspects of branding, design, usability and function

<u>User Interface (UI) Design:</u> The process of making interfaces in software or computerized devices with a focus on looks or style. Designers aim to create designs users will find easy to use and pleasurable

<u>User Journey</u>: A path a user may take to reach their goal when using a particular digital tool. User journeys are used in designing digital tools to identify the different ways to enable the user to achieve their goal as quickly and easily as possible

<u>User Research</u>: Conducted so as to understand users' characteristics, aims, and behaviors towards achieving these aims. Its purpose is to produce designs that improve users' working practices and lives. User research also involves the continuous evaluation of the impact of designs on the users, not only during the design and development phase but after long-term use, too

<u>Usability Testing:</u> The practice of testing how easy a design is to use for a group of representative users. It usually involves observing users as they attempt to complete tasks and can be done for different types of designs, from user interfaces to physical products

<u>Wireframe:</u> An initial design of a website or app at the structural level. A wireframe is commonly used to lay out content and functionality on a page which takes into account user needs and user journeys. Wireframes are used early in the development process to establish the basic structure of a page before visual design and content is added.