SRC-HCDS Meeting Minutes

Human Centered Design Subcommittee Teleconference

March 31, 2023, 12:00 PM – 1:30 PM CDT

Voting Members:	**Ex-Officio Members:**	**SRTR Staff:**
Christopher Zinner (Co-chair)	Cory Schaffhausen, PhD (Co-chair)	Ajay Israni, MD, MS
Harry Hochheiser, PhD	Shannon Dunne, JD (HRSA)	Jon Snyder, PhD, MS
Olivia Foss		Amy Ketterer, SMS
Kaia Raid		Tonya Eberhard
Not in Attendance:		Ryan Follmer
Sue Chu, PhD		Ahmed Habashy
		Not in Attendance:
		Josh Pyke
		Mona Shater, MA
		Ryutaro Hirose, MD

Welcome and opening remarks

Dr. Cory Schaffhausen called the Human Centered Design Subcommittee (HCDS) meeting to order. He reviewed conflict of interest management and the agenda. Dr. Schaffhausen proceeded with the first agenda item.

Patient-centered website process to date

Dr. Schaffhausen reviewed the SRTR website design process with a schematic timeline, split up into two parts (human-centered design [HCD] and SRTR IT/Communications). While there was no dedicated design research phase for the website, key features of it have been part of previous grants and research studies that included patient feedback and qualitative research. Working with a contractor, SRTR started with a user list that included patients, family members, organ donors, transplant professionals, advocacy groups, regulators, and organ procurement organizations to capture all stakeholders. Different homepage contents were created and internally circulated to IT and Communications staff for feedback. The refined concepts were presented to patients, family members, and donors in online feedback sessions. A single, preferred design was taken from this, with the contractor making additional refinements and expanding content to be a more complete site representation. This was completed in late 2022. Dr. Schaffhausen said that at the time of the design work, there was no budget or timeline constraints. As SRTR is now working within a set budget for a new contract year, some features will not be included right away and will be placed into a later phase.

Then, he reviewed an example of how SRTR has documented different user scenarios, in that the type of information patients seek is contingent on what stage of the transplant journey they are in.

He went on to next steps of website development, which included design refinement and more user testing. Key objectives of testing include 1) focusing only on features that are in-scope, and confirming there are not any additional changes to address user feedback, 2) evaluating transplant professional content for the website, and 3) considering alternatives based on templates available on the web platform. Dr. Schaffhausen explained a main focus was targeting a process to detail functional requirements to be given to the IT team for implementation.

Patient-centered website process discussion

Members discussed recommendations for the final design phase and implementation process. Mr. Ryan Follmer briefly summarized the IT capabilities at SRTR. On past projects, there were infrastructure and database staff who worked on applications like statistical calculators. Mr. Follmer initially launched a website provided by the third-party Nerdery. After this was launched, technical debt has incurred as a result of its maintenance. IT has also grown web capability in its software development capabilities. IT is currently working on transferring technical knowledge from the independent software development house (contracted to work on the new website) to the SRTR team to continue to develop the sites and grow out the web space. IT is also in the process of hiring new talent in this area.

Mr. Follmer explained the current website layout, building processes, and the challenges with creating a new website. Hybrid development processes are used, potentially including Agile or waterfall processes, depending on what is being built. Some past applications used Agile web development. For web, everything on the current site is built in Umbraco. The Centers for Medicare & Medicaid Services (CMS) communications team is used at times. Mr. Follmer noted that in developing the new website and being presented with the mock-ups, there are functional differences in navigation. One obstacle was presenting the new pages consistently with the legacy website without uprooting everything already built. IT had less experience in the area of requirements development, and in bridging the technical gap of taking all the steps involved with converting a stationary mock-up into a live page.

Dr. Harry Hochheiser asked if Mr. Follmer thought IT capacity may not have the flexibility to be as agile as hoped in terms of building and testing new web environments. Mr. Follmer thought a main problem was being constrained by technical debt. Mr. Christopher Zinner commented that it seemed the issue was fitting a new functional version of a patient-centered website into the current information architecture with technical consistency—in other words, digital strategy that needs to happen at a technical level. Mr. Follmer agreed, adding that another goal during development and launch of the new pages was reviewing existing SRTR pages to see if anything could be simplified. Ms. Olivia Foss mentioned the online platform Miro to help with content migration, as well as setting boundaries for what would and would not be tolerated in the migration process.

Mr. Follmer mentioned the business analyst gap in the process—the IT team does not have a large capacity of talent in that area since there was no need for it in the past. Mr. Zinner brought up the potential challenge of using HCD in a process with constrained budgets to make sure the web implementation process was on track without needing to add more requirements later on. Mr. Follmer noted that money was allocated with the software development contract house used to create the mock-up products. If the contract was presented with a clear plan and requirements, a lot of ground could be covered in building the new website.

Mr. Zinner centered the discussion around if a main issue was more about how to insert HCD into a process, or more of a shift from a waterfall web development method to an Agile web development method. He said that the Agile method was more useful when paired with the HCD process. Using the Agile methodology along with clickable prototypes would be helpful for developers to understand. However, having collaborative sessions for developers, designers, and business analysts to understand each other was important. Mr. Zinner also added that having a budget and scope appropriate for Agile was essential for success.

Ms. Foss said a digital strategy would be useful to prioritize important items. Mr. Follmer thought a good next step would be having clickable prototypes in between the mock-up and coding process for the new web page. Mr. Zinner pointed out that design was cheap relative to code, so it was best to make mistakes in an illustrator mock-up instead of after a developer creates the site. He also added that designers typically should not design every single page. Ms. Foss agreed with this, and also suggested information hierarchy sorting to help with the process. She said prototypes were helpful, but did not have to be clickable. Dr. Hochheiser said usability testing could be low tech (eg, hand drawn), and research suggested unfinished representations result in better feedback. Ms. Kaia Raid said that from a designer perspective, it may be better to start over. However, she said using a template to fit existing designs onto would be useful. Mr. Zinner suggested communicating with the software development contract house on the level of fidelity needed before handing materials to them to work on, and then collaborating on materials not directly given. A combined IT and design team effort would be more successful.

Mr. Zinner asked if there were future plans to do usability testing, and what assurances were in place to make sure the contract house would not try to complete tasks outside of its capacity and results would meet expectations. Dr. Schaffhausen said they planned to shift to usability testing. Mr. Follmer mentioned SRTR had a strong relationship with the software group (a co-op of independent developers) in terms of communicating capabilities and skillset. Giving the group detailed instructions would allow a fast build process.

Mr. Zinner asked committee members for advice on how to handle design concepts for page designs, with there being no business analysts in the case of SRTR. Ms. Raid advised annotated wireframes. The design tool Figma was also a good resource. She said there needed to be a company document that communicates the ideas in mind on how a website should function, when there is no working prototype. A design pattern library that clearly defines states, buttons, rules, and grid systems would also be helpful. She emphasized the importance of templates in this process. Ms. Foss agreed Figma was useful, and Dr. Schaffhausen agreed this could be a potential approach for SRTR to document requirements. Ms. Raid also suggested prioritization testing for certain features.

Dr. Hochheiser advised decoupling the "what" from the "how," in that who is going to build what and how it is going to be implemented, which differs from the user goal story. He recommended the book *Usability Engineering: Scenario-Based Development of Human-Computer Interaction* by Mary Beth Rosson and John M. Carroll, which discusses different levels and phases of scenario design. Mr. Zinner pointed out that SRTR IT could use the mock-up ideas with the annotations as the mechanism to communication function and requirements, which was a lightweight collaborative process. And as

Dr. Hochheiser said, start with designing user flows before individual page design or use of templates.

Mr. Zinner asked if SRTR IT in the Agile process figured out how to write user stories in a more traditional way. In addition, because SRTR has a product, he mentioned the possibility of Dr. Schaffhausen being product owner since he managed the design, and the product owner could be the person who is writing user stories. Mr. Follmer said SRTR did not have a pipeline for building Agile web information, and their software developers did not work with web design. Many contracting decisions were made through the lens of using small businesses, as is the case with nonprofit operating federal contractors.

Mr. Zinner listed the main suggestions given during the meeting: 1) prototype screen annotations, 2) use of templates if bespoke design is not necessary, 3) reliance on external development firm for recommended design patterns, 4) user testing (resonance/usability) before handing off to development, 5) design and development conversations and additional annotation details versus separate additional documentation, and 6) starting with user flows before individual page design, and then refining user flows as requirement-based design realization.

Closing business

With no other business being heard, the meeting concluded. The next HCDS meeting date is to be determined.