18F // NRM Heritage application: workshop summary

April 10, 2018

Introduction

On April 10, 2018, 18F conducted a presentation and workshop with nine regional Program Managers for the Forest Service's (FS) Heritage application. The goals of the workshop were to introduce human centered design with some examples from the FS' ePermits program and to surface the groups current understanding of the application's value and problems it should aim to address, its users and their frustrations, and to help the team prepare to chart a path forward. This document summarizes what we did and what came out of this workshop.

What we did

Participants were asked to write on stickies their answers to the following prompts:
- What value should the Heritage application create?
  - What are the key problems the Heritage application is supposed to solve?
- Who uses Heritage?
  - Given the key problems we are trying to solve, which users is it important to serve first?
- For these people, what are the best and worst moments using Heritage? How do we know?
- What questions do we have of these users?

Participants then grouped like stickies using affinity diagramming, and in some cases, prioritized their answers using dot voting.

What came up

In this section we summarize participants answers to the prompts and how they prioritized the issues that came up. You can photos of the actual whiteboards and stickies in the appendix.

What value should the Heritage application attempt to create?

- Tell users…
    - Where cultural resources are/are not
    - What ground has been looked at?
    - What did we find?
    - Is it important?
    - Types of cultural resources
- Manage cultural resources
- Manage data to comply with federal laws
- Protect and consider resources
- Build relationships with states and tribes
- Support academic research

Key problems

- Glitches
- Lot's of fields
- Time consuming
- Query workarounds
- Poor geographic data
- Missing "vast amounts" of legacy data
- Limited outputs
- Outputs are not usable
- Not accessible
- No mobile accessibility

Heritage users

Internal to FS
- Para-professionals*
- Fire*
- Archeologists*
- Line officers
- Seasonals
- GIS staff
- LEOs
- ID team
- Heritage techs
- Heritage staff
- Tribal relations specialists
- USFS program mgrs

External to FS
- Para-professionals*
- Fire*
- Archeologists*
- LEOs
- SHPOs
- Tribes
- The Public
- Congress
- Volunteers
- Contractors
- Universities
- Researchers
- Historical societies
- Other Federal agencies

Users that are on the border between being internal and external to the FS, have dual roles internally and externally, or there are people with this role in and out of the Forest Service that use Heritage data.

Frustrations and who has them

Priority 1: Entering data is time consuming and complex
There are many data fields and many different types of users are frustrated by the time it takes to enter data.

Users primarily impacted:
- FS archeologists
- Heritage staff
- FS Line officers

Priority 2: Poor data quality
Participants cited missing and inaccurate data as a pain point.

Users primarily impacted:
- THPOS
- SHPOS

- Universities
- Congress
- Contractors
- FS Archaeologists
- External archeologists
- IDs
- Line officers

Priority 3: "Where is it, dammit!!?"

Data sharing is far from seamless; SHPO and FS data systems do not sync, and SHPOs and researchers have trouble accessing the data.

Users primarily impacted:
- SHPOs
- Researchers

Lower priority issues

Participants also cited glitches and the need to maintain 2 databases (GIS and NRM) as a frustration for Heritage staff.

What questions would we want to ask?

Questions participants had for different user groups are in priority order from highest to lowest priority:

1. **SHPO** - What data do you need for S.106 consult?
2. **CR Professionals staff** - What data do you need?
3. **Archeologists, SHPO, THPO** - What data do you need to do the job?
4. **Manager** - What data is most useful/should be easy to access?
5. **LEO** - What do you need in order to monitor? To issue a citation? To prosecute?

The following Qs were articulated, but did not receive any votes, so they're not prioritized:

- **Public** - What data do you want us to share? How would you like to be involved?
- **Academics** - What are your research questions?
- **Contractors** - How would it be possible for you to help populate the database?

- **Congress** - What do you want? When? Why? What data do you need in order to fund us properly?
- **Tribes/THPO** - What data is most sensitive? What data do you need to be confidential?
- **Tribal relations specialist** - What data do you need for upward reporting? What data do you need access to?
- **Heritage staff -**
  - How much time are you ok with spending on data entry?
  - What fields in the database do you need?
  - What fields do you want to <u>not</u> be required?
  - What outputs do you need?

Project briefs

To help guide Heritage leadership's next steps toward addressing issues that came up in the workshop, we've prepared a few example project briefs. The purpose of a project brief is to describe a project's scope and core objectives and set the stage for initiating project work.

Priority 1

The Heritage application should help its users manage data in order to comply with federal laws.

We believe, based on complaints from users who enter data, that the Heritage application is falling short of meeting their needs. Specifically, FS archeologists and Heritage staff FS Line officers find data entry very complex and time consuming.

To better meet Heritage users' needs, we aim to understand these users' specific challenges to data entry, how much time they are ok with spending on data entry, what data outputs they need, and what fields in the database are needed and/or should not be required.

Priority 2

The Heritage application should provide complete, accurate, and useful data representations that tell data consumers what ground has been looked at, what cultural resources were found (or not), and whether it's important.

We believe, based on complaints from data consumers, that the Heritage application is falling short of meeting their needs. Specifically, unusable data outputs make it difficult for THPOs, SHPOs, and Archaeologists (both internal and external to the Forest service to do their jobs.

To begin to understand how we can better meet data consumers' needs, we aim to learn what data THPOs, SHPOs, and Archaeologists rely on to do their jobs and what form and format will make the data most useful to them.

Priority 3

The Heritage application should provide complete, accurate, and useful data interfaces that tell data consumers what ground has been looked at, what cultural resources were/were not found, and whether it's important.

We believe, based on complaints from users, that the Heritage application is falling short of meeting their needs. Specifically, SHPOs and researchers have difficulty accessing and sharing data.

To better meet Heritage users' needs, we aim to learn specific challenges to data sharing and what opportunities exist to provide SHPOs and researchers better access to the data and a more seamless data sharing experience.

Appendix

VALUE DATABASE

WHERE C.R. ARE

GROUND LOOKED AT

GOOD FOR

TYPES OF C.R.s

MANAGING C.R.s APP'n

ONE ENTRY, MULTIPLE USES

FOLLOW THE LAW

REPORTING ACCOMPLISHMENTS

RELATIONSHIPS WITH STATES, TRIBES...

SUPPORTS ACADEMIC RESEARCH

VALUABLE

WHAT'S IMPORTANT

NR. Eligibility

Heritage staff,
SHPO, ID Team,
Line officer, Tribes
Site
SIGNIFICANCE

SHPO values
Heritage outputs
for legal compliance

SHPO
data managers

site
INFO.

(ID Ti..)
able to
plan project
areas to
avoid CRs

Employment
Fs +

PROGRAM
MANAGERS
CAN ACCESS
DATA Quickly

Project Planning
- Archs   - SHPO
- FD Team - other groups
- Line other - Tribes
- SHPO

Location
of
C.R.
(everyone)

Where what?
it
is.

What the C.R. is.
(everyone)

Survey
where?
quality

Line Officer
can make
good
decisions

Regional Arch.
quick
PA upward
reporting -
GI Tool

WHERE & WHAT

Understanding history
Tribes Univ
SHPO researchers
Archs Public

KEY PROBLEMS Database

GLITCHES

LOTS O' FIELDS

TIME CONSUMING

NOT ACCESSIBLE

QUERY WORKAROUNDS

POOR GEO

OUTPUTS ARE NOT USABLE

MISSING "VAST AMOUNTS" OF LEGACY DATA

LIMITED OUTPUTS

NO MOBILE ACCESSIBILITY

DATE

FRUSTRATING

MISSING DATA

DATA QUALITY
GIGO

Where is it dammit?!

SHPO CAN'T GET DATA

SHPO lack of seamless electronic data sharing

Missing Data
ID Teams - SHPOs - Contracts
Univ - THPOs - Universities

Inaccurate Data
Archs ID team Line Offer
- SHPO
- Universities
- Contractors

FS ARCHS FRUSTRATION with data entry and limited outputs

Garbage In, Garbage Out

SHPO AND FS DATA systems DO NOT SYNC

Time Consuming
took too much time to (Heritage Staff, maybe enter data Line everyone)

Line officers frustrated @ the time it takes

Outputs? (site form?) (for Heritage Staff & SHPOs)

RESEARCHERS CAN'T ACCESS DATA

Heritage Staff complex, time consuming data entry

TIME CONSUMING

Congress bogus data

Glitches! (Heritage Staff)

Maintaining 2 databases (GIS + NRM) (Heritage Staff)

Lots o' Fields! (Heritage)

WHAT WOULD YOU ASK?

Mangers
- what data is most useful & should be easy access?

Aveos, SHPO, THPO
- What data do you need to do the job?

CR Professionals Staff
WHAT DATA DO YOU NEED

Heritage staff
What fields do you want to NOT be required

Heritage staff
How much time are you ok with an important spending on data entry?

Heritage Staff
What Fields in database are important to you?

Heritage Staff, What datapoints do you need?

Tribes
What data is most sensitive

THPOs
- What data should be confidential?

CONGRESS
What data do you need to fund us properly?

SHPO:
What data do you need for 5.106 consult.

Tribal Relations Spec.
How much access do you want.

Tribal Rel. Specialist.
What data do you need access to

Tribal Relations
What do you need for upward reporting?

Congress
What do you want? When? Why?

LEO
What do You Need?
→ to monitor?
  to issue citation?
  to prosecute?

Contractors
How would it be possible for you to help populate?

Public
What data do you want us to share?

Public
How would you like to be involved

BEER

Academics
What are your research questions?