

Final report:

FRTIB tsp.gov USWDS Consulting

March 2018

Vision	2
What we did	2
What we learned	3
Our users	4
Key outcomes	4
Recommendations	7
Observations	8
Deliverables	11
Conclusion	12

The Federal Retirement Thrift Investment Board (FRTIB) was created by the Federal Employees' Retirement System Act of 1986 (FERSA) to administer the Thrift Savings Plan (TSP) as one element in the three-part retirement program for employees covered under the Federal Employee Retirement System (FERS). In the nearly thirty years since the TSP received the first civilian contributions, it has expanded to cover members of the uniformed services and spousal beneficiaries. It is now the largest defined contribution retirement plan with more than 4.9 million participants with nearly \$470 billion in assets under management.¹

FRTIB engaged 18F to help the Office of Communications and Education's (OCE) in-house design team develop capabilities in agile software development, user-centered design, and content strategy. The work we achieved during our engagement set the direction for designing a new tsp.gov and built agile and user-centered practices to support the redesign.

¹ From FRTIB 2017-2021 Strategic Plan

Vision

In collaboration with federal agencies, we want to help federal employees, uniformed service members, and their beneficiaries develop an understanding of their retirement options in order to be engaged in investing through the TSP.

What we did

At the end of our work together, our goal was to ensure that the in-house team at FRTIB had developed additional skills and capabilities needed to successfully implement against a prioritized roadmap that meets the needs of tsp.gov users. During our work together, we focused our efforts on the following:

- Define the users of tsp.gov, including their needs, motivations, and preferences when accessing the site.
- Provide coaching throughout the engagement that empowers FRTIB to work in a more agile, open, and human centered way, with examples including:
 - The development of a repeatable process for testing new design iterations.
 - Establishing strategies for prioritizing the product backlog, including taking on the most important work first, slicing work small enough to quickly deliver value, and moving along to other areas once enough value has been realized.
- Introduce the [U.S. Web Design System](#) (USWDS) to improve the site's "look and feel." Both users and stakeholders have consistently prioritized the need to improve the site's visual design and accessibility. USWDS offers a foundation of our current design standards that have tested well with users. Use of the standards also satisfies the [OMB Memo M-17-06: Policies for Federal Agency Public Websites](#) which directs agencies to ensure a consistent look and feel across websites.
- Develop a vision and roadmap for tsp.gov that outlines design priorities for the site based on user needs, the mission of FRTIB, and stakeholder goals. This work leverages USWDS and other best practices (including agile product development), identifying specific opportunities for improving the user experience and site content in order to establish a foundation so that FRTIB can relaunch tsp.gov successfully in 2019 (with an initial public beta by June 2018).

Guiding principles

Per 18F's core values, we relied on the following principles to guide our work and help us prioritize when we needed to make tough decisions:

- Keep the needs of our users at the center of our work, instilling trust in their experience
- Build useful services by doing user research
- Reduce risk and cost by starting small and iterating frequently
- Recognize that a product is never “done” – we will keep learning, testing, and building until user needs drive us to change directions
- Work in the open to build stronger services and save government resources while properly protecting sensitive information
- Use plain language consistently, especially when addressing complicated topics
- Optimize testing, deployment, and other operational practices for rapid iteration cycles
- Bring program staff, IT staff, and contractor staff together to work as a tight-knit, cross-functional team, with explicit, shared goals and priorities
- Empower a single product owner, support them to succeed, and hold them accountable

What we learned

Through our research with early career federal employees and our content work, we learned that users were generally overwhelmed by the structure and navigation of tsp.gov, as well as the amount of information available. In many cases, this information was duplicative or hard to find. Users demonstrated that they only visit tsp.gov to sign into their account and complete a particular task, and are often confused about what level of risk might make the most sense for their individual retirement goals. Because tsp.gov content is organized by topic as opposed to a specific user goal, we heard that users felt like they had to figure things out on their own.

A few other observations we made during this work include:

- Several users had never changed their default contributions or were employed by the federal government for years before doing so. Few users understood the value of “maxing out” their matching funds.
- Users learn in different ways, particularly around financial data. In looking for information on funds, we saw some users who preferred highly customizable graphs, while others preferred detailed descriptions of TSP funds.

- Users did not rely on the tsp.gov search function. Instead, users searched for content by using google search, including “tsp” in their search query.
- Users directed to learn about loans could not easily identify the downsides of borrowing against one’s retirement funds.
- The tone across of tsp.gov was inconsistent — authoritative in some areas, friendly and conversational in others.
- The process for which content is currently created or edited may not be as lightweight as would be most useful for the redesign.

Our users

FRTIB serves over five million participants (current or former federal employees, and uniformed service members) as well as their beneficiaries. In the start of 2018, the agency began enrolling and transitioning thousands of uniformed service members into the TSP’s new “blended retirement” system, resulting in an estimate of hundreds of thousands of new users each year.

FRTIB also coordinates with over 100 payroll offices in the federal government that oversee those employees. In addition to serving users through tsp.gov, FRTIB manages a large volume of phone calls (2.8-3 million in 2017) in its call centers, a number which is likely to increase as users start retiring in larger amounts.

18F and FRTIB’s work during this engagement focused predominantly on new users of tsp.gov, specifically individuals who have been in the federal government for less than five years. 18F and FRTIB prioritized this user group over others because we believe that the most significant interaction a user has with the TSP is at the beginning of their retirement savings journey. This initial interaction sets the stage for a user’s future interactions with tsp.gov.

Key outcomes

The groundwork we’ve established with FRTIB has enabled the team to successfully redesign and launch tsp.gov in the months to come. We relied on the following metrics to achieve the subsequent accomplishments during our work together.

Metrics

These are the metrics we relied on to determine whether or not this engagement was successful with an evaluation of how we did:

- Whether or not the team, as a whole, is developing and testing hypotheses with users by using prototypes
Partially successful: We developed hypotheses and prototypes, but prioritized other work in place of testing these with users. We encourage FRTIB to quickly resume user research using the prototypes we developed together as they begin the next phase of work.
- Whether or not FRTIB team members are planning and leading research sessions
Fully successful: FRTIB led research sessions and helped plan for them.
- Whether or not FRTIB team members are leading standups, sprint planning, sprint reviews, and retrospectives
Mostly successful: FRTIB led standups, sprint planning, sprint reviews, and retrospectives. However, near the end of the engagement, 18F team members did lead several standups; given that we have seen FRTIB team members successfully lead standups over the course of this engagement, we are confident in their ability to continue to do so.
- Whether or not we have created research findings, content recommendations, and a roadmap to guide FRTIB efforts once the engagement has ended
Fully successful: Research findings, content recommendations, and a roadmap were collaboratively assembled and delivered.

Activities and accomplishments

Research

- We conducted interviews with stakeholders.
- We prioritized our research on early career federal employees.
- We conducted interviews and usability testing to determine what users need from tsp.gov, what parts of the site they visit most frequently, and whether or not they are able to easily find the information they are looking for.

Content

- We reorganized the existing content audit and utilized user research to identify content challenges of existing tsp.gov, along with any potential barriers that could keep us from tackling those challenges.
- We developed and obtained buy-in on the recommendations and roadmap for tackling content challenges.
- We refined the tone and voice for the new tsp.gov.
- We suggested revisions to the *Writing for the FRTIB* style guide and FRTIB

content strategy.

- We iterated on a new information architecture based on research findings.
- We conducted governance planning and identified areas of further governance-based development.

Design and development

- We conducted a Lean product design workshop, where we collaborated on writing a problem statement, documenting our assumptions, and creating personas.
- As a part of this our Lean product design workshop, we discussed outcomes, outputs, and impacts, and used all of this information to develop a series of hypotheses, prioritizing the one we thought would be the best to address first.
- We held a design studio to get input from the team and from FRTIB subject matter experts on what we might build to address the priority hypothesis.
- We held sketching sessions to develop ideas and collaboratively define a direction for our prototypes and wireframes.
- We created an Adobe Illustrator mockup using USWDS asset library for rapid prototyping.
- We created a code-based USWDS prototype for future in-browser usability testing and USWDS familiarization.
- We established centralized code storage.
- We relied on a collaborative code review process using pull requests and approvals.
- We encouraged faster development (within Adobe Illustrator and code) using USWDS.
- We automated deployments of prototypes to cloud storage to support usability testing.

Product

- We established agile processes and framework to guide our work.
- We created an “information radiator” ([our Trello board](#)).
- We delivered a weekly ship report to provide updates on our progress.
- We provided coaching and training on the Product Owner and Product Manager roles and responsibilities.
- We provided coaching and training on Scrum team responsibilities.
- We modeled behavior via rituals and pairing.

Recommendations

The work we've done over the past three months has helped us hone in on our vision for tsp.gov, specifically focused on continuing to conduct research, testing prototypes with users early and often, and streamlining and decluttering content based on user needs.

All of this work should be done by focusing on the most important work first, breaking work down into manageable pieces, determining when something is sufficiently complete so that the team can move onto other pieces of work, and setting metrics and measuring against them. We also encourage the team to continue seeking input and gaining alignment with stakeholders to support the team's efforts, identify and leverage opportunities, and remove obstacles. We strongly suggest the team consistently look beyond the immediate quarter and be mindful of over-committing to too much work.

Additional priorities and recommendations can be found in our [content recommendations](#) and below:

- Organize the site based on the information architecture we've been iterating on (and continue to iterate on the IA as you learn more).
- Use the content roadmap we've created to guide work and the content strategy to steer decision-making and workflow.
- Identify another priority user group, and conduct interviews and usability testing with them.
- Consider conducting another Lean product design session upon completion of the next round of research.
- Conduct regular usability testing on the redesigned site with a broad set of tsp.gov users.
- Continue using the same workflow for iterating on prototype: research -> sketching/low-fi -> Illustrator/code prototype -> usability testing.
- Continue developing collaboratively and in the open to keep all team members informed and involved.
- Work to remove technical obstacles in order to focus on directly impacting end users.

Team makeup

The current core team includes:

- One project manager
- One visual designer
- One content specialist
- One developer, also serving as the product owner
- One lead writer
- Two additional writing team members

To continue to support this work, we suggest adding the following roles to this team:

- One additional frontend developer
- One research lead
- One DevOps engineer
- Ad-hoc consulting, as needed, from security and DevOps specialists

Training

Though the team has been exposed to and is practicing modern software development techniques, we highly encourage FRTIB to continue to develop its staff by providing trainings and consultations so that they can continue to deepen their skills. Some trainings we suggest include:

- Certified Scrum Master (Lorraine and other interested team members)
- Certified Scrum Product Owner (Donald)
- Certified SAFe Agilist (any team members who are interested in learning more about managing complex projects, including multiple teams or an ongoing development cycle, such as this one)

Observations

Key strengths

FRTIB team members have quickly picked up iterative development practices, a user-focused approach, and have practiced product principles such as prioritization and working toward positive outcomes.

The broader team within OCE realizes the significance of this effort and is empowering the core team and devoting resources to the success of this work. The team has a strong vision for the direction of the product and has demonstrated a willingness to learn new skills in order to maintain ownership of the product over the long term.

Possible risks

Breaking new ground involves risk. Given this, we encourage the team to regularly surface risks they are able to identify, discuss them, and determine how they can be resolved, owned, accepted, or mitigated.

For example, moving forward, the team will need to handle the entire gamut of activities associated with product delivery, including the need to understand and own a hosting situation, the need to pay for and manage any third party integrations, hire and work with vendors, ensure system security, support users of the system, do quality assurance testing, and deliver product updates.

Some specific, significant risks we have discovered during the course of our engagement are below.

DevOps/DecSecOps

In order to develop a working process by which the team can regularly produce secure working code that is of value to users, we have recommended that the team push to make a public beta available as quickly as possible on the tsp.gov production environment that can be iterated on. To relaunch the site next year, it will be crucial to figure out how to enable continuous delivery by automating the deployment pipeline all the way through to security compliance and operations (DevSecOps).

Though this will take some work in the coming weeks to configure, addressing the challenge of setting up this beta and testing environment will help the team quickly deploy code moving forward, get feedback from real users (so feedback can be captured sooner rather than later), and avoid a lengthy integration process in the future.

To configure these successfully, the team will need to establish a realistic technical setup for their different environments and determine their deployment processes. To do so, they can leverage the current production environment (configured with Cascade), the Amazon Web Services development environment the team has used during this engagement, and other possible tools such as GSA's Federalist or cloud.gov or other third-party services.

In considering a system that is accessed by the public or contains public data, the agency ATO (Authority to Operate) should be considered, maintained, and, if needed, expanded. Additionally, it may be helpful to bring in extra operations support from FRTIB or conduct additional DevOps consulting with 18F or another partner.

GitHub

GitHub is a web-based tool for storing code and documentation in a centralized location. It has numerous features built-in to help facilitate collaboration, good development practices, and task management. During our engagement, GitHub has been a critical part of our development process by enabling team members to have visibility into code changes as well as being the launchpad for moving prototype code to Amazon Web Services. Continued access to GitHub or a similar service will be critical to keep this current workflow intact.

During our engagement, we met with representatives from OTS and GSA IT to discuss the path for opening wider use to GitHub at FRTIB, and we encourage the team at FRTIB to continue these conversations so this tool can be made available.

For context, our current understanding at GSA is that the Federal Risk and Authorization Management Program, or FedRAMP, (a government-wide program that provides a standardized approach to security assessment) expects to authorize GitHub as “tailored” for GSA by the end of March 2018, at which time other agencies such as FRTIB can then leverage this foundational work.

Uncertain velocity going into PI2

Given that the 18F team is largely rolling off from this work (with the exception of some members contributing minimally over the coming months), the FRTIB team will need to determine its velocity to help predict how much work they can accomplish. This is normal but should be monitored.

We encourage the team to be ambitious with their plans but also maintain a reasonable and sustainable approach. If velocity lags, the team should de-scope work, take on less work at a time, or consider adding more resources with the understanding that new team members will take time to onboard and contribute fully.

After a few sprints and a quarter, the FRTIB team will have a better idea of its velocity and will continually improve in its ability to predict, within a certain threshold, how much work they can likely achieve within a given unit of time.

Maintaining a product-oriented, iterative, user-focused, open development process

Developing strong product management capacity can take time. Moving forward, the team will need to remind stakeholders of the product manager role in defining and prioritizing work as well as measuring and communicating outcomes so the entire team is empowered to execute on the vision and strategy.

It will take effort to deepen the momentum we have developed. We encourage the team to continually articulate a compelling vision and strategy for tsp.gov while constantly demonstrating how this work is furthering product goals, along with continually developing skills, demonstrating the value of the approach we have taken, and make a case for both the work to be done and how the work should be done.

To do this, we encourage the team to continue publicizing its vision and strategy documents, publishing release notes, and eventually, blogging or tweeting to tell the story of tsp.gov.

Additionally, there is an opportunity to build coalitions and spread impact across FRTIB. We encourage the team to start small, learn quickly, build on strengths, and adapt from failure to deliver value to users, FRTIB, and themselves.

Additional risks we have discovered

We've heard that the team may not have continued access to development MacBook computers. These computers are critical to the redesign of tsp.gov if FRTIB wants to continue relying on the systems we've identified during our engagement.

Additionally, a shared document tool is vital for the team to be able to write and edit content together. We just recently learned that the team will be using [Amazon Web Services WorkDocs](#) to solve for this particular need. As the team has never used WorkDocs before, it will take some time to get up to speed and could result in some changes to the existing workflow.

Deliverables

Roadmap

As an output of our work, we created an actionable roadmap for FRTIB to use to continue researching and iterating post-engagement. [This roadmap](#) demonstrates how FRTIB can reach their objectives by the end of the year and is broken out in six program increments (PI) to set the team up for success.

PI2 (Program Increment 2) plan

After we developed, vetted, and revised the roadmap, we worked as a team together to break the next PI into an [actionable plan](#), highlighting objectives, risks, capacity, and dependencies to consider as this work continues. While the roadmap and PI plan will serve the team as it works towards its objectives, we encourage the team to

continually update both as they move forward, determine their velocity, and encounter new information.

Github repository

We used GitHub and our [project repository](#) to store important project assets, practice reviewing code, and to integrate with FRTIB's Amazon Web Services S3 bucket. As our prototype was based on USWDS, we accessed the latest project documentation and code using the USWDS repository. Moving forward, the prototype can be accessed using the new [FRTIB GitHub repository](#).

Content recommendations and strategy

Good content is accessible to everyone, organized, and easy to find, read, and understand. We compiled a set of [content recommendations](#) in order to achieve these goals. We've also organized these recommendations into a roadmap with a priority order for which we suggest this work be completed.

We also refined the [FRTIB content strategy](#) to steer decision-making throughout the tsp.gov redesign and to establish a strong workflow that can be used to adequately develop new tsp.gov content.

Additional documentation

Our initial project brief, research plan, research notes and synthesis, Lean UX exercise templates, sprint outcomes slide deck, and other project documentation can be found in our [team Google Drive folder](#).

Conclusion

We decided to take on this work together to help effectively set FRTIB up for success to continue working to meet user needs as the FRTIB team redevelops tsp.gov. The in-house design team within OCE at FRTIB has consistently demonstrated how capable they are of implementing against a roadmap that's been prioritized while also continuing to develop their own skills and knowledge base.

Additionally, OCE leadership has committed to a working process that emphasizes results over activity, and we have, together, identified, possible obstacles and articulated steps to mitigate these so this work can succeed.

We trust that our work together during this engagement will ultimately lead to an improved experience for tsp.gov users, and we are excited to see FRTIB execute on

the plans that we've assembled together while evolving their next steps to incorporate new learnings and adapt to the landscape as it shifts.

Here's to the Ps and Bs!