

Process Book: MUSE

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Introduction

In this process book, we will discuss the growth our team experienced while developing the service MUSE. We will share some key moments from different stages of the project, relating our learning to concepts from lectures, reading, and class discussions. Finally, we will reflect on where we are now, the growth that went through individually and as a team after completing the investor pitch and pivoting multiple times throughout the process.

Where did we start?

Alana

Coming into this project, I was interested to see how I could apply concepts and methods from other MHCI courses and projects with less scaffolding present. Specifically, I was looking for opportunities to use research methods from UCRE (user centered research and evaluation) to inform our efforts. This was the first project I have been on where I was coming in with the most design experience, which definitely was not an area I was confident in.

Having pitched this service individually and gotten investment from my peers, I was also determined to allow my teammates to feel ownership over this project as well so that it could be a team effort.

Elie

I am a software engineer. I have prior experience with AR/VR technologies, and I am here to learn how startups grow. I started my mobile game company in Lebanon, but a year later I stopped working on it because I had very limited idea of what I should do beyond programming and building games.

I was open to learn anything this course can offer, and I came to this project ready to apply the concepts I learned during the first 7 weeks. I invested in Alana's Muse idea and I thought it was original. But what attracted me most about Muse is the way Alana presented it in front of the class and the way she used tools like Powerpoint to convey her idea.

Where did we start? (cont.)

Rohan

Before CMU, I had a software engineering background. I had some experience with customer interviews from the previous product management course that I had taken at CMU. The idea that I had about design thinking was just from the UI point of view. While going through the initial readings it's not at all about UI, it's much denser and more about the experience and value that the user gets out of the service. After the initial 6 weeks of DSI class, I had an understanding of identifying product opportunity gaps, making sense of the value flow in the service, and the definition of a minimum viable product by Robinson and Eric

Chirag

I walked in this class with a brief entrepreneurial stint, and about 3 years of experience as an analytics consultant operationalizing data pipelines and managing analytics maturity roadmaps. My motivation for the Digital Service Innovation class was to unlearn and relearn entrepreneurship while appreciating the importance of design. Six weeks into the class, I was already looking at problems differently -

- I was able to identify opportunity gaps but now, from Eric Ries's idea of MVP, I was formulating hypothesis that could be validated with minimum effort.
- Seelig's ideas of reframing and Normann's idea of unbundling the services gave me a creative ways of thinking about the problem rather than the solution,

Innovation through reframing

Learning about Unbundling and rebundling allowed to think about innovations from a new perspective. This was during a reading of “Reframing Business: When the Map Changes the Landscape” by **Richard Normann**. These concepts helped me think how successful tech companies like Uber and Airbnb succeeded. I also reflected on these concepts in MUSE when it comes to unbundling seeing how a painting looks like at home from the physical world and rebundling it to the virtual space.

Reframing was another eye opening concept(How Reframing Unlocks a Problem, by **Tina Seelig**). In Muse, we had many opportunities to reframe, but the most obvious reframing we did was when we reframed the idea of a customer trying to fit a painting on their wall in their home. Home was the box or the frame we were thinking inside. Reframing for us meant the customer can try to fit a painting on there wall while being physically outside their home as well.

A Pretotype can be abstract

We were having these brainstorming sessions on how to create a prototype for an AR-based service, Should we use the existing AR-based solution for the validation session? What were the challenges associated with it?

Then we learned about '**Pretotyping**' from the book '**Pretotype It**' by **Savoia**. Our team focused minimized the effort and eliminated AR for the pretotype and used Figma instead.

We tested the idea without building the solution. From this process, we learned that the core ideas behind a service can be validated with users before a team puts in the effort of solving the problems they think they have identified.



An example of the activity that served as our pretotype

Talking to Users

We started by interviewing customers in museums to validate a hypothesis that people there would like to have more art in their homes. When coming up with our plan for these interviews, we recognized it as an opportunity to learn about how users think while they are in the context of an art focused space. We brought in concepts of conceptual inquiry.

Later we used **directed storytelling** by **Evenson** to learn more in depth how people make decisions about what art to buy and how to display it.

While validating MVP1, we used a **think-aloud protocol** to observe how users shop for art online. For most team members, this was a new method, so we focused on encouraging the user to talk without affecting their behavior.

We talked to...

2 artists

~10 art buyers

~15 museum goers

Importance of Empathy

After having several directed storytelling sessions over Zoom, in-person at art galleries, museums, and CMU's fine arts department, we were practicing empathy by trying to understand the art buying experiences of our variety of users.

Ovetta Sampson suggested that empathy starts with internal reflection within the team to uncover our biases. Muse got engaged in groupthink and we fixated on fitting all the value within the phone.

As rightly mentioned by Sampson, true empathy is tougher to practice.

Cagan and Vogel suggested that a product should meet a consumers' conscious and unconscious expectation. Muse met the conscious needs by enabling buyers to imagine art. Effective empathy could have unlocked the value in satiating unconscious needs - discover art and build a community

What we learned from users

- **Let go of AR:** AR was key in conceiving the original idea of Muse, since technological environment can trigger us to think about solving problems that we could not solve before. But when interviewing our users, we need to be ready to let go of some of our hypotheses if we could not validate them. AR was not our priority anymore because we now need to find and articulate the real customer problems, which involves supporting art buyers while they are out in the world- not home.
- **Impulsivity:** Many users buy art impulsively. They see a painting that looks good to them, or that reminds them of something, and they buy it without thinking about where to fit it in their home. Directed storytelling was key in this finding, because this is not something most people are aware of to begin with.
- **Insights from the artists:**
 - Some artists are not willing to compromise their style just to get new customers.
 - Some artists see the process of creating art for a customer as a negotiation between what the customer wants and what the artist can create authentically.
 - Some commercial artists trust their instincts that they honed with many years of experience and are not interested in getting insights from data analytics and data aggregation. They think they already know their customers.

Not pivoting enough

Our initial MVP enabled the users to store their living spaces in their phones and experience how the art pieces look in their rooms.

The Pivot

After on-the-ground user research, we realized that people experienced disappointment when they realize art will not look good in the home even if it saved them from a bad purchase. Our pivot added recommendations on top of our existing service.

Was that enough?

Not really! We learned after in-person critique sessions and talking to more potential customers that *we weren't pivoting enough* and left a lot of value on the table. Muse could also be a platform for artists and art buyers to connect.

Pivoting on value creation

After realizing that our pivot of adding the concept of recommendation was not very meaningful, we began to think more about the concept of **Cocreation of Value**. We considered what the byproduct would be if we were able to provide art buyers with our service, and realized that we could collect valuable feedback on how users shop for art.

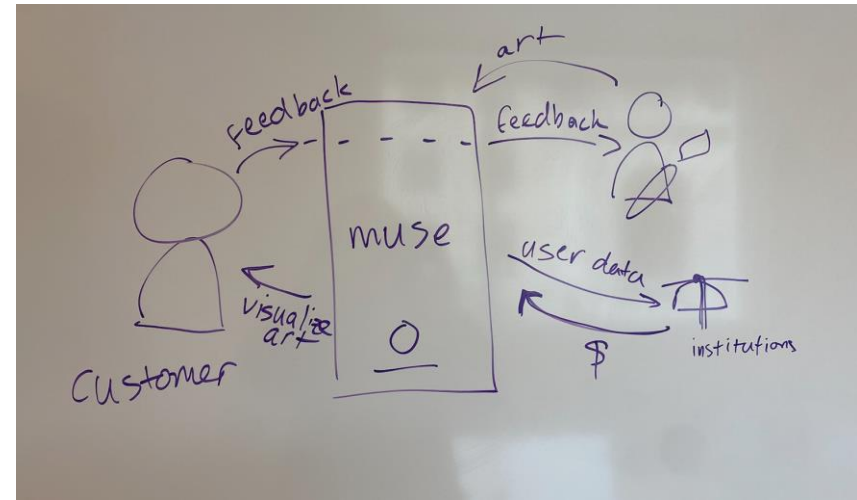
We formed a hypothesis that this feedback would be valuable to artists and institutions, applying the concept of **operant resources** (from Iusch, Vargo and Wessels). Our operant resource is feedback from users, and a way to define how users are currently shopping for art. From this exchange, we were able to totally redefine our value flow after being encouraged to use visual models.

From here we knew we would have to validate with artists what type of customer feedback they could benefit from. At this point in the semester, we had days not weeks to conduct this research. It was a good opportunity to force very fast turnaround and decide what the most valuable information was that we could collect in a short period of time.

The value of visual models

Trying to present an entirely new value flow during one of our last in class critiques, we realized how well a visual model could really communicate hard to articulate concepts.

Throughout the rest of the semester, in deliverables and pitching, we would try to remember that a visual model could communicate concepts very efficiently and also would allow more focus on the speaker in presentations in the absence of text heavy slides.



Eliciting productive critique

Every member of the team individually improved in receiving and eliciting critique, but we also learned how being in a group and **working together could make critiques much more valuable.**

The critiques where we learned the most and came away with the most new ideas were the ones where each member of the group took an active role in leading the critique. For example, when introducing our new value flow, we had one member pitching, one drawing a model that reflected the words of the speaker, and one taking notes on what our peers thought.

Some lessons about critique that resonated for the whole team were:

- Don't ask either-or questions, but also don't leave it completely open ended
- Avoid defending your work
- Ask follow up questions of the audience
- Ask for the feedback your team needs in that moment to move forward

Pitching

- During this project we learned that we need to speak the language of the investors: what investors look for is not so complicated and out of this world, it is just what creates value.
- Investors were attracted to empathy, they didn't discount their emotions and values.
- Investors valued team dynamics: We learned from this pitching round that every team member should talk to every investor
- There's a slowdown on technology in the startup space and more focus on discovering what problems people are facing: solving the problems can involve technological breakthroughs, if needed.



Reflections

Alana

This class was like exposure therapy in public speaking. I was not someone who got very nervous before, but now I am confident that I can hold my own in those situations even if I know I could be more prepared. This is a very valuable skill, considering I will have to be able to speak for ideas that are not fully fleshed out.

I also learned that investors are not only driven by the potential of an idea to make money. Initially, interest can be generated by playing on the more emotional aspects of a service. Previously I had thought that value had to be communicated at the expense of forming a human connection, but I see that is not the case and that is something I can apply to future endeavors.

Elie

I became better in receiving critique, although I there's big room for improvement. I, like many others have an instinct of trying to argue or defend my idea whenever someone critiques it, be it in business, politics, sports or art. But after this course, I became better at asking questions, and I now view conversations as a tool to co-create value, and discover solutions together. Asking questions is more effective than jumping to conclusions, and it can advance a conversation in unexpected ways.

Reflections (cont.)

Rohan

I learnt how the focus after pitching should be on gathering feedback instead of defending the solution. If a user asks a question instead of answering it, I learned the importance of asking them why do you think this way? Or what we can do to make your experience better?

Chirag

I am walking out of this course with three major takeaways -

1. Pivoting should bring about a substantial change in the value that the service offers.
2. Facilitating a critique session properly can elicit feedback and reactions and truly unlock the “wisdom of crowds”.
3. Practicing empathy is harder than it seems, and I learnt through taking interviews that you have to immerse yourself in the narratives to empathize with someone else’s lived experience.