

U.S. Forest Service

ePermitting/ Discovery plan

18F

Summary

- **We propose 18F conducts a brief discovery phase** to speed the first Agile BPA buys for both special uses and Christmas tree ePermitting:
 - For special use permits, we'd like to construct a prototype noncommercial group use application form, show it to both forest users and frontliners and gather their thoughts.
 - For Christmas tree permits, we'd like to observe "end users" participating in the permitting process and, perhaps, construct a rough prototype that shows an end-to-end permitting user experience.
- **We propose starting with special use permits discovery.** Our understanding of the challenges and opportunities for this permit are clearer.
- **After brief additional discovery for special use permits, we can start the agile BPA buy for that system.** Although we'll do some prep work for the buy during the discovery phase, we will scope the buy in earnest after the discovery period ends.
- **As the noncommercial group use buy begins, we'll start discovery work on Christmas tree permitting** (in time for Christmas tree season).
- **As a result, our rough timeline is as follows:**
 - **Sprint 1: September 7-21:** Planning research, scoping prototype, communicating back to stakeholders
 - **September 21-October 5** (Sprint 2): Building noncommercial group use prototype building, starting acquisition planning
 - **October 5-October 19** (Sprint 3): Conducting and analyzing research (using the prototype) with forest users, frontliners, and special use administrators
 - **October 19-October 21** (Sprint 4): Preparing to launch Agile BPA buy for noncommercial group use, beginning similar approach for christmas trees.

Table of contents

[Summary](#)

[Table of contents](#)

[18F's approach](#)

[Background](#)

[Our proposal: discovery phases](#)

[Special uses discovery plan](#)

[Research questions](#)

[Methodology](#)

[Participants](#)

[Schedule](#)

[September 7-21 \(Sprint 1\): Planning](#)

[September 21-October 5 \(Sprint 2\): Building prototypes and preparing for research](#)

[October 5-October 19 \(Sprint 3\): Conducting research](#)

[October 19-October 21 \(Sprint 4\): Preparing Agile BPA buy](#)

[Christmas tree permitting discovery plan](#)

[Research questions](#)

[Methodology](#)

[Participants](#)

[Schedule](#)

[November 11/2-11/16 \(Sprint 5\): FS staff interviews / process mapping](#)

[November 11/16-11/30 \(Sprint 6\): Break](#)

[November 11/30-12/14 \(Sprint 7\): Public field observation](#)

[November 12/14-12/28 \(Sprint 8\): Synthesis](#)

[Outfitters and guides discovery plan](#)

[Research questions](#)

[Methodology](#)

[Participants](#)

[Schedule](#)

[November 11/2-11/16 \(Sprint 5\): Recruiting and scheduling](#)

[November 11/16-11/30 \(Sprint 6\): Outfitter/guide interviews](#)

[November 11/30-12/14 \(Sprint 7\): Break](#)

[November 12/14-12/28 \(Sprint 8\): Synthesis](#)

18F's approach

18F is part of the General Services Administration's Technology Transformation Service. We help other federal agencies build, buy, and share efficient and easy-to-use digital services. We're a growing team of technology experts that build custom solutions to pressing problems, develop platforms that empower federal employees, and help agencies buy better products from private vendors. What sets us apart from other digital teams in the federal government is that agencies come to 18F requesting our services and then we choose what projects to tackle.

Three principles guide our work:

- **Human-centered design:** Our projects are by the people, for the people. Everything is designed with the end user in mind.
- **Agile:** We're iterative, experimental, and failure tolerant. We don't plan two years of development before we start. As we work, we pay careful attention to what succeeds — and what doesn't. We quantify our work with metrics and feedback, which, in turn, informs our thinking and our next round of building.
- **Open:** Our projects are designed and built in public. That means open source, open data, and open APIs. Working transparently helps us develop faster, make better decisions, gather meaningful feedback, provide code for many others to reuse, and keep costs low.

Whether we can impart these ways of thinking successfully is more important than the scale of any given project or line of business.

18F partnered with the General Service Administration (GSA) Office of Integrated Technology Services to establish a blanket purchase agreement (BPA) featuring vendors specializing in agile delivery services (e.g., user-centered design, agile software development, DevOps). The

Agile Delivery Services BPA (Agile BPA) represents an effort to align acquisition practices with agile delivery practices.

Background

18F began an effort to help the U.S. Forest Service pilot electronic **special use** and **Christmas tree permitting** (or “ePermitting”). We kicked off the effort with several workshops (you can find read outs). The eventual, production ePermitting systems will be constructed by agile BPA vendors.

In general, we heard that these ePermitting efforts should help the Forest Service:

- Welcomes the public consistently (across units, despite being decentralized) by giving the public more flexible options for gaining permits to use their public lands.
- Reduce workload for employees involved in the permitting process, so they can spend their time better serving the public, the land and the agency.

After exploring the range of users and features the application could contain, our workshops concluded that:

- **Special use permitting is a large, complicated and varied process, so a good place to start is with “non-commercial group use” permits**, which are among the simplest of the permits processed. Progress iterations will add functionality to cover more special use permits.
- **Christmas tree permitting, although a seemingly simpler process, may be a bit thornier.** We have less understanding of the “end user experience” of the Christmas tree permitting process, it requires several systems integrations and open questions remain about how to standardize the permitting process across units.
- **Both permitting processes need to integrate** with related backend systems, including the Special Use Data System (SUDS), Timber Management System (TIM) and others. We will need our systems to interact with these, either through their APIs (for the redesigned SUDS) or constructing our own “API layer.”

Our proposal: discovery phases

We propose 18F conducts a brief discovery phase to speed the first Agile BPA buys for both special uses and Christmas tree ePermitting. Discovery research will help us test our assumptions about how ePermitting systems will help users and help us craft more specific requests for the Agile BPA buys.

The special use and Christmas tree permitting discovery phase may be slightly different. For special use permits, we'd like to construct a prototype noncommercial group use application form, show it to both forest users, frontliners and gather their thoughts. For Christmas tree permits, we'd like to observe "end users" participating in the permitting process and, perhaps, construct a rough prototype that shows an end-to-end permitting user experience and experiment with possible payment systems.

We will conduct these discovery periods sequentially, starting with special use permits and then pursue Christmas tree permitting. After brief additional discovery for special use permits, we can start the agile BPA buy for a component to serve that system. Although we'll do some prep work for the buy during the discovery phase, we will scope the buy in earnest after the discovery period ends. When we finish the discovery for special use, we'll begin work on research for Christmas trees.

The remainder of this document will describe our discovery use for special use permits. We will update this document at the conclusion of the special use discovery with a plan for Christmas trees.

Special uses discovery plan

Research questions

We're conducting this discovery research to answer the following questions:

- Does offering a digital application improve the experience of non-commercial group permittees?
- Does it improve the experience of special use administrators who receive their permits?
- What elements (features, data types, etc.) of the application are particularly helpful to these groups?
- What constraints do these groups face?
- What problems will a digital application not solve?

Methodology

We are using *presumptive design* to answer these questions. In other words, we will construct prototypes that embody our assumptions about the answers to these questions (based on our initial conversations with Forest Service staff, users, etc.). We gather answers to our questions by showing prototypes to users, asking them to use them and reveal how our knowledge is missing.

A *prototype* can be any artifact that tests our ideas. Sometimes they are sketches, elaborate fakery or other simple approximations of an ultimate solution. In this case, our prototype will be a simple version of the permitting system, available online, constructed in Django (a Python web development framework).

Participants

We'll aim to show our prototypes to the groups of users our initial research identified as most important.

Outside the Forest Service:

- **Schools and higher education**, people leading trips from schools and higher education institutions who need to apply for a noncommercial group use permit
- **Nonprofits**, officials of non-profit clubs and organizations (such as the Boy Scouts, YMCA, mountaineering groups) organizing trips to national forests
- Others who pursue these permits “one off” like families hosting weddings, etc.

Inside the Forest Service:

- **Special use administrators**, the people who manage the process of distributing permits at the forest level)
- **Decision makers**, at various levels, including staff officers, line officers, and others involved in approving permits

We will focus on recruiting these groups of people surrounding our pilot forest, **Mount Baker-Snoqualmie National Forest**.

Schedule

This is a rough schedule, subject to change. For up-to-date, granular information, please visit our Trello board at: <https://trello.com/b/ONDcGQnk/forest-service-e-permitting-project>

September 7-21 (Sprint 1): Planning

- Preparing this document
- Moving workshop prototype to cloud.gov
- Building scaffolding for initial prototyping

September 21-October 5 (Sprint 2): Building prototypes and preparing for research

- Gather feedback on workshop protosketch
- Construct prototype
- Recruit research participants
- Arrange any research-related travel
- Write research protocol

October 5-October 19 (Sprint 3): Conducting research

- Conducting research sessions
- Analyzing and synthesizing research results
- Preparing findings document

October 19-October 21 (Sprint 4): Preparing Agile BPA buy

- Preparing to launch Agile BPA buy for noncommercial group use
- Beginning similar approach for christmas trees

Christmas tree permitting discovery plan

Research questions

We're conducting this discovery research to answer the following questions:

- What are the **work processes**¹ of Christmas tree permitters and Forest Service staff? What are the inputs, outputs and in between sequence of activities involved in Christmas tree permitting? How do they vary between forests?
- What are the functional, emotional and social **jobs to be done**² by Christmas tree amongst Forest Service staff and permittees?

Methodology

We will answer these questions using two inductive, qualitative methods:

- Conducting **interviews** with Forest Service staff that employ ethnographic techniques to surface useful attitudes and depictions of process. In particular, we use **descriptive questioning**³ to surface useful answers to our research questions.
- Conducting **participant observation** of the permitting process (involving both Forest Service staff and permittees), during which we take **field notes** that identify the various forms of behavior at hand.

¹ Garvin, D. a. (1998). The Process of Organization and Management. *Sloan Management Review*, 39(4), 33–50.

² Christensen, C. M., Anthony, S. D., Berstell, G., & Nitterhouse, D. (2007). Finding the right job for your product. *MIT Sloan Management Review*, 48(3), 38.

³ Spradley, J. P. (2016). *The ethnographic interview*. Waveland Press.

Participants

We aim to interview and observe groups of people from inside the Forest Service identified by our kick off workshop, including:

- Front-office staff
 - Front liners (employees operating the front desk)
 - Collection officers (responsible for collecting fees)
- Back-office staff
 - Program coordinator (SFP)
 - Resource specialists
 - Timber management

We aim to observe members of the public, involved in the permitting process, including:

- Single pass holders
- Families, people who celebrate Christmas
- Outdoor enthusiasts
- Urban first-time visitors
- Groups, such as church groups
- Organizers of planned events
- Vendors (Ace Hardware, local Chamber of Commerce, etc.)
- Others (lottery participants, other event planners, financially savvy individuals wanting to save money by cutting down their own trees)

We will focus on recruiting these groups of people surrounding our pilot forests, **Shoshone National Forest, Mount Hood National Forest, Flathead National Forest, and Arapaho & Roosevelt National Forests.**

Schedule

November 11/2-11/16 (Sprint 5): FS staff interviews / process mapping

- Conducting interviews
- Creating process diagrams based on interviews
- Recirculating process interviews for feedback
- Synthesizing results
- Arranging travel for public field observation

November 11/16-11/30 (Sprint 6): Break

(Conducting outfitter / guide interviews.)

November 11/30-12/14 (Sprint 7): Public field observation

- Traveling to field observation sites
- Conducting observations
- Writing field notes

November 12/14-12/28 (Sprint 8): Synthesis

- Analyzing observation field notes and coding interview notes
- Preparing final brief
- Planning next steps

Outfitters and guides discovery plan

Research questions

We're conducting this discovery research to answer the following questions:

- What are the **work processes**⁴ of outfitters, guides and Forest Service staff? What are the inputs, outputs and in-between sequence of activities involved in their permitting process? How do they vary between Forests? How are they different than the simpler noncommercial group use permits?
- What are the functional, emotional and social **jobs to be done**⁵ by outfitter/guide permitting?

Methodology

To answer our research questions, we will conduct **interviews** with Forest Service staff that employ ethnographic techniques to surface useful attitudes towards and depictions of process. In particular, we use **descriptive questioning**⁶ to surface the answers to our research questions.

⁴ Garvin, D. a. (1998). The Process of Organization and Management. *Sloan Management Review*, 39(4), 33–50.

⁵ Christensen, C. M., Anthony, S. D., Berstell, G., & Nitterhouse, D. (2007). Finding the right job for your product. *MIT Sloan Management Review*, 48(3), 38.

⁶ Spradley, J. P. (2016). *The ethnographic interview*. Waveland Press.

Participants

We aim to interview groups of people identified by our kick off workshop, including:

Outside the Forest Service:

- Outfitters and guides who apply for permits (vocal and powerful “agents of access”)
- Schools and higher education institutions *who require commercial permits*
- Non-profit clubs and organizations (such as the Boy Scouts, YMCA, mountaineering groups) *who require commercial permits*
- App developers and people who might build on a permitting API

Inside the Forest Service:

- **Special use administrators**, the people who manage the process of distributing permits at the forest level)
- **Decision makers**, at various levels, including staff officers, line officers, and others involved in approving permits

We will focus on recruiting these groups of people surrounding our pilot forest, **Mount Baker-Snoqualmie National Forest**.

Schedule

November 11/2-11/16 (Sprint 5): Recruiting and scheduling

- Recruiting and scheduling interviews with participants
- Writing interview protocol
- Arranging any travel for interviews

November 11/16-11/30 (Sprint 6): Outfitter/guide interviews

- Conducting outfitter and guide interviews
- Conducting FS staff interviews

November 11/30-12/14 (Sprint 7): Break

(Conducting Christmas tree permitting observations.)

November 12/14-12/28 (Sprint 8): Synthesis

- Analyzing observation field notes and coding interview notes
- Preparing final brief
- Planning next steps