CreativeConnect:
Bridging UX Designers & Startups

Carnegie Mellon University
School of Design Graduate Thesis
by Jane Lien, under the guidance of Bruce Hanington
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CreativeConnect: Bridging UX Designers & Startups

A thesis proposal submitted to the
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Abstract

Startups are an important entity to bring new ideas into the world. However, nine out of ten early stage startups fail. There are many factors contributing to the fate of a startup. Incorporating user experience (UX) design into an early stage startup can increase its chances of success.

UX designers have the capability to generate and evaluate ideas, as well as conduct user research, visualize concepts for communication, and create prototypes for user testing. Despite the valuable skills a UX designer might bring to a startup, many startups lack in-depth knowledge about design and access to the design community. A shallow understanding of design leads many startups to only add a designer’s input at the end for visual design.

The proposed solution, CreativeConnect, is a platform connecting early stage startups with UX designers. CreativeConnect builds a community of UX designers and provides entrepreneurs and aspiring designers access to that community. Through tools and services provided by the platform, those outside of the design community can gain a deeper understanding of design. By utilizing design beyond visual design, startups can connect with their users on another level and increase their chances of success.
At Thrill Mill’s startup bootcamp with other entrepreneurs in Pittsburgh, PA (2015)
Startup Bootcamp

I was first inspired to explore the startup world as a thesis topic because of my personal experience with an early stage startup. It all started when a friend of mine asked me to join him and his friends at a startup competition. Before I knew it, we were accepted into a local incubator space and working on a startup. Throughout the year I worked with the startup, communication issues arose. While I am still friends with the guys I worked with, and they are continuing on the startup road, I am no longer with that startup. The year I spent working on the startup and immersing myself in the Pittsburgh startup community, however, was a great learning experience. Through my research, I found that many entrepreneurs believe that one of the top reasons startups fail is due to disagreements among the co-founders. This led me to my initial exploration into communication between co-founders at a startup.

After exploratory research, I speed dated concepts with entrepreneurs. One concept was called "Designer Office Hours." I could clearly see the benefits a UX designer could bring to a startup, but I found that most of the entrepreneurs I spoke with did not see how a designer would be helpful to them beyond creating a logo or website and making their product "pretty." As the purpose of my project is to maximize a startup’s chances of success, I pivoted to further explore the role of UX design at a startup. The following pages document the process of creating a platform connecting entrepreneurs and UX designers to form mutually beneficial relationships.
Why Startups?

Startups are an important entity in bringing new ideas into the world. However, nine out of ten early stage startups do not succeed. There are many factors contributing to the fate of a startup. In this thesis, I explore the question: how can design help early stage startups maximize their chances of success by improving the way entrepreneurs evaluate and execute ideas?

User experience (UX) designers have the capability to generate and evaluate ideas, as well as conduct user research, visualize concepts for communication, and create prototypes for user testing. Incorporating UX design into an early stage startup can increase its chances of success. Despite the valuable skills a UX designer might bring to a startup, many startups lack in-depth knowledge about design and access to the design community. The design solution addresses the question: how might we connect more early stage startups with UX designers?
“A startup is a company working to solve a problem where the solution is not obvious and success is not guaranteed.”

Neil Blumenthal, co-founder of Warby Parker
Interviews

Founders (11)
Employees/volunteers (5)
Startup Incubator Managers (2)
Certified Mediator (1)

Exploratory research started with interviewing founders of startups about communication with their co-founder(s). The interviews then extended to employees or volunteers that have worked with startups, as well as incubator managers, to gain more insight into communication that happens within a startup. I also interviewed a certified mediator to learn more about best practices in conflict resolution.

Many entrepreneurs shared that conflict occurs, and sometimes there are even intense shouting matches, but the successful team members are able to learn more about how each member works and how to work through the conflict. The certified mediator stated that knowing oneself and one’s conflict management style is important in being able to resolve conflict with others.

Another insight from the interviews is that not all conflict is bad. This corresponds with messages in Dan Brown’s book Designing Together about conflict validating and elaborating ideas (2013, p.52). One incubator manager observed that one successful group in her incubator would argue intensely about their product, but the arguments were productive in that they would improve their product offering. The key is to not let things get personal.
Observations

Participant observation with Kopo
Personnel committee at Upper Room
Fjord Values Exchange Workshop
Gottman Institute Seminar

As a co-founder at a startup, I was able to conduct participant observation. A “startup diary” was kept to document milestones, meetings, and areas that could use improvement. The immersion showed how busy entrepreneurs are, as well as how last-minute many tasks can be. The last-minute tasks that needed to be completed were often due to opportunities that the team wanted to take advantage of, such as applying for a particular grant, despite the lack of preparation time. The constant changes from interfacing with potential investors or advisors led to several opportunities for miscommunication. Even though regular meetings were established, often they were focused on putting out fires, with team building and sharing of vision/mission a low priority.

Besides participant observation and general observations made while conducting interviews in the field, observations were also made as a member of the personnel committee at Upper Room, a small church plant. After speaking with one of the founders, I found similarities between a startup and a church plant. I then found myself being asked to help develop feedback forms for the church personnel. While the feedback forms have not yet been used, the process showed how difficult it is to balance personal and professional relationships when giving feedback, a crucial part of communication within an organization.

Two workshops were also instrumental in developing my understanding of communication. One was a workshop facilitated by Fjord at the 2015 Service Design Network Conference in New York City, titled, “Designing Playful Sustainable Handovers.” As we only had a short time to complete the game they had set up, I requested the file to recreate and observe people playing it. The group that playtested the game found it to be more useful if it was used in the beginning of a group formation and if the group members didn’t know one another. The other workshop was a relationship workshop run by a couple who had undergone training at the Gottman Institute. The workshop covered concepts developed by Drs. John and Julie Gottman, such as the “Four Horsemen of the Apocalypse” which hinder good communication (Gottman).
Playtesting

Surviving Design Projects by Dan Brown
Lululemon’s Vision and Goal Worksheets
Fjord Values Exchange Board (see Appendix A for board template)
Gottman Institute Rituals for Connection Cards

Related to several of the observation activities were tangible tools for facilitating communication. I decided to try them out to better understand how they work. One tool was for facilitating group work in creative environments. It was a game which consisted of a deck of cards called Surviving Design Projects by Dan Brown (2012). The cards tie in with his book *Designing Together* (2013). The cards contain various scenarios and potential ways to resolve issues presented in the scenarios.

As I worked with the Upper Room personnel committee to develop feedback forms which included a goal setting component, I found inspiration in a set of vision and goal setting worksheets developed by Lululemon (2012). The worksheets start off by allowing the user to dream big and then creating specific goals that lead to the larger, long-term goal.

The lead facilitator from the Fjord workshop kindly sent me a copy of the Values Exchange Board (Matter, n.d.), and I was able to recreate the game which consisted of a board, scenario cards, and hexagonal, acrylic pieces that players can write on with dry erase markers. The objective of the game is to work together as a team to determine who would be able to provide the skills needed for each phase of a product’s development and how each team member can support one another in each of the tasks.

From the Gottman workshop, I discovered the Rituals for Connection Cards (Gottman). The card deck contained a variety of events that a couple may encounter in their lives together and in which there may be potential disagreement. The couple splits the deck in half and each chooses an event to discuss. They then pick one from the two events to discuss using the guiding questions provided.
From exploratory research, I pulled out five key insights.

**Pivoting** is difficult but a necessity.

**Conflict** is initially hard, but people get over conflicts through learning about their own and their teammates’ conflict management styles.

People need **clarity of roles and responsibilities**.

**Best resources** for startup founders come from **people** and their feedback.
From the key insights, I derived four design implications. Even though I was not sure at this point what form my final deliverable would take, I wanted to make sure it would achieve the following:

- Facilitate better self-awareness and feedback loops
- Support clarity of roles and responsibilities within the team
- Provide a resource that is not generic but dynamic and customized
- Ensure decisions and priorities are based on shared vision, mission, and values
“A team aligned behind a vision will move mountains. Sell them on your roadmap and don’t compromise — care about the details, the fit and finish.”

Travis Rose, American entrepreneur
After brainstorming concepts, I decided to speed date three of the concepts with entrepreneurs. The concepts were shared in storyboard form with the concept being described in a scenario. The storyboards used can be found in Appendix B. Four entrepreneurs weighed in on the concepts.

It soon became clear that the skills a designer could bring to a startup were not evident. The responses to the first concept “Designer Office Hours” revealed an opportunity for education about the role of design at a startup. Feedback from the fall semester’s thesis review panel also pointed to the first concept as the most promising. The panel advised looking at everything as a system, not just a product or a service. They also pointed out the legal complexities of engaging students as volunteers.

1 Designer “office hours”

Entrepreneurs can sign up for “office hours” with a designer who meets with them in person. The designer acts as a sounding board and helps the entrepreneur with improving his or her business plan and getting user feedback.

I guess it depends on what her [the designer’s] expertise is in and if the startup was about something she is familiar with.

Often people talk to an expert in the field versus a designer.

What ideas are the designer offering him?

Time would be better spent with someone you trust.
## TOOL

### Team check-ins

Prior to meetings, team members will receive a check-in email where they can mark on a spectrum how they are feeling about their progress, general well-being, and how the company is doing in aligning with certain value statements. The results are collected and available to the team for assessment.

- It's not the easiest thing to bring up. Where can I get this tool?
- Good idea, scary idea. Would it be anonymous?
- Could be tedious. I would hate doing it, but it’s a good idea.
- Would want to augment with observation.

## PLATFORM

### Skilled student volunteers

Entrepreneurs can find educational courses online that match the task they need help with. Students taking the course can choose the task as their assignment. Entrepreneurs receive all submissions and can choose the one they feel was executed the best.

- They have an incentive to try their best.
- Good if the student can review and select what they’re passionate about.
- Quality is a challenge. Like interns, they’re there to learn.
- Good to get their insights, good to get non-business, engineer, or design people involved too.
This competitive analysis shows there is an opportunity space for developing resources specifically for startups. While some organizations are specifically geared towards startups, they are less scalable than the organizations that are currently available solely for non-profit organizations.
“...if we are to compete effectively in today’s world, we must begin to celebrate collective entrepreneurship.”

Robert Reich, former US Secretary of Labor

A resource-based view states that a business creates a sustainable advantage when the resources that entrepreneurs bring to a venture are “distinctive and difficult to transfer” (Ruef, 2010, p. 58). In startups, these conditions tend to occur when there is diversity among the owner-managers (Ruef, 2010, p. 58). Even so, startup founders tend to collaborate with those similar to themselves. For example, when entrepreneurs are looking for partners, they display a preferential bias toward other entrepreneurs of a similar age, even if this may contribute to redundancy in human capital (Ruef, 2010, p. 49). I believe this has to do with an entrepreneur’s limited exposure to groups not similar to their own and a limited network which they rely on when looking for partners.

Connections an entrepreneur has can be divided into strong and weak ties. Strong ties could include marital and familial relationships, whereas weak ties are ones where there is less time invested or less intimacy. Research shows that “weak ties are often more important in spreading information or resources because they tend to serve as bridges between otherwise disconnected social groups” (Ruef, 2010, p. 166). Additionally, Ruef (2010) extrapolates the importance of a diverse network. He writes, “we anticipate that entrepreneurs who are embedded in a diverse set of network ties are more likely to be innovative than entrepreneurs relying on homogeneous ties” (Ruef, 2010, p. 168). I believe that relationships made on virtual platforms, which also transpire in real life, are one way an entrepreneur can broaden his or her network.
“Technology can often be copied, design can bring in an emotion which often can’t.”

Laurence McCahill, Founder of Spook Studio

The startup world is slowly, but surely, emphasizing the importance of design. There is growing interest in incorporating designers, particularly as a co-founder. Successful startups, such as Etsy, Airbnb, Pinterest, and Behance, have one thing in common — they have a designer co-founder. Since 2010, 27 startups that were co-founded by designers have been acquired by companies such as Google, Facebook, Adobe, and Yahoo (Maeda, 2015). Many investors look for a startup team that consists of “a hacker, a hustler, and a hipster” (Parkhurst, 2013). (The hipster being a designer.)

UX designers have the capability to help a startup identify and connect with their users and quickly test out products/services. A previous era of startups depended up technology to set them apart, now startups are differentiating themselves through good UX design. Laurence McCahill, founder of Spook Studio and The Happy Startup School, said in an interview, “People are now more savvy than they were even five years ago and so won’t put up with a poorly designed product or service if there’s a better alternative” (2013).

A VentureBeat article states that creating an exceptional user experience is a competitive advantage (McCullum, 2011). The venture capital firm that sponsored the article, Venture51, believes adding a designer co-founder creates a competitive edge that they refer to as the “Unfair Design Advantage” (McCullum, 2011). The article goes on to say that adding a designer founder to the mix creates a “black swan” that is “hard to predict, highly improbable, and will change the world — potentially redefining the high tech landscape” (McCullum, 2011).

Venture capital firm Kleiner Perkins Caufield & Byers (KPCB) has issued a report called Design in Tech. The May 2015 report predicts that design’s business value will evolve, stating “Design in VC is not about pretty — it’s about relevance” (Maeda, 2015).
In 2014, John Maeda, who was the President at Rhode Island School of Design for six years, left the school to join KPCB as a Design Partner. In an interview with FastCompany, he explains why he decided to join KPCB, “It seems like right now more than ever technology needs design, and that’s in my mission to bring those two worlds together in the context of business” (Ferro, 2013). In a Wall Street Journal article, he writes, “To leverage design successfully in tech, don’t spray design on at the end” (Maeda, 2015).

Maeda is also on the board of the 30 Weeks program, an incubator that according to their website “helps transform designers into founders, entrepreneurs, and the kind of leaders that invent the future” (www.30weeks.com). The incubator is operated by Hyper Island, and supported by Google in partnership with SVA, Parsons, Pratt, and The Cooper Union, among others. The program started with its first cohort in March 2016. One of the startups to come out of 30 Weeks, Light Phone, has already raised over $415,000 on Kickstarter and will ship in June 2016 (“An experimental school...”, 2016).

Another example of the startup world and design community intersecting is Designer Fund (www.designerfund.com), a venture capital firm that invests solely in startups co-founded by a designer. Enrique Allen, co-Director of Designer Fund, says, “If you want to ship great products, consider having a designer in your founding group” (2012). They also run Bridge, a professional development program that connects experienced designers with top startups and a design community in San Francisco. The same group also started Designerfounders.com, which has published two books by running a successful Kickstarter campaign, featuring designer founders of successful startups and their stories.
Design Concept

Connecting Entrepreneurs & UX Designers

From the initial research, competitive analysis, and speed dating concepts, I wanted to move forward with creating a dynamic resource for entrepreneurs by connecting them with UX designers. I felt an online platform would be able to achieve this goal. The initial system map places an emphasis on time because I knew from research that entrepreneurs are very busy people. The system map features two main users: early stage entrepreneurs and aspiring designers.

Facilitating Communication Between Users

As I started my research looking into communication between startup co-founders, I wanted the design solution to scaffold communication between entrepreneurs and UX designers. The first system map includes a “coffee meeting” where users can assess work compatibility with one another and interest in the project before committing to work with the other person. Even in the initial system map, I imagined a tool that would help the users with project planning.
Initial System Map

- **Entrepreneurs**
  - Education
  - Project info

- **Designers**
  - Education
  - Project info & Education
  - Time

- **CreativeConnect**
  - 30 minutes

- **Coffee Meeting**
  - 1-2 hours

- **Project Planning**
  - 1-2 hours

- **Project Execution**
  - 20+ hours

- **User research**
  - Improved user experience
  - Startup story

- **Portfolio piece**
  - Recommendation
  - Other compensation *

- **Provide feedback and support for one another**

- **Design Feedback / Support**

* dependent on agreement
Designing and Leading a Business (DLB) is a course offered through Tepper School of Business at Carnegie Mellon University that welcomes both Master of Business Administration (MBA) and graduate design students from the School of Design, Human-Computer Interaction, and the Integrated Innovation Institute programs to participate. I was able to take the Spring 2016 course, which was co-taught by David Mawhinney, Tim Cunningham, and Art Boni. The course is structured so that MBA students work on projects that they have chosen from a list of client projects or from their own startup interests. The design students form an internal design consultancy called MODUS (name has no particular significance). The MBAs pitch projects to the designers and the designers are able to join teams based on their interests. All students are invited to join in on design and business workshops and lectures held throughout the semester.

Six designers from the Spring 2016 course commented on their experience working on DLB projects. When asked, “How has your experience been working with the MBA student(s)?” on a scale from 1-5 with 1 being ‘easy breezy’ and 5 being ‘very challenging’ all designers selected either a 2 or 3. However, many found that the MBA students did not have a clear vision when it came to the role of design within the project they were working on. One designer wrote, ‘The ‘openness’ to innovation by individuals in the team determines the ease of incorporating design into business. Some choose not to or are not able to see the value of this.’ Survey results are available in Appendix D.
I also surveyed the businesspeople in the course and 16 participants gave insight into how they viewed design. Questions ranged from “How likely are you to use a designer as an integral part of your startup team?” to “When would you see the designer providing the most value?” (Survey results are available in Appendix E.) The word cloud below was generated from the question: If you want a designer to join your team, what would you want the designer to work on?”
Case Study: Design Clinic

The Design Clinic at the University of Michigan provides design advice and services to local startups, nonprofits, and cultural institutions. In fall 2014, two graduate students in the School of Information, Kruthi Sabnis Krishna and Lily Samimi, came up with the concept and were able to get funding from the school to hire a part-time coordinator for the program (“Design Clinic,” 2015). The program started out of the School of Information’s Entrepreneurship Program to give Bachelors and Masters students at the School of Information the opportunity to gain hands-on experience as a design consultant.

Their clients benefit from a wide range of free client services, including consultations on user interface and interaction design, website architecture, customer discovery and user research, usability testing, content development, and social media marketing. Students can participate whether they have experience or not, as the program is based on an apprenticeship model with experienced students as Design Clinicians and students looking to gain experience as either an Apprentice I or II.

As of spring 2016, the design services are free of cost to clients and students are unpaid. However, the coordinator has said that they are planning to experiment with pay scales for the Design Clinicians. Even though the designers are currently unpaid, they are able to gain valuable experience. While I was visiting the Design Clinic’s end of the semester presentations, one student shared with the coordinator how he was able to land an internship thanks to his experience at the Design Clinic. Another student, Jeffery Zhang, who participates as an Apprentice II, shares why he joined the Design Clinic, “I joined the Design Clinic because it offers a unique environment for mentorship and experience surrounding user experience that isn’t found elsewhere on this campus. Working at the clinic so far, I have already gotten to practice user research techniques I’m familiar with, while also exploring new techniques I haven’t tested before. If you’re willing to work for it, the Design Clinic offers you the opportunity to gain experience you simply will not get in the traditional classroom setting.” (“Design Clinic,” 2015)
Getting feedback on concepts
Generative Research

To get a better sense of how entrepreneurs view the designer’s role at a startup organization and vice versa, I had a business person, a designer, and a person who has experience in design and business (as well as engineering) visualize their ideal organizational structure at a startup. Participants were given a variety of materials to play with, including colored blocks of various shapes and sizes, bendy wires, post-it notes, a variety of string, and clear acrylic hexagons with dry erase markers. The participants were asked to use the materials to symbolize people at a startup and the relationships between those people.

The participant with a background in design, business, and engineering used a cone (yellow) to represent hierarchy for the businessperson, a column (green) to represent symmetry for the engineer, and the ‘h’ shape (red) for a designer because of its unique shape. The blue bridge shape was chosen to represent an administrator because that person connects people. All the other pieces symbolize investors.

The participant with a background in business used acrylic pieces with titles written on each to symbolize team members and wooden color pieces (and one black bendy wire) to represent connections. Most team members were interconnected.

The participant with a background in design used a green wooden piece to symbolize the CEO, a yellow piece to represent a designer, and the purple and blue arches to represent front and back end developers. The pieces are spatially arranged to indicate the information flow between team members, and are placed near tasks indicated on the clear acrylic hexagons.
While devising a planning tool to help entrepreneurs learn more about skills a designer can bring to the table and to be able to plan specific tasks with the designer, I made a paper prototype with movable pieces, including blank pieces. I had three entrepreneurs use the tool, provide feedback, and co-design the tool to better align with how they would like it to be. Participants shared that the timeline should be in shorter time increments, or not necessary as the phases provide an anchor of time. They found the things a designer could help with popping up to be useful.
I took the feedback from the entrepreneurs who tested out the paper prototype and created a digital version of the planning tool [Fig. 1]. I used Justinmind for interactivity. Simultaneously, I continued interviewing potential users, and I soon realized that potential users wanted more guidance than what the tool was providing.

One interviewee, who was an aspiring designer, said he wanted someone to “assign tasks” to him. He further explained how in coding they have patterns that help solve issues and he would like to have someone more experienced tell him, “In this situation, I would...” Another aspiring designer said she felt “somewhat confident” that she could take on a project with a startup, but wanted more information. The insights into what an aspiring designer would like to have as a planning tool led to a pivot regarding the content of the planning tool. I realized that even though I wouldn’t be able to cover every situation or question that might come up in planning a project, I could still provide a tool with curated design methods that correlated with specific questions a designer might want to know about a startup and for the startup to answer before proceeding.

The new planning tool [Fig. 2] provides questions that a startup should be able to answer regarding their startup concept. If there are unanswered questions, the tool provides a curated set of design methods that can be used to answer the questions.

The planning tool is intended for use by both entrepreneurs and aspiring designers. A later version includes a hover state which gives more details about each design method. It also allows the user to select methods to add to a ‘Project Plan’ that is shared by the entrepreneur and the designer.

A further iteration of the planning tool is shown in the “CreativeConnect: Touchpoints” section.
Have you conducted user research?

Do you have a clear vision of your business concept or would you like to explore a couple ideas?

Start with:
- Interviews
- Observations
- Surveys

Do you have a clear vision of who your user is?

Do you have a clear vision of how your user will interact with your product/service/system?

Do you know what differentiates your startup from competitors?

Have you tested out your concept with users?

YES

PRETTY CLEAR

NO

EXPLORE

EXPLORATION IDEA: 2x2 Matrix

YES

Brainstorming

NO

Storyboarding

Service Blueprints

Experience Prototyping

Fig. 1: Planning Tool v1 allowed users to slide a slider to different phases of a project and have suggested design methods pop up underneath.

Fig. 2: Planning Tool v2 provides questions relevant to a startup and suggests design methods that can help discover answers to those questions.
Business Model Generation

Considering the ties this project has with the startup world, I examined a well-known tool used in the startup world — the Business Model Canvas. The Business Model Canvas comes from a book called *Business Model Generation* written by Alexander Osterwalder and Yves Pigneur with contributions from 470 members of the Business Model Innovation Hub (2010). I also used this tool to further my project’s concept and consider the value propositions it offers each user.

Changing business models have been transforming multiple industries, from fashion to food, with companies like Rent the Runway and community supported agriculture programs. An often cited example is Apple and how it changed online music with the iPod and iTunes.com. According to *Business Model Generation*, a business model “describes the rationale of how an organization creates, delivers, and captures value” and business model innovation is about “creating value for companies, customers, and society. It is about replacing outdated models” (Osterwalder & Pigneur, 2010).
Multi-Sided Platform

Osterwalder and Pigneur discuss several existing business models. One is multi-sided platforms, which “bring together two or more distinct but interdependent groups of customers” (Osterwalder and Pigneur, 2010, p. 77). Examples of this kind of organization include: eBay, Visa, and Google. It goes on to say that these platforms are only valuable to one group of customers if the other group is also on board, and it grows in value as more users join, which is known as the network effect (Osterwalder & Pigneur, 2010, p. 77). The difficulty lies in attracting both groups of users at the same time. My platform concept falls under this category as it brings together entrepreneurs and UX designers. It creates value by facilitating the interactions between the two groups.

Osterwalder and Pigneur (2010) identify the challenge of attracting both groups of users at the same time and offer a potential way to solve this problem through subsidizing a customer segment. Basically, the platform would entice a segment to the platform through an inexpensive or free value proposition. The difficulty, they say, is in “understanding which side to subsidize and how to price correctly to attract customers” (Osterwalder & Pigneur, 2010, p. 78). The writers pose the following questions: Can we attract sufficient numbers of customers for each side of the platform? Which side is more price sensitive? Can that side be enticed by a subsidized offer? Will the other side of the platform generate sufficient revenues to cover the subsidies? (Osterwalder & Pigneur, 2010, p. 78). These are all questions that need to be considered when designing this platform’s business model.

Business Model Canvas for platform connecting entrepreneurs and UX designers
System Map V.1

I originally imagined a platform that connected aspiring designers with startups. I started with the assumption that early stage startups don’t have that much money to pay an experienced designer. I thought the early stage startups could get pro bono help from aspiring designers who are looking to build their portfolios with real projects.

I have since learned that there is a range of entrepreneurs and some have funding or would be able to get funding for design help through a foundation or incubator. Additionally, some design issues a startup may face are more complex than others and may require a more experienced designer.
The business model evolved because some projects require more expertise than others. The next iteration involved connecting expert designers with startups and having the expert designers take on apprentices who are aspiring designers to reduce the workload and therefore reduce the costs. Additionally, the aspiring designers would have a way to get some mentorship with their work.

Through feedback from some experienced designers, I found that they don’t like to sub-contract their work unless they really know the designer because they believe their name is on the line.
Concept Testing

In order to validate and test out the relationships I wanted to facilitate through the online platform, I set up experience prototypes, surveys, and interviews. By experience prototype, I mean that the participants go through the experience the concept intends to create without any infrastructure, such as the virtual platform, being built. I played the role of the platform by distributing the touchpoints and making the match between the entrepreneur and UX designer.

The revelation that led to the final business model occurred during the second experience prototype. The role of the UX designer was played by an experienced designer, who at that time could not take on another project, but was willing to play the role of a designer looking for a match, for my research. After listening to the entrepreneur’s explanation of his startup and what he thought he needed, she was able to advise him on the next steps to take. I realized that most entrepreneurs have little access to the design community, which leads to a shallow understanding of the field of design. For example, the entrepreneur did not realize that there are differences between what a product designer, a UX designer, and a graphic designer can do. Through this experience prototype, along with an interview with a freelance designer that works with startups, I realized the importance of having a design advisor that can help entrepreneurs identify their startup’s needs and look for the right person to get the job done.
The following list breaks down the different relationships explored and the methods used to gain insights:

**UX Designer - Entrepreneur**
Survey | 23 entrepreneurs, 6 designers
Experience Prototyping | 2 entrepreneurs, 2 designers

**Stakeholders - Platform**
Platform Pitch | Startup Meetup & Project Olympus (groups of entrepreneurs)
Interview | 5 aspiring designers, 5 expert designers

**Incubator Support**
Platform Pitch | 2 incubator managers

**Mentorship**
Survey | 11 professional designers

**Entrepreneur - Design Advisor**
Experience Prototyping | 3 entrepreneurs, 3 designers

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**Key insights:**

*Before today, I didn’t know much about design. Technologists aren’t sure of the role of design but we know it’ll help us get customers...Today was very helpful.*
(Entrepreneur, after consultation)

*I have thought about and would definitely want a platform like that to exist...If you don’t know any designers, it’s very hard to get into it.*
(Asspiring Designer)

*I’d pay you $1000 to consult with all of the startups here for 2-3 hours this summer.*
(Incubator Space Manager)

*The main deciding factor for me would be the apparent dedication of the aspiring UX designer.*
(Professional UX Designer)

From 2 platform pitches, 10 interested entrepreneurs have requested UX design help.

**Additional insights:**

Entrepreneurs have varying degrees of knowledge about design, especially UX design.

Entrepreneurs and aspiring designers find it difficult to “know where to start.”

Some early stage startups have financial resources. Incubators could also be a source of funding.

Expert designers are hesitant to “sub-contract” out work because their reputation is on the line.
**CreativeConnect** is a platform connecting early stage startups with UX designers. CreativeConnect tools help facilitate good communication between entrepreneurs and designers. The platform also provides aspiring UX designers with resources and the opportunity to network with a larger design community.

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*CreativeConnect* landing page; additional wireframes can be found in *Appendix C.*
**CreativeConnect** builds a community of UX designers and provides entrepreneurs and aspiring designers access to that community. Through tools and services provided by the platform, those outside of the design community can gain a deeper understanding of design. By utilizing design beyond visual design, startups can connect with their users on another level and increase their chances of success.

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**Mentorship**
- Aspiring designer seeks mentorship
- Expert designer provides mentorship to aspiring designer (meaningful volunteer opportunity)

**Aspiring UX Designer**
- Provides more advocates for UX design
- Receives resources for UX design projects

**Design Advisor**
- Consults with entrepreneur to determine startup’s needs
- Receives payment for consultation and posting startup’s needs on to CreativeConnect

**Incubator Support**
- Provides funding for early stage startups
- Receives opportunity to make money if the startup becomes successful

**Entrepreneur**
- Provides project information, payment, and time
- Receives opportunity to learn more about UX design and access to UX designers

**UX Designer**
- Provides information about skills and background
- Receives access to startups and connection to local design community

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*CreativeConnect systems map*
Entrepreneur

Provides project information, payment, and time

Receives opportunity to learn more about UX design and access to UX designers

Has either technical knowledge or is business savvy

May know someone in the design field, but not necessarily a UX designer or a UX designer that has time/interest in joining his/her team

May be part of an incubator that provides work space and startup expertise

Early stage entrepreneurs

I started this project focused on entrepreneurs, more specifically early stage startup entrepreneurs. Early stage means that the startup has not yet received seed funding. The startup may have been awarded grants, small sums from friends or family, or won some financial support at a competition, but it has not received funding from angel investors or venture capitalists. I believe at this stage the startup is still undergoing changes at a conceptual level, and a UX designer can have the most impact advocating for users at this stage. While some startups may only consider a designer at the visual design/polishing stage or when creating a logo or website for marketing purposes, I believe with education and access, startups can connect with the design community at the ideation and conceptualization phases, as well.

Value proposition

At first I assumed all early stage startups did not have funding to hire a designer, so I wanted to provide free design services for these startups by connecting them with aspiring designers who would be willing to provide pro bono design services in exchange for a good portfolio piece and recommendation. However, after further research, I found that some startups do have the financial resources to pay a designer, though often at a reduced rate. I also found that some startups have more complex needs and therefore need a more experienced designer. CreativeConnect provides access to a range of designers, so startups can find the UX designer that meets their needs and price range. Entrepreneurs can look for design co-founders or short-term UX design help. If they find an aspiring designer, they assume the risk that the person is still learning. If they have the resources to work with a more experienced designer, they have access to many designers, not just the ones in their network.
Experienced UX Designers

Experienced UX designers have had a couple years of experience and feel confident taking on any UX design project that a startup might have. They understand and have used a wide variety of design research methods and feel comfortable directing others in the methods. They would be able to assess a startup’s needs and guide them on the next steps. However, they may not understand startup terminology or have much exposure to the startup world.

Value proposition

CreativeConnect provides a platform for experienced UX designers who are freelancers, or those who would want to take on an additional project, to connect with the local startup community. They have the opportunity to build their client list and to get involved with startups they believe show potential for success. They may have interest in a particular kind of nascent technology, such as virtual reality, and want to gain exposure to that technology or have the opportunity to design for that technology.

CreativeConnect also provides experienced UX designers the opportunity to be a design advisor to startups in their community. By being a design advisor, a designer would be able to see a variety of ideas that are being explored by passionate entrepreneurs. They would also receive payment for their time, though it may be at a reduced rate (depending on their normal rate).

Additionally, CreativeConnect could serve as an avenue for meaningful and skilled volunteering on the part of the experienced designer. Experienced UX designers would have the opportunity to mentor an aspiring designer. They could also act as a design advisor on a pro bono basis for startups supporting a social cause that they care about.
Aspiring UX Designers

Aspiring designers are people who are interested in UX design and still learning about it, oftentimes teaching themselves while building their portfolios. Aspiring designers often have started on one career path, but want to transition into a UX design role. Aspiring designers will reach out to their network to find someone in the design field, though it may be an architect or fashion designer. They may also attend meetups to meet other designers. Many aspiring designers would like to find a mentor who can help them navigate the world of UX design. But as one interviewee put it, if you don’t know any UX designers, it’s really hard to find one.

Value proposition

CreativeConnect provides a platform for aspiring designers to find real-world projects to work on in order to build their portfolios, as well as access to a larger design community. The platform also has tools and resources they can use to complete projects and further their skills.

As there are more design projects available than experienced designers available, aspiring designers provide more advocates for UX design, as well as skills to provide design services. Besides building their portfolios, aspiring designers can use the platform to build their network. Even if they work on projects pro bono or for lower than market rates, they are building connections with potentially successful startups that could lead to additional work in the future. If the startup is satisfied with their work, they may be recommended to other startups. This would most likely appeal to those pursuing freelance design careers.

An additional value proposition is that an aspiring designer may be able to connect with another aspiring designer in his/her community and learn about UX design together. By having a peer, the aspiring designer may feel more encouraged to continue learning and seeking UX design opportunities. The aspiring designers can also share resources and work on projects together, which would improve the quality of design work produced.
Aspiring designers who do not know any UX designers in real life may turn to online forums, such as Reddit or Quora, to seek advice from more experienced designers.

Aspiring UX designer posts on Reddit to ask for advice on how to transition into a UX design role.

Aspiring designer posts what steps he has taken thus far to learn more about UX design.

More experienced designers comment with advice on how to get experience in UX design. This post says, “If you work for a family company, see if you can relate UX to your current place of work. I’m sure you could find many things that apply that you could build out into real portfolio work.”
This user journey map shows an entrepreneur and a UX designer using CreativeConnect to work together on a project. Previous iterations of the user journey map are available in Appendix I.

**Initiated by THE ENTREPRENEUR**

The entrepreneur **hears about CreativeConnect** from one of his colleagues at his co-working space. He has been learning about UX design and believes it will help his startup.

The entrepreneur **reads about the process on** CreativeConnect **and fills out a profile, including a Q&A section**, where he shares information about himself and his startup.

He sees that he can get a consultation with a design advisor in his area, so he signs up for a slot. He wants to make the most of his meeting with the design advisor so he uses the **planning tool** provided by CreativeConnect to get a sense for what a UX designer can do to help his startup.

The entrepreneur **meets with the design advisor and shares about his startup**. He believes he needs to improve his product’s packaging and create a “killer app” to go with his hardware. The design advisor advises him to find a product designer to help with his physical product packaging, and a UX designer for the app component of his startup.

The entrepreneur **pays the design consultant to find the right UX designer for him, and to craft the research plan.**

**Initiated by THE DESIGNER**

The UX designer **sees CreativeConnect** on a sub-Reddit for freelancers. She wants to build her client list, so she goes to the site to check it out.

The designer **reads about the process and fills out her profile**, including a link to her portfolio, list of skills, and experience.

She **looks through the list of startups asking for UX design help**. She has been interested in VR, so she uses a keyword search and finds a couple of startups with a VR component. After reading through the Q&As, she picks one in her locale that she feels matches her interests.

The designer **contacts the startup’s founder**, saying she would be interested in meeting with him.
The entrepreneur receives the contact information for a couple of local designers, as well as a research plan that the design advisor goes over with him.

The entrepreneur chooses the designer he wants to work with and sets up a meeting.

He uses the checklist provided by CreativeConnect to make sure he is bringing the information he needs to have an efficient and effective meeting.

The entrepreneur brings all the information recommended by CreativeConnect and has a planning meeting with the UX designer. Using the conversation guide provided by CreativeConnect, they discuss how much involvement he wants to have with the design aspect of his startup and what milestones they would like to reach on the project’s timeline.

The entrepreneur attends a brainstorming session the designer organizes. They work together to find a concept and start interviewing potential users to gain insights.

With the designer’s help, the entrepreneur is able to give a compelling pitch, including a concept video that shows his concept in context, to investors and secure funding for his startup.

Connecting with UX Designer

The designer meets with the entrepreneur. She uses the conversation guide to jumpstart the conversation and brings up the planning tool to talk about potential project plans and expectations.

After the meeting, she reviews her notes and impressions about the entrepreneur and decides to take on the project.

The designer sends the entrepreneur a research plan, including metrics and the estimated number of hours it will take to complete the scope of work she has laid out.

After the entrepreneur agrees on the research plan, the designer facilitates a brainstorming session, which the entrepreneur attends. They also conduct some user interviews together.

The designer creates a concept video for the startup and attends the pitch where the entrepreneur uses a pitch deck the designer has contributed to and is able to get funding from investors.
As this project originated from an interest in facilitating better communication between co-founders at a startup, I wanted to make sure that the communication between entrepreneurs and designers was also optimal. Through five touchpoints, CreativeConnect scaffolds the communication between entrepreneurs and designers. The touchpoints include a Q&A conducted by CreativeConnect, a planning tool, access to a design advisor, an assets checklist, and a conversation guide.

The tools were designed based on the previously stated design implications. They are meant to provide clarity about the role and responsibility of the UX designer, promote self-awareness by offering feedback to the entrepreneur, and ensure that the designer has a clear idea regarding the startup and its goals. In addition, by having people as a resource, the platform provides a dynamic resource, not a generic one-size-fits-all solution.

**Q&A**

The first touchpoint is a Q&A with entrepreneurs about themselves and their startup. This is intended to help make sure relevant questions are covered. An aspiring designer, or a designer working with startups for the first time, may not know all the questions to ask. For example, the designer might not think to ask about the entrepreneur’s partners. They may be unaware that there is tension within the founding team, which leads to an unproductive work environment.

Feedback from entrepreneurs and designers have added, omitted, and reordered questions from the original format. Feedback from experienced designers have shown that this is a useful tool for them as well because it would save time during the initial assessment meeting.
Planning Tool

The second touchpoint is a planning tool. It is intended for use by entrepreneurs to learn more about UX design and how it can help a startup, and aspiring designers to give them ideas on methods they can use. Experienced designers can also use the tool with the entrepreneur they are working with to create a project plan.

Feedback from entrepreneurs and designers contributed to an added option to overview the entire list of questions, instead of only being able to move through it sequentially.

If the user decides to pursue a particular question, a curated list of recommended design methods appears. A hover state provides more information about the design method and an image depicting the design method in use. If the user wants to use the design method, the user can add the design method to the project plan. The project plan can then be shared with others on the dashboard.

The planning tool was tested with 5 entrepreneurs and 4 designers. The planning tool in its entirety is located in Appendix G.
The third touchpoint is access to a design advisor service. Individuals can set up meetings with design advisors to get design guidance on their project. Entrepreneurs may not know what kind of designer they need to further their startup, or what kind of design deliverables should be prioritized. A design advisor is an experienced designer, who can help entrepreneurs determine their next steps, design-wise. If they are in need of a UX designer, and are trying to decide between hiring an aspiring designer or an experienced designer, the design advisor can make a recommendation. If they are looking for an aspiring designer, the design advisor can help write a specific job post with the design deliverables that are needed.

The first two touchpoints can be used in conjunction with meeting with the design advisor, as the consultation is limited in time. The Q&A and the planning tool can help the startup give the design advisor as much information as possible upfront. The more the design advisor knows upfront, the more time can be spent directing the startup in the right direction during the meeting.

Feedback from experienced designers indicated that this would have to be a paid gig. However, if there was a social cause attached to the startup being consulted with, some designers would be willing to charge less than their normal rates. The designers also indicated that having the logistics planned for them would help them reduce the amount of time spent on this added work; thus, they would be more interested in participating. Another benefit to the experienced designer would be the exposure to new startups/ideas, and gaining potential clients. Another potential and parallel route would be to partner with incubators, who could pay a set amount for the design advisor to consult with each of the startups within their incubator portfolio.
The fourth touchpoint is the assets checklist. This is a list of things an entrepreneur should bring to a first meeting with the designer. It is based on the questions in the planning tool, so if the entrepreneur is able to answer the question in the planning tool, he or she should also be able to have the assets ready to share. By having the assets ready to share, there can be more efficiency at the meeting.

The assets checklist was developed in response to an entrepreneur’s feedback after meeting with a designer. The entrepreneur received feedback from the designer that she did not appear organized, so the entrepreneur suggested creating an assets checklist. More meetings between designers and entrepreneurs could help refine this list.

The last touchpoint is a conversation guide that is sent to the designer and entrepreneur before their first meeting. The conversation guide is a way to jumpstart the conversation, and to cover questions that they might not think to ask. This is mainly intended for use by an entrepreneur meeting with a designer for the first time and vice versa. (The full list of questions is available in Appendix H.)

In the two sessions where the conversation guide was tested, the designers both used the guide (the aspiring designer more so than the experienced one). In one of the sessions, the entrepreneur used the guide, but in the other the participating entrepreneur did not. More feedback after meetings between designers and entrepreneurs would help refine the conversation guide.
Reflection

Next Steps

The next step for this project would be to build a working infrastructure for this platform and to start charging users for this service. This documentation is somewhat meta in that it contains a lot of the information which is necessary for starting a real startup to bridge UX designers and startups. I have enjoyed consulting with startups on their design issues, and could see myself taking this forward (after recovering from thesis burnout). There are even some folks I have spoken with that would be interested in partnering for such a venture. I conclude by saying that one day, this project about startups and designers might become an actual startup.

Lessons Learned

Someone I interviewed said there were three kinds of people that he saw in the startup space that he managed: watch-preneurs (those who are scoping out the scene), play-preneurs (those who are interested in attending events and maybe giving some pitches), and entrepreneurs (those who are out there really making their startup work). Since hearing that, I have been able to identify these characters in the startup spaces I have observed, as well as more clearly define my own role. It is about so much more than good ideas with flashy pitch decks and demos. I now have a better sense of what it takes to make a startup work, and I hugely admire the sacrifices the entrepreneurs have made to get their ideas out there in real life to real users.
References


Matter, J. Values Exchange Board. (n.d.)


Appendix A: Values Exchange Board

VALUE EXCHANGE BOARD
Increasing value exchanges through co-creation, collaboration and play!

PHASE 1:

UNMET NEEDS | HOW THEY CAN BE RESOLVED | TAKEAWAYS

PHASE 2:

UNMET NEEDS | HOW THEY CAN BE RESOLVED | TAKEAWAYS

PHASE 3:

UNMET NEEDS | HOW THEY CAN BE RESOLVED | TAKEAWAYS

WIN-WIN-WIN
(User-Employee-Brand)

Value exchange board by Joumana Mattar is licensed under a Creative Commons Attribution-NonCommercial-NoDerivatives 4.0 International License.
Appendix B: Speed Dating Storyboards

Scenario 1: Speed dating ideas with an online tool

Tom is passionate about improving food access to people who don’t have access to fresh produce. He has several ideas for a business.

He uses the speed dating ideas site to quickly sketch some ideas.

He then sends out the link to several of his contacts.

He receives a reply from his contacts and the site shows him votes and feedback on his ideas. One idea had particularly positive feedback.

Tom decides to work on his concept which brings fresh produce from local farms to parts of the city by using a reclaimed food truck.

The first scenario was discarded after feedback.

Scenario 2: Team check-ins for internal communication

Matt is part of a software startup. He and his team have weekly meetings, but before the weekly meeting he receives a check-in reminder.

He goes online and fills out the check-in, marking down how he is feeling about his progress as well as how he is feeling in general.

The vision, mission, and values are listed for him to mark on the spectrum if he feels the company is still aligned with those statements.

Matt checks disagree with one of the statements because he feels the company has been shifting directions.

During the meeting, he finds out that several others also feel that the company has been shifting directions.

They have a discussion about how the company is changing and rewrite one of the statements to reflect the change.
Scenario 3: Design “office hours”  
finding designers to help with the business plan

Max is excited about his ideas to reduce parking tickets for Pittsburgh residents. He wants to discuss this idea with someone.

Max goes to design office hours and signs up to meet with a designer.

The designer hears his idea and walks through some scenarios with him.

She shares with him ways he can get feedback from potential customers.

Max leaves happy that he has refined his idea and has a way to get feedback from potential customers.

Scenario 4: Student volunteers  
finding skilled volunteers from the student population

Jackie and Sarah are working on a clothing brand that creates fashionable, ethically made, and machine washable business casual clothing.

They want to launch their website soon, but they would like to have someone write some copy for their website because they both do not have a marketing background and do not feel confident in their writing skills.

They go on to the student volunteers website and find a marketing course. They list their project on the website.

The next day, a few people from the course choose their project.

A week and a half later, they receive the submissions. Jackie and Sarah are able to choose one of the submissions as the copy they use on their website.
Appendix C: CreativeConnect Wireframes
Appendix D: DLB Survey Results (Designers)

Visualization: Google Forms

How has your experience been working with the MBA student(s)?

- 0 (0%)
- 1 (33.3%)
- 2 (33.3%)
- 3 (66.7%)
- 4 (66.7%)
- 5 (0%)
- 6 (0%)

Can you please explain your selection above? (6 responses)

My two groups have tremendous buy-in terms of design and its role in shaping a new business. This has been very helpful especially when it comes to pivoting our business model.

The "openness" to innovation by individuals in the team determines the ease of incorporating design into business. Some choose not to or are not able to see the value of this.

Most of my time has been spent working with Pitt Ohio. The MBA students on the project seem to be ambitious and have a general idea of how to move forward with the project. They've been very supportive of design throughout the process which has been great. The only challenge has been deciding whether or not to design an app for truck drivers. The MBA students want an app for reasons that don't seem to be supported by user research.

Different goals and unclear expectations

Pros - Super open-minded, easy to communicate with / Cons - They don't have a clear vision when it comes to design perspective.

They are kind but don't have a clear idea about what they want

What kind of design methods have you utilized (or will be utilizing) while working on your project? Please feel free to add more to the list! (6 responses)

- Interviewing
- Observing (c...)
- Conducting s...
- Brainstorming
- Creating stor...
- Creating per...
- Prototyping (...)
- User testing
- Other

0 0.5 1 1.5 2 2.5 3 3.5 4 4.5 5 5.5 6

Do you feel like you are able to make a valuable contribution to the project? Can you share how you are contributing? (6 responses)

Yes. From the user research we did, the MBA students actually realized that they needed to redo the business model to align with user needs and values.

SumaTea, no. Recently switched to BlockChains, can update later. For aqu0gen, I am already incorporating design research.

I feel like my skills have not been utilized to their potential. However, a lot of that has to do with the timing of the project. Our team is still making decisions about what directions to take the project and that makes it tricky to get a solid start on designing. I have, however, contributed by helping to write a survey, attended meetings with stakeholders, interviewed users, synthesized our research, and contributed to an investor pitch.

Hard to say since the end goal isn't clear. Ambiguity is fine as long as everyone on the team is equally so. Sometimes, communicating is hard given the limited amount of time we have to meet.

Not really...it feels like our works are kind of separated from the real business.

Somehow I can make contributions to Nimbus, but this project is really tough for me.

Are you working on other stuff for the project? (4 responses)

- Visual design
- Product design
- Marketing & PR
- Other
<table>
<thead>
<tr>
<th>Name of the startup you are working on</th>
<th>Would you classify your startup as providing a product, service, or system?</th>
<th>How likely are you to use a designer as an integral part of your startup team?</th>
<th>If you want a designer to join your team, what would you want the designer to work on?</th>
<th>Additional comments</th>
<th>Have you ever taken a design or design thinking course/ workshop?</th>
<th>When would you see the designer providing the most value?</th>
<th>Would you be willing for a follow up conversation?</th>
<th>If so, please leave your email.</th>
<th>What inspired your startup?</th>
</tr>
</thead>
<tbody>
<tr>
<td>It's currently a service, that we want to turn into a product (we are trying to identify the product / market fit)</td>
<td>3 Designing the UI/UX for the final reports or dashboards on water usage, also may need help with a media marketing campaign.</td>
<td>Yes, a design thinking course</td>
<td>Middle</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product (hardware)</td>
<td>4 Market research, ethnography, ideation, prototyping, 3d renderings</td>
<td>Master of Design degree</td>
<td>Finding unique solutions to meet the customer's needs</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product (software)</td>
<td>4 Ideation Prototyping</td>
<td>Yes, a design thinking workshop</td>
<td>Ideation Early Stage</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Beverage</td>
<td>5 UI - concepts art designs logos etc.</td>
<td>Yes, a design thinking course, Yes, a design thinking workshop</td>
<td>heaviy with ideation that would resonate with consumers (aesthetically and possibly emotionally)</td>
<td>Mentors and food enthusiasts</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Food products</td>
<td>5 food packaging design food stall / restaurant interior design website design</td>
<td>Yes, a design thinking course, Yes, a design thinking workshop, Yes, a design thinking workshop</td>
<td>from start (ideation) to production</td>
<td>Discovery of a new potential market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product (hardware)</td>
<td>5 Market usability research, product design, customer feedback evaluation.</td>
<td>Yes, a design course</td>
<td>Ideation, minimum viable product, product and feature improvements going forward</td>
<td>Discovery of a new or improved technology</td>
<td></td>
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</tr>
<tr>
<td>Product (hardware)</td>
<td>5 Develop understanding of current human problems in the world and find ways to use drones to solve those problems. Ideally find a way for humans and drones to work together to solve complex tasks.</td>
<td>Yes, a design course, Yes, a design thinking workshop</td>
<td>Ideation, early stage when developing concepts, and when developing new iterations of the product</td>
<td>Discovery of a new or improved technology</td>
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<td></td>
</tr>
<tr>
<td>Product (hardware)</td>
<td>5 Usability test Redesign Co design activities</td>
<td>Yes, a design course, Yes, a design thinking workshop</td>
<td>Early stage</td>
<td>Discovery of a new or improved technology</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Product (hardware)</td>
<td>5 With the product: Industrial Design, User Interaction, User Experience, Packaging Design. With additional services: Curriculum Design for teaching how to use the product as well as a manual for the product, Service Design (how the product gets from the factory to the user and how they use it). With company: Website Design</td>
<td>Yes, a design thinking workshop</td>
<td>All stages benefit from a designer's input. However, ideation and early stage for the creation of a product.</td>
<td>Discovery of a problem for a target market</td>
<td></td>
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</tr>
<tr>
<td>Product (hardware)</td>
<td>5 Good luck :)</td>
<td>Yes, a design course service is most important.</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Product (hardware)</td>
<td>5 Front end design, app design, brand aesthetics</td>
<td>Yes, a design thinking course, Yes, a design workshop, Yes, a design thinking workshop</td>
<td>From ideation to production</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product (software)</td>
<td>5 1) Customer Discovery using Design Thinking techniques 2) Prototyping - Low Fidelity thru High Fidelity 3) Product Design - Interaction Design and UX Designers Rock!</td>
<td>Yes, a design workshop, Yes, a design thinking workshop, School of Hard Knox</td>
<td>Full 360 degrees</td>
<td>Discovery of a problem for a target market</td>
<td></td>
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</tr>
<tr>
<td>Product (software)</td>
<td>5</td>
<td>Designer would be central to the basic discussion of how we deliver maximum value to the customer.</td>
<td>No, I have not taken any of the above</td>
<td>Ideation</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Product (software)</td>
<td>5</td>
<td>Designer could be helpful in creating the workflow and screen designing of the app</td>
<td>Yes, a design thinking course</td>
<td>Ideation and early stage</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product (software)</td>
<td>5</td>
<td>wire frames, how the app will look.</td>
<td>No, I have not taken any of the above</td>
<td>Ideation and early stage - essentially in the process of figuring out how do we best address the problem we have at hand and would the solution we have in mind achieve the goal of minimizing or solving that problem. If not, how best do we design or implement our solution to effectively address the problem.</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product (software)</td>
<td>5</td>
<td>- Conceptualize and execute design and layout of different features</td>
<td>Yes, a design thinking course</td>
<td>→</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Product (software)</td>
<td>5</td>
<td>- Create logo design and app’s overall font set and look &amp; feel</td>
<td>Yes, a design thinking course</td>
<td>→</td>
<td>Discovery of a problem for a target market</td>
<td></td>
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</tr>
<tr>
<td>Product (software)</td>
<td>5</td>
<td>→ Select the color schema</td>
<td>Yes, a design thinking course</td>
<td>→</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
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<tr>
<td>Product (software)</td>
<td>5</td>
<td>Business Strategy Service Design Communication Design Product Development (UI/UX Design) Marketing &amp; Graphic Design</td>
<td>Yes, a design thinking course</td>
<td>Throughout the entire process (ideation is crucial)</td>
<td>Discovery of a problem for a target market</td>
<td></td>
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<tr>
<td>Service</td>
<td>5</td>
<td>→ I've been the designer, I designed the user experience, our mobile app, our Logo, our website</td>
<td>Yes, a design thinking course</td>
<td>→</td>
<td>Discovery of a problem for a target market</td>
<td></td>
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<tr>
<td>Service</td>
<td>5</td>
<td>→ UX/UI Branding Marketing</td>
<td>Yes, a design thinking course</td>
<td>→</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
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<tr>
<td>Product (software)</td>
<td>5</td>
<td>The creation of content for branding of help all of the startups in the incubator space with content creation Help with website design for all the startups Help with branding for TM T and startups - if can do some social media for TM T - if can Logo creation for app and help logo creation for startups</td>
<td>Good luck!</td>
<td>→</td>
<td>Personal experience</td>
<td></td>
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<tr>
<td>Service</td>
<td>2</td>
<td>Design the logo Design the art for the truck and make the truck logo awesome</td>
<td>No, I have not taken any of the above</td>
<td>Can also be useful at beginning but not the most useful at this time</td>
<td>Discovery of a problem for a target market</td>
<td></td>
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<tr>
<td>Software as a Service (Both)</td>
<td>5</td>
<td>Branding, User Interface, User Experiences, Effects and Animations, Marketing Creatives, Consumer Materials, Sales Materials These roles are often exclusive to particular disciplines, I do not expect on designer to be competent in all areas.</td>
<td>Yes, a design thinking workshop</td>
<td>→</td>
<td>Discovery of a problem for a target market</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Service</td>
<td>5</td>
<td>→ human centered design to better engage users to challenge prevailing mis-assumptions about military</td>
<td>No, I have not taken any of the above</td>
<td>All stages</td>
<td>Discovery of a problem for a target market</td>
<td></td>
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Appendix F: Q&A Questions

Name (short answer text)

Name of your startup (short answer text)

Tell me a little about yourself. (long answer text)

At this time, I am looking for... (multiple choice: someone to help me with UX design help (short-term), designer co-founder, other)

Please give a short description of your startup. (long answer text)

Have you conducted any user research? If so, please list. (long answer text)

What problem is your startup addressing? (long answer text)

Based on what you know about UX design, what do you want the designer to help you with? (long answer text)

Is there compensation for this role? (short answer text)

Do you have a website/social media where the designer can get further information? (short answer text)

Would you classify your startup as providing a product, service, or system? (multiple choice: Product (hardware), Product (software), Service, System/Platform, Other)

Have you ever taken a design or design thinking workshop? (multiple choice: Yes, a design thinking workshop, Yes, a design course, Yes, both a design thinking and design workshop/course, None of the above)

What inspired your startup? (multiple choice: Discovery of a problem for a target market, Discovery of a new or improved technology, Other)

Are you working full-time or part-time on your startup? (multiple choice: full-time, Part-time and still working at another job, Other)

Currently, who else is part of your startup team? (multiple choice: It’s just me, Other)
Appendix G: Planning Tool Wireframes

Available in interactive form on InVision: https://invis.io/RE6SHXXBH
Appendix H: Conversation Guides

Coffee Meetup Questions for the Entrepreneur

How long have you been working on the startup?

Has the idea changed throughout this time (Has it pivoted)?

Are you doing this full-time or part-time?

Who are your partners?

Where are you working? (Office space?)

Do you have access to users to interview or prototype with?

If they have taken a design workshop or course, ask to hear more about that experience.

Try to get a sense for how open-minded this person is to change or suggestions you might make in regards to the startup.

Coffee Meetup Questions for the Designer

How long have you been designing?

Tell me more about your experience.

Have you worked with a startup before?

What do you think about my startup based on the description/what you know so far?

Are you currently working? (Part-time, full-time?)

How much time commitment can you make for this project?
Appendix I: Other User Journey Maps

User journey map with feedback after experience prototyping
The entrepreneur hears about CreativeConnect from her incubator space’s manager. She has attended a UX workshop through the incubator and is interested in learning more about UX design. She reads about UX design, the CreativeConnect process, and fills out her profile, including information about her startup. The form prompts her to start thinking about questions she wants answered in regards to her startup. She expresses interest in a designer on the platform. She receives an email from CreativeConnect saying the designer is interested in meeting up for a coffee date. The entrepreneur reviews the question flow that is part of the planning tool to think about questions she would like to tackle with the designer’s help. She also looks over the checklist to bring as much to the meeting as possible. She realizes that her research thus far is only available in her notebooks and is scattered. She takes the advice offered on CreativeConnect and puts her research into a few slides. She meets with the designer and they use the guided questions provided by CreativeConnect to learn more about each other. She shows the designer her slides about her research thus far. They use the planning tool to talk about potential project plans and expectations. After a day, she receives an email from CreativeConnect saying the designer is interested in working with her. She arranges to meet up with the designer again to finalize the project plan.

CreativeConnect
Entrepreneur gets UX help

CreativeConnect facilitates relationships between fledging UX designers and early stage startups to bring innovative, user-centered products and services to market.
The aspiring UX designer sees CreativeConnect on a Reddit comment. She wants to build her portfolio so she goes to the site. The designer reads about the process and fills out her profile, including a link to her portfolio. She uses the Startup 101 guide to learn more about startups and startup terminology. She is interested in the startup and the entrepreneur so she agrees to meet for a coffee date. CreativeConnect sends her the entrepreneur’s contact information, and they decide on a date, time, and place. She then looks over the planning tool and the question flow overview to prepare for the meeting. She meets with the entrepreneur and they use the guided questions provided by CreativeConnect to learn more about each other. They use the planning tool to talk about potential project plans and expectations. After the meeting, she takes time to think about the opportunity. She reviews her notes and impressions about the entrepreneur and her startup and decides to not take on the project. She indicates on CreativeConnect that she does not wish to work on the project and uses the space provided to give feedback to the entrepreneur on how the entrepreneur can better organize her materials before another coffee date. The designer goes to the Matching section and looks through other profiles in search of another project.
The aspiring UX designer sees CreativeConnect on a Reddit comment. She wants to build her portfolio so she goes to the site.

The designer reads about the process and fills out her profile, including a link to her portfolio. She uses the Startup 101 guide to learn more about startups and startup terminology.

She is interested in the startup and the entrepreneur so agrees to meet for a coffee date.

CreativeConnect sends her the entrepreneur’s contact information, and they decide on a date, time, and place. She then looks over the planning tool and the question flow overview to prepare for the meeting.

She meets with the entrepreneur and they use the guided questions provided by CreativeConnect to learn more about each other. They use the planning tool to talk about potential project plans and expectations.

After the meeting, she takes time to think about the opportunity. She reviews her notes and impressions about the entrepreneur and her startup and decides to take on the project.

She RSVPs to the project on CreativeConnect’s platform.

The designer looks on CreativeConnect and learns more about the design methods.

The designer and the entrepreneur meet up and interview potential users over the course of two weeks. She also finds another aspiring designer in her area to meet up with and get feedback from.

The designer and the entrepreneur meet up and interview potential users. They craft metrics for the project together.

After a week, the designer meets her mentor over Skype for an hour. She talks about her process and gets feedback from the mentor.

After 3 weeks, the designer completes the agreed-upon work and adds the project to her portfolio. The entrepreneur thanks her by taking her to dinner. The entrepreneur also writes her a stellar recommendation.