CASE: E-651
DATE: 06/05/18

NOTE ON CREATING A VIABLE VENTURE—A GLOBAL PERSPECTIVE

This note identifies key issues that must be addressed in the creation of a viable venture in both developed and developing economies, and provides an overview of the processes and techniques available to resolve the issues discussed. This note is not intended to be an exhaustive review but rather to focus in on some important characteristics as a guide to creating a viable venture. There is a rich literature on the topic beyond the insights and information mentioned here.

New ventures typically start when an entrepreneur develops an idea about how to match a specific need and a solution. The idea itself does not constitute a viable venture. To become a viable venture, the idea must become an innovative product or service, which in turn must be thoroughly tested with consumers or users, matched to a market—what is often called "product/market fit"—and then combined with a business model capable of delivering it profitably, or sustainably in the case of a nonprofit. This process is first and foremost an iterative one. Iteration drives change—often referred to as "pivoting"—allowing the entrepreneur to evolve his or her initial thoughts into a viable venture.

During the iterative process of creating a viable venture, any of its elements can change. Ideally these changes take place "pre-product/market fit"—i.e., in the initial phases of developing a product or service and its associated business model rather than after the product or service has been launched—since it is typically more costly and complex to make changes post-launch.[1] Changes post-launch can't always be avoided and refinements are necessary in order to scale and grow an initially promising venture. Pivots can be frequent and common, and often quite significant. For example:

[1] Steve Blank, *The Four Steps to the Epiphany* (K&S Ranch, 2013).

Lecturers Steve Ciesinski and Howie Rosen prepared this case based on the original note, E-402, as the basis for class discussion rather than to illustrate either effective or ineffective handling of an administrative situation.

- **The product or service itself can change:** The founder of Avon started selling books door-to-door. To entice female customers, he offered perfume samples, which quickly became more popular than the books. The result was the launch of California Perfume Company, which became Avon. More recent examples include group buying service Groupon, which began as a group cause message board called the Point. Twitter started as a podcast service before its founders dropped that concept and moved to a micro-blogging product.
- **The target customer can change**: Facebook was initially an exclusive site open only to college students who registered with their dot-edu email addresses. After opening its platform beyond the college market, by early 2018 Facebook had grown to over 2 billion registered users worldwide in early 2018.
- **The business model can change**: Paypal's business model changed several times from its original vision as a cryptography company to a business enabling people to transmit money via "smart" cell phones, to a third-party online payment platform for individuals and companies. Chegg was launched to provide a college-focused alternative to Craigslist: After realizing 90 percent of its volume involved textbooks, the company focused on renting textbooks to college students instead. Genentech took its first product, human insulin, only part-way though clinical development before licensing the rights to Eli Lilly, a large pharmaceutical company, but then took subsequent products all the way to market and sold them through its own sales force.
- **The interplay of the product or service, the customer and markets, and the business model can also drive change**: Starbucks began as a single retail site selling roasted coffee beans and equipment to coffee connoisseurs. When the company shifted its focus to provide brewed coffee to go, it not only expanded its revenue stream, but was able to capture a more mainstream customer and rapidly increase its locations. Amazon.com started as an online bookseller, morphed into a broad line e-tailer, then integrated vertically into fulfillment and hosting services. In doing so, Amazon grew its customer base from a specific consumer segment, to the entire consumer population, to business customers as well.

As these examples show, creating a viable venture is an exercise in foraging and discovering what customers and markets have in store for your product or service—and vice versa—and adapting your plans and execution. The process that you, the aspiring entrepreneur or entrepreneurial team member, are embarking on requires you to be open to and comfortable with change. To help guide you, **Part I** of this note frames the major components of venture viability analysis. **Part II** provides an overview of some of the processes and techniques available to execute this analysis.

PART I: WHAT DO YOU NEED FOR A VIABLE VENTURE?

A Product or Service

"Wouldn't it be great if…" is an oft-heard preamble to an idea for a product or service. Great innovative products and services frequently spring from perceived needs, which flow, in turn, from observed problems. **Figure 1** offers an illustration of this common path to making a

product or service. When you have a product or service and a market of customers or users in mind, you are ready to work on your business model.

Figure 1: A Venture Origin Path Starting With a Problem

For example, the founding team members of the start-up social venture Embrace began their journey by contemplating a major societal ill: high infant mortality rates in developing countries. In their travels to Nepal, they observed that infants born prematurely, especially those born in rural regions, lacked access to the necessary incubation equipment to survive the early weeks of life. Premature infants needed an inexpensive and reliable way to stay warm in places without basic infrastructure like electricity. The team brainstormed a number of ideas and decided on a baby bag: a very small and very warm sleeping bag. This product eventually became a waterproof thermal wrap offered throughout markets in developing nations. It is now also in use in modern hospitals.

The business model that delivered the Embrace product was a nonprofit entity that partnered with existing nonprofit organizations to identify funding and distribution channels for the product, initially priced at $25. Since the initial launch, Embrace has developed two distribution streams targeted for home and clinical use, and has priced its product below $200, or 1 percent of the cost of a traditional infant incubator.

As this example shows, you may identify a problem and perceived need by observing others. The problem could also occur at the level of institutions like businesses or government agencies, or be a social or societal need. It could even be a problem or need that is personal to you.

Understanding a problem and its attendant needs is a complex and multilayered process, one that itself merits close attention. Although you may be tempted to jump directly into a solution, a thorough exploration of the problem and needs can pay dividends down the road. The design thinking approach discussed later in this note focuses on turning a perceived need into a well-defined statement that can *then* serve as the basis for a solution that becomes a viable product or service.

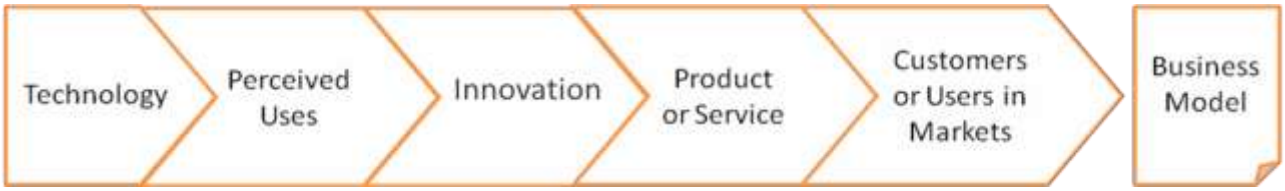
A Solution

There has been such a significant focus in recent years, in industry (e.g., IDEO) and academia (e.g., Stanford's d.school and BioDesign Program), on the needs-based approach to new ventures described in the previous section that it can feel like any other approach to discovering and developing an idea is "wrong." As a practical matter, entrepreneurs, especially scientists and engineers, often are involved in developing a technology before they ever consider what problem

or need it may solve. In fact, some technologists argue this is the only way to develop innovative products or services that address latent needs customers don't even know they have.

This approach can also lead to viable ventures, as illustrated in Figure 2.

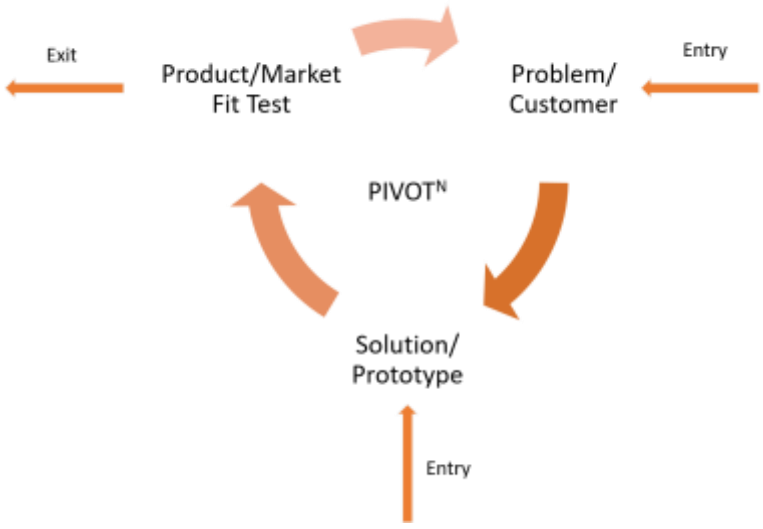
Figure 2: A Venture Origin Path Starting With a Technology



Circular Iteration

Rather than debate which approach is correct—starting with a need or starting with a technology—we have observed that the key isn't where you start, but where you end up. And where you want your venture to end up is with a strong product/market fit, especially for your initial target customer. Since the venture viability process is iterative, as illustrated in Figure 3, it shouldn't matter where you make your entry into the process as long as you do in fact iterate! In other words, if you start with a technology or solution, don't wait too long before going and looking for a market it may fit with. The same tools that have been developed for identifying needs as a starting point can be applied to matching technologies to potential needs. Again, the goal is to iterate until you identify the ideal product/market fit, and then use an appropriate business model to build a viable venture.

Figure 3: Iterative Product/Market Fit Model



Note above that the "pivot" process can occur "N" times, and that product/market fit can be realized at any number of iterations in the process—although if you have only pivoted once or

twice, you probably haven't found an extraordinary product/market fit yet! Great companies can start with observed problems or new technologies. **Exhibit 1** provides a sample list of questions that are helpful to address as you develop your product or service, no matter where you start your journey.

The Customers and Users in Markets

Who will buy or use the product and why? How many customers are there? Where can they be found? New ventures must create a compelling value proposition and determine these important questions. There are three broad target audiences for any product or service:

- **An existing market**: If your product or service addresses customers in an existing market, there may be a wealth of information about their preferences and behaviors that you can use to develop your value proposition. This information is typically easily accessible in developed economies but will likely take additional effort to collect in developing economies, where traditional market research is less common. In addition, you will need to devise a way to reach these customers. When entering markets with established competitors, it can be important not only to have an innovative product, but also to develop an innovative way to reach your target customers—i.e., an innovation in the business model.
- **A new market**: Creating a new or hybrid market (i.e., from existing ones) often requires substantial resources as well as creative marketing and sales efforts. In particular, you will need to understand how large the market will be. Is there a critical mass of customers and users having similar problems, needs, preferences, and behaviors? For hybrid markets you will also need to understand how existing firms across the markets can impact you.
- **A duplicated market**: You may offer an existing product or service in one market to a similar set of customers or users in a different market not yet served. Many international product or service launches, particularly in developing markets, seek to duplicate successes in one geographic market across others. For example, Rocket Internet's business model is based on "cloning" successful Internet-based businesses from developed economies and launching them in developing economies.

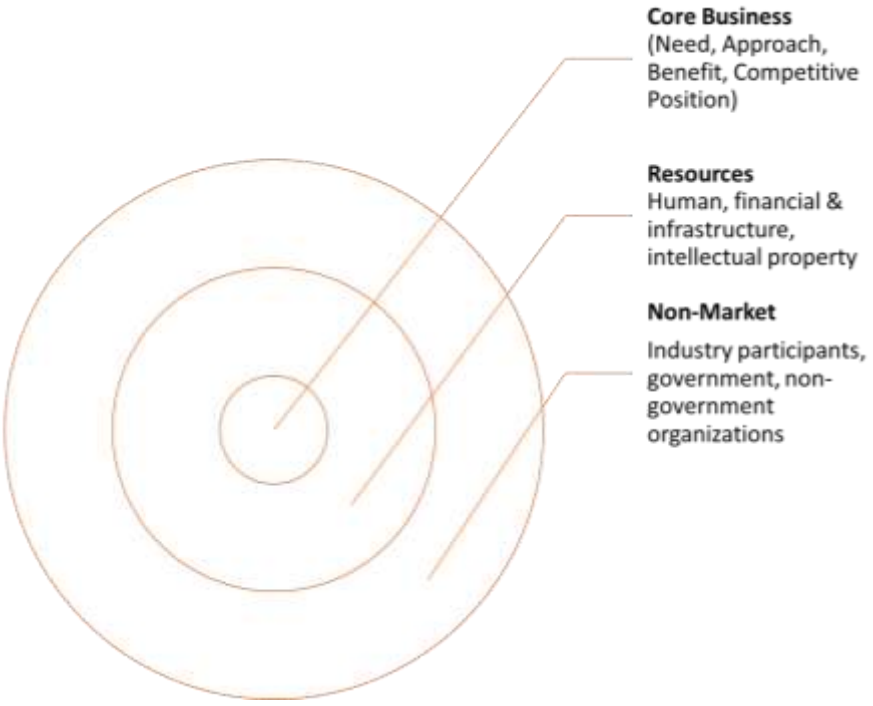
To be a viable venture, the product or service must deliver a compelling value proposition to specific groups of customers and users in the markets you have identified. For many consumer-focused companies, an emphasis on "delighting" the customer can help lead to a compelling value proposition. Again, **Exhibit 1** offers a set of questions to help guide your thoughts on developing your customers and markets.

The Customers and Users in Markets

Just as important, a viable venture must provide economic value to the stakeholders: founders, investors, lenders, and any others with an economic interest. In this note, we use the term "extended business model" to refer to the elements that are required for transforming a product

or service (with a customer or user base and identified markets) into a viable venture.[2] We have divided the business model into three parts: core business; resources; and non-market (**see Figure 4**). Each part is described below.

Figure 4: Extended Business Model



Core Business

This part, sometimes along with "Resources," is what is often referred to in the literature as a company's "business model." The core business covers the fundamentals of the venture—the need, approach, benefits, and competition—and how the business will become profitable, or, in the case of a nonprofit, sustainable. Needs and approach (or solution) are described above on pages two and three; additional detail on benefits, competition, and profits are provided below.

- **Benefits**: This covers what value the customer will receive from your product or service. The value may be a cost-savings or the elimination or reduction of what is sometimes referred to as a "pain point" for the customer. It's important to understand the difference between "features" and "benefits." Features are characteristics of a product or service included by the venture with the expectation they will provide value. Benefits are the characteristics of the product or service that *actually* provide value to customers, *through their eyes.* There also may be benefits that are captured by other stakeholders that help promote the viability of the venture. For example, in the health care industry, there are often multiple

[2] Haim Mendelson, "Business Models: An Introduction," 2010, Stanford University Graduate School of Business.

stakeholders involved with a product—patient, physician, other health care professionals, pharmacies, hospitals and other health care providers, insurance companies, and government agencies. A well thought out venture should be able to quantify the value and benefits that are expected to accrue to all stakeholders.

- **Competition**: A viable venture needs not only a compelling value proposition for its customers, but also a means of distinguishing itself and protecting itself from competitors. The product or service must be developed with an awareness of where and how it fits in the competitive landscape. Beyond the product or service itself, the venture must develop a viable economic model that will provide the profits required to build and maintain a competitive position and provide an attractive return. There are many ways to create a competitive advantage, including superior execution, a large and active user base, or intellectual property protection. The initial focus on a defensible competitive position varies by venture. For example, a company based on intellectual property from a technological breakthrough will have a different approach from a consumer Internet company in a well-defined market. In some cases, entrepreneurs may even launch ventures believing they are not defensible in the longer term, but convinced that the model can achieve a good return on investment for a period of time. In all cases, it is useful to think about these issues and how your product or service will compete with others.
- **Profits and Sustainability**: The venture requires a revenue model that specifies how you will capture value from your customers; in other words, how you will be paid for your product or service. To be economically viable, a product or service ultimately must be sold at a price point that is accepted by the market, is sufficient to cover the costs of the delivery system, and yields an acceptable profit. In the case of nonprofits, the goal is to become sustainable by providing sufficient value that philanthropists, government agencies, foundations, customers (if something is being sold—even if it isn't covering the costs), and other contributors will provide resources (capital, advice, infrastructure, etc.) to the nonprofit. The revenue model should also optimize the collection of revenue from customers. It should specify *how* and *when* as well as *how much* a customer will pay for the product or service. In some cases, there may be options as to *what* the customer pays for and whether the offering should be sold as a product or as a service.

Resources

Acquisition of human and financial resources, putting infrastructure in place, and managing intellectual property are all critical to a successful venture. In short, these steps enable the other parts of a business model. Some considerations are described below.

- **Human and Financial Resources**: The ability to hire the right team is one of the primary tasks of a founder, as is the ability to obtain the capital required to launch the venture. In developing economies, hiring even for entry-level positions can be a challenge (see A Note On Human Resources In Developing Economies

[Stanford GSB E-497]).[3] Suppliers that perform business functions can facilitate the work of starting a new venture. Financing the venture is a topic unto itself and is covered elsewhere (see A Note on Financing in Developing Economies).[4]

- **Go-to-market Strategy**: To be successful, a venture must not only correctly identify its target customers, it must also have a cost-effective customer acquisition process and distribution strategy. Even with a compelling offering, if the cost of acquiring a customer or entering a new market is too high, the overall economics of the business will not be viable. Customer acquisition is done through the marketing and sales functions of a business.
- **Supply Chain Infrastructure**: Successful business models have both a production and a distribution process that deliver an appropriate product or service to customers at the right time, at a cost yielding appropriate profits. In the early stages of a new venture, when resources are typically constrained, the venture must determine which activities to conduct in house and which can be outsourced. Successful business models have production and distribution processes that have costs and response times that support the marketing and sales functions. As with back-office tasks, most industries have an extensive network of contractors who can be hired to provide many or all of these services.
- **Partners**: Partnerships with other entities can be very important to creating a viable venture. Partnerships can range from a more intimate relationship with suppliers—such as is typical in the Japanese auto industry—to collaborations put in place to drive an innovation ecosystem forward.[5] Another example from the auto industry is the variety of approaches being used by electric vehicle manufacturers to assure there are ample locations to charge these vehicles. Tesla is building its own proprietary network of charging stations, Nissan has a partnership with EVGo for rapid charging of the Leaf, and other manufacturers are relying on private companies such as ChargePoint, property developers, and local governments to install charging stations. The density and availability of the charging stations is a critical factor in customer adoption, since "range anxiety"—i.e., concern over running out of power—is a key issue for consumers.

Business Model Canvas

A helpful tool that covers the first two parts of the Extended Business Model—Core Business and Resources—is the Business Model Canvas, crowd-sourced by Alexander Osterwalder (see Figure 5).

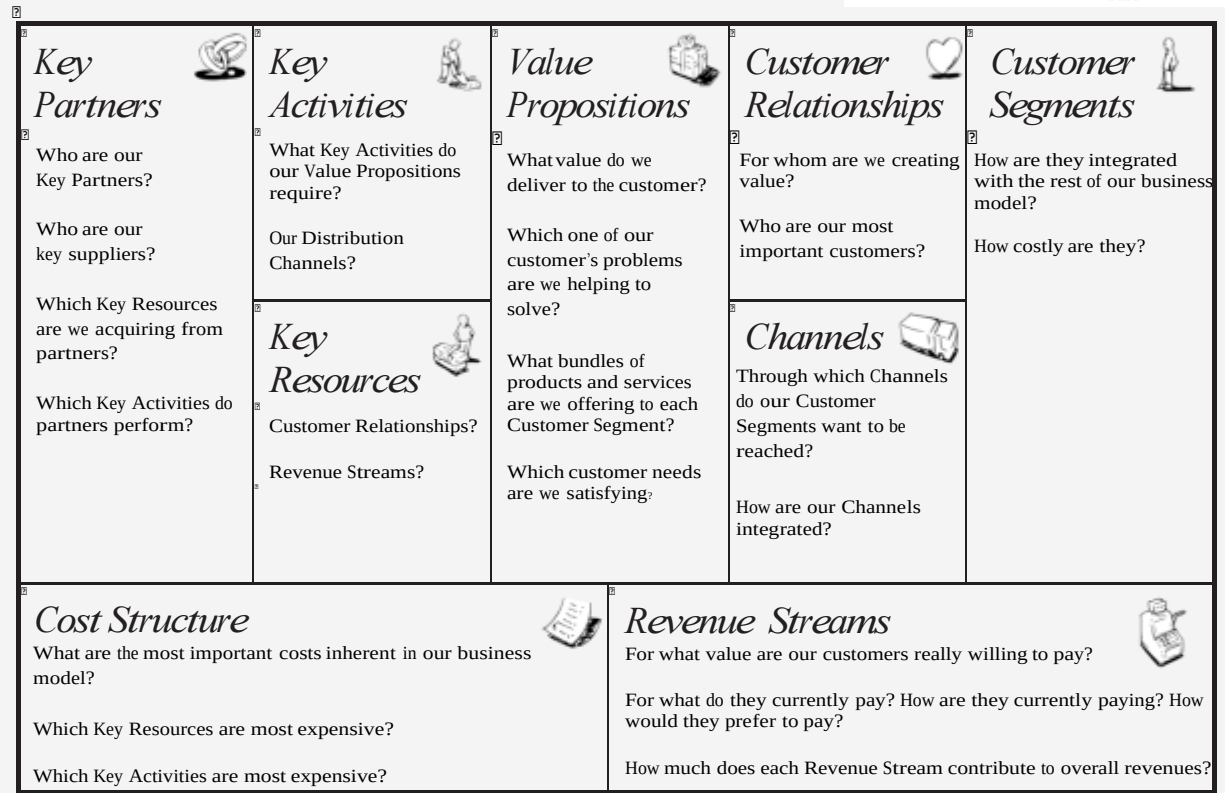
---

[3] Yin Li, Howard Rosen, Stephen Ciesinski, "A Note on Human Resources in Developing Economies," 2014, Stanford University Graduate School of Business, https://www.gsb.stanford.edu/faculty-research/case-studies/note-human-resources-developing-economies (May 21, 2018).

[4] Steve Ciesinski, Howard Rosen and Jason Luther, "A Note on Financing in Developing Economies," 2014, Stanford University Graduate School of Business, https://www.gsb.stanford.edu/faculty-research/case-studies/note-financing-developing-economies (June 27, 2018).

[5] Ron Adner, "Match Your Innovation Strategy to Your Innovation Ecosytem," *Harvard Business Review*, April 1, 2006, https://hbr.org/product/match-your-innovation-strategy-to-your-innovation-ecosystem/R0604F-PDF-ENG (May 21, 2018).

Figure 5: Osterwalder's Business Model Canvas



Source: Alexander Osterwalder

There is a wealth of material available online and in print for those who want to pursue the use of this tool.[6,7] In general, we believe the more ways entrepreneurs looks at their ideas to try to understand the strengths and areas for improvement, the better.

Non-Market Forces

The final part of the Extended Business Model is the collection of groups that aren't directly tied to the venture but may have significant impact on its success. This overarching portion of a business model is sometimes referred to as the "business environment." These groups include: governments; non-government organizations (e.g., charities, advocacy groups, political organizations, media outlets, social media users) and industry participants, i.e., companies or other stakeholders who aren't direct competitors but may have an influence on the market. This part of the business model can often be left until later in the viability analysis or even after the launch of the venture, although in highly regulated businesses (e.g., health care and alternative energy) the non-market portion of the business model should be evaluated early in the viability process. It also is becoming more common to see new companies created in areas where there

[6] Alexander Osterwalder, Business Model Canvas, https://strategyzer.com/canvas (May 2, 2018).

[7] Alexander Osterwalder, Business Model Generation, https://www.amazon.com/Business-Model-Generation-Visionaries-Challengers/dp/0470876417 (May 2, 2018).

are no regulations—but it can be anticipated governments will impose them once they catch up with the innovators (e.g., self-driving cars, peer-to-peer lending, cryptocurrencies, Internet data privacy). It is worthwhile in these situations to do some early work anticipating (and possibly influencing) the eventual regulations. The need to look early at non-market forces is also true in developing economies, as described in the following section.

The Extended Business Model—Developed vs. Developing Economies

Overall, the relative degree of importance of each of the parts for any Extended Business Model will depend on the product or service, the industry sector in which it will compete, the dynamics of the competitive landscape, and the presence of non-market forces. During the process of evaluating an entrepreneurial opportunity, some of these questions may be handled with quick estimates and assumptions until deep analysis is needed or made possible.

In developed economies, an entrepreneurial team can usually focus on iterating the core business to find a desirable product/market fit, as described earlier, and set aside other concerns for later. In developing economies with less-developed entrepreneurial ecosystems; however, uncertainty around resources, regulation, and infrastructure suggests that it is more productive to work all three parts of the Extended Business Model in parallel.[8] This is because an issue with any part of the model may either make the venture unviable, or create a new, unique opportunity. For example, Strive Masiyiwa, the founder of Econet Wireless, had to sue the Zimbabwean government to win the right to start Econet as a competitor to the state-owned telecom company—and the process took five years!

PART II: PROCESSES AND TECHNIQUES FOR CREATING A VIABLE VENTURE

The following sections describe processes and techniques for gathering information on the aspects of the venture described in **Part I** of this note, and the questions in **Exhibit 1**. These processes and techniques serve a number of purposes: to test and validate or disprove your initial assumptions and estimates; increase the likelihood of your success by anticipating issues in product or service, customer acceptance, or others issues early in the process; and mitigate the risk that such issues present. A sample outline for a Venture Viability presentation is provided as well, below.

Prototyping

One of the most effective ways to assess and enhance the viability of a venture is through "rapid" prototyping. Building prototypes of products during the design process has long been a tradition of product designers and a requirement for more complicated engineering and science-based ideas—e.g., self-driving cars, biopharmaceuticals, alternative energy sources—where companies need to test scale-up in stages. A prototype is a representation of a product that allows others to experience and inspect its functionality. By seeing and sometimes using a product, individuals will be able to respond to its usefulness and viability in ways not possible with an abstract

[8] Steve Ciesinski, Howie Rosen, and Ryan Kissick, "A Note on Entrepreneurial Ecosystems in Developing Economies," 2016, Stanford University Graduate School of Business, https://www.gsb.stanford.edu/faculty-research/case-studies/note-entrepreneurial-ecosystems-developing-economies (May 21, 2018).

description. A prototype will have a depth and richness of information that can allow entrepreneurs to discover needed improvements. A rapid iteration through prototypes allows products to change and evolve quickly, to clarify and better address the identified need. At its most basic level, a prototype is anything a user can interact with, and need not be functional. The term *pretotyping* was coined by Alberto Savoia at Google in 2009 to refer to non-functional, simple prototypes that allow information to be gathered from users or stakeholders.[9]

At its most advanced level, what has been popularized as a "minimally viable product" (MVP)[10] is essentially a prototype that is good enough to satisfy initial paying customers, thereby allowing for feedback and further pivoting before the product development process is completed. A MVP helps avoid spending the time and money to potentially over-design a product before discovering if this is actually a product customers want. MVPs are often used with Internet or software-based products. And, although not referred to as a MVP, the same concept is used in biopharmaceutical development, where the manufacturing requirements for the preliminary human (Phase 1 and 2) testing of medicines are less strict and compounds often are tested using a preliminary formulation. For example, it is possible to test a powder in a capsule, instead of formulating a tablet.

The process of prototyping can be extended beyond products, to services. Even business models benefit from prototyping. By describing parts of a venture in detail and making them as real as possible, entrepreneurs, potential customers, and experts will be able to evaluate the model more completely.

Since the product or service and the parts of the business model are tightly integrated, being able to quickly produce prototypes can be very useful in the evolution of a venture. Where there are options, creating prototypes for each part or step along the way can help you reach the best set of solutions. Over time, a more complete, concrete, and reasonably detailed product and business model can allow you to obtain information important to choosing an option or evolving to another model.[11] With highly regulated or engineering and science-based products, the cost and lead times may result in lengthy, costly prototypes, but the thoughtful testing of the concepts and product/service at each step can ensure fast failure and can prevent pursuit of an expensive yet unsuccessful venture.

Using Experts

A key part of the process of gathering information is deciding where to get the information. The general answer to this is "experts."

Experts can be potential customers who know their preferences well. They can be industry insiders—those who have an understanding of how the industry and its players operate and serve

[9] "Make sure you are building *THE RIGHT* it before you build *IT* right," http://www.pretotyping.org (June 8, 2018).
[10] Eric Ries, "Startup Lessons Learned," August 3, 2009, http://www.startuplessonslearned.com/2009/08/minimum-viable-product-guide.html (June 8, 2018).
[11] Arar Han and Haim Mendelson, "Prototyping: A Quick Introduction," 2012, Stanford University Graduate School of Business, https://www.gsb.stanford.edu/faculty-research/case-studies/prototyping-quick-introduction (May 21, 2018).

their customers, and who may be able to quickly relay their experience with market norms, including opportunities or problems within the market. Some experts may be entrepreneurs who have tried and succeeded partially, or failed at starting a similar business. A rich source of industry or market wisdom is retired executives. It is surprising how often retired executives or even current executives are willing to help. Most are proud of what they know and enjoy telling entrepreneurs about their experiences.

All these people can be invaluable as you assess many aspects of your proposed venture. In particular, if you are attempting to enter an industry that is new to you, these "river guides" can be a quick and cost-effective way to gather information. Finally, financial, start-up, process and technology experts are useful to help you think about aspects of the business model. For technical issues, specialists can provide know-how that will inform your decisions.

The Design Thinking Approach

Figure 1, on page 3 of this Note, illustrates the creation of a new venture starting with a problem, moving to a perceived need, a product or service, and a set of customers. The design thinking approach, championed by the Stanford d.school, focuses primarily on this approach to creating a new venture. Even if the idea starts with a solution or technology, as shown in **Figure 2** (see page 4), the d.school techniques can be used with customers and stakeholders to help determine if you do, in fact, have a solution that matches a need.

Design thinking prescribes a set of processes and techniques leading to the discovery and deep understanding of problems, and the creation of solutions that result in products and services. This approach starts by recommending entrepreneurs to assume several "mindsets" that:

- Focus on human values
- Show rather than tell; build and use prototypes
- Endeavor to create clarity from complexity
- Are experimental
- Are mindful of process
- Have a bias toward action
- Collaborate across boundaries

Design thinking is characterized by its focus on understanding the feelings of customers, discovering implicit thought (as opposed to relying on what people say, or say they do), and using "active" and innovative approaches to studying problems and discovering solutions. It defines "modes" of operating and "methods" for accomplishing the tasks in creating a viable venture. These modes include:

- **Empathize**: This is the beginning of the process. It involves observation of users and their behavior to arrive at a personal understanding of the problem they face and insights into why they behave as they do. Methods for doing the observation that improve your ability to successfully gain these insights are an important part of the process.

- **Define**: The define mode is particularly central to design thinking. It focuses on delivering an actionable problem statement that captures the essence of the problem, is inspirational, focuses efforts, and can facilitate brainstorming. It can be a key to developing innovative solutions. For instance, "I need to reach the high shelf," versus the more common "I need a ladder," opens up a range of solutions. In the Embrace example discussed earlier, moving from "How can we reduce infant deaths?" to "How do we keep babies warm?" changes the thrust of the design problem.
- **Ideate**: This is the idea-generation mode. While the define mode focuses, the ideate mode "goes wide" to identify creative solutions. Again, design thinking provides processes and techniques that can improve brainstorming and creative problem solving.
- **Prototype**: As discussed, a prototype allows users to understand features through interaction. Of course, a replica of a product qualifies, but so could Post-it notes, sketches, or role-plays. The idea is to start building prototypes that a user can interact with—even when you are not sure about what you should do—to get feedback, and quickly revise and repeat.
- **Test**: This is the feedback phase. Design thinking encourages putting the prototype in users' hands, carefully watching and listening, then asking questions about what is right or wrong with it. The methods recommended include techniques to create the right mindset, do empathetic interviews, reframe a design challenge into an actionable problem statement, do effective brainstorming, and make choices. For more on the design thinking approach, see the d.school Bootcamp Bootleg.[12]

Traditional Research[13]

Beyond interviews with experts, as discussed earlier, you can access information pertinent to the components of your business model and overall venture design by conducting traditional research. Prior to delving into any research, you should know what you are searching for. Your research goals could be as specific as a list of questions, perhaps drawn from those offered in **Exhibit 1**. The research goals could be as wide as learning what popular press publications say about your target market and customer base. Regardless of the level of specificity, you're more likely to find what you're searching for if you can be clear about these goals.

In broad terms, market research divides into two types:

- **Primary data**: This is drawn from direct interactions with potential end users and others in the value chain, including suppliers, distributors, partners, and even competitors. Primary data can be exploratory, to discover insights and a broad understanding of a market; or confirmatory, to test various aspects of the venture model and gain a greater degree of confidence about the viability of the venture. Primary data collection techniques include interviews, focus groups, ethnographies, and surveys. Interviewing industry insiders as a source of industry information is an example of primary research. The data gathered through primary research can be contradictory and incomplete—and,

[12] "Bootleg 2018: Design Thinking Bootleg," https://dschool.stanford.edu/resources/design-thinking-bootleg (June 9, 2018).
[13] Alicia Sieger and Robert B. Chess, "Note on Market Research," Stanford GSB Note E-165, June 18, 2004.

as a result, inconclusive. For interviews or focus groups, one way to manage this uncertainty is to be prepared with a list of questions and a set of goals you hope to address through the interaction. Another approach is to conduct a large number of interviews to ensure the volume and variety of responses from which to draw your conclusions. For surveys, you could ask others experienced with survey analysis to review your design and make sure your survey will elicit the feedback that you seek. To aid in survey collection, you can use a free, web-based service. A significant limitation of interviews and focus groups is that, as asserted by proponents of design thinking, not everyone will reliably self-report—and few people have instant, synthesized recall of their preferences or experiences within a specific industry or market. One way of encouraging respondents to prepare in advance is by sending out a preliminary list of questions or a description of your goals beforehand. It is also useful to ask permission to keep an audio or video record of your conversations.

- **Secondary data**: These are essentially data and analysis created by others. Secondary data ranges from investment analyst reports created by professional services firms, articles from news and trade journals, reports from industry organizations, and filings from public companies. Competitor websites and marketing literature can also be a rich source of secondary data. Secondary data usually doesn't come in a format that directly addresses your needs. You may need to sift through a considerable volume of information before you arrive at the bits and pieces needed to answer your research questions. One way to save time in this regard is to ask your primary sources of data (industry insiders and others) for any reliable secondary sources of information. Another way is to use reports produced by reputable research organizations. These are often expensive, but may be available free of charge through a research library or through industry contacts. Fruitful sources of secondary data include research libraries that have subscriptions to a range of analyst and industry reports; industry organizations dedicated to researching and promoting the industry they represent; competitor websites and literature, including annual reports, where available; and analyses by industry consultants. A good rule of thumb is to start with accessible sources of secondary data like Internet searches. Then, based on the high-level information you gather, you can hone in for a closer understanding of what you seek. It can also be helpful to seek help from experienced researchers on creative ways to access secondary data.

The benefits of an iterative approach apply to market research, too. You may find that the initial research goals you started with change as soon as you have a few conversations with industry insiders or begin to delve into a good secondary research report. The results of a survey, for instance, may cause you to rethink your approach to the product or service itself. Be open to these types of shifts and welcome the new areas your research leads you towards, and don't be shy about asking for help. Useful information can be found in many surprising places.

In developing economies, secondary sources and familiarity with primary market research techniques can be limited. Relying more on ethnographies and in-person research can mitigate this situation. When researching a market from a distance, leveraging a personal network to test ideas via an online survey or a prototype posted on Facebook, Instagram, or a similar social media site can provide helpful initial insights into your venture's viability.

Exhibit 1
Reference List of Basic Questions[14]

The Product or Service

The end product or service is the key basic starting point for any new venture. It is the first step in translating an idea into a viable venture. The characteristics of this product or service will shape the remainder of the business.

- What is the unmet customer need, the pain point? Or, for many consumer companies, the question is not about a pain point, but what are the latent desires of the user and what will delight or entertain them?
- What are the features of the product or service required to satisfy this need? This is sometimes called the "Minimum Viable Product."
- How do you propose to provide these features? What is the product/service you will provide?
- For the customer, what is the value proposition of the product or service?
- What is the technology, design, and execution risk associated with providing the product/service?
- What development must be done to offer your product or service? Is there an option to test a minimal viable product? If so, what might that look like?
- How does your product or service integrate with other products or services?
- Do you have (or need to develop) any intellectual property?
- Do you need any licenses, approvals, or certifications to proceed?
- Is your product or service ethical and legal?

The Customers and Users in Markets and Their Size

Closely related to the product or service is the market of customers or users you will address (the "addressable market") and its size.

- In which industry or industries do you operate?
- How are these industries changing? How fast?
- What changes will affect the need for your product or service?
- What is/are your specific target market(s)?
- How large is the addressable market?
- Does the sale of your product or service depend on the sale of another product or service?
- Who are your customers and are they in the identified target market(s)?
- Is your customer different from the end user? If so, who influences the purchase decision more?
- What influences the purchase decision of your target customers?

[14] Claire Magat, Dennis Rohan, and Evan Porteus, "Venture Viability Research," Stanford GSB Note E-324, December 1, 2008. Also see Deloitte & Touche, *Writing an Effective Business Plan* (Fourth edition, 2003).

- Is it costly or difficult for your customer to change product or service providers?
- What is the approximate size and geographic spread of your target market(s)?
- What is the approximate growth rate of your target market(s)?
- What is required to develop that market?
- Are there changes in the political or regulatory landscape, or social values, that affect the need for your product or service?
- How will changes in technology change your industry?
- What market trends/changes may affect your customers' need for your product and ability to pay for your product or service?

Product/Market Fit[15]

e-Commerce

- Do you have $100,000 Gross Merchandise Volume (GMV) with clear path to $1 million GMV?
- Is monthly growth greater than 25% (greater than 3x annually)?
- Are returns less than 10%?
- Is Long-Term Customer Value (LTV) more than 3 times Customer Acquisition Cost (CAC)?
- Is there strong "word-of-mouth" about the product or service?
- Is Net Promoter Score (NPS) greater than 40?

Consumer

- Is Net Promoter Score (NPS) greater than 40?
- Is there a clear path to 100,000 users?
- Is there greater than 25% monthly growth?
- Is churn less than 2%?
- Are Daily Active Users (DAU) at least 30% of Monthly Active Users (MAU)?
- Is organic daily growth in users in the hundreds?
- Is active use the day after sign-up greater than 30%?

Enterprise (SAAS)

- Are there 3 to 4 customers?
- Is there a repeatable use case at $10,000 Monthly Recurring Revenue (MRR)?
- Is there a clear path to $100,000 MRR?
- Is there no churn?
- Is there at least a 5% conversion rate from free to paying customers?
- Is LTV more than 3 times CAC?
- Are customers willing to provide white paper testimonials?

[15] Adapted from Eric Chen, "Product Market Fit," Presentation to GSBGEN 514, January 23, 2018.

The Business Model[16]

Revenue Model

The revenue model most commonly involves one or more of the following:

- Are customers willing to provide white paper testimonials?
- Transactions: Customers pay a fixed price per unit of the product or service, e.g., $4 for a gallon of milk at the supermarket or $3 to view a movie on demand. Transactional revenues often incorporate fixed fees and quantity discounts. They are the most common form of revenue and cut across all value-creation models.
- Metered: This is a variation on the transactional revenue model where the use of services is measured and payment is based on these measurements, e.g., 2¢ per minute for a telecommunications provider.
- Outcome-based: In this case payment is based on a measurable outcome. It is most common in B2B markets, where it is used to align the incentives of the seller and the buyers. Commissions paid as a percent of a transaction is a common example.
- Subscription: Customers pay a fixed fee per unit of time, and they receive in return a fixed number of units of the product or service (e.g., one issue of a magazine monthly, or a data-limited cellphone plan) or unlimited, (e.g., a monthly cable TV subscription).
- Licensing: This revenue model is common for intellectual property or in the B2B domain. The customer pays a royalty or license fee that allows it to use, sell, or copy the product within a given period of time (unlimited in time if the license is perpetual). For example, the owner of a patent may license its technology to other companies in return for license fee.

Businesses often receive multiple revenue streams, where different customers pay according to different formulas or revenue models, or hybrid revenue streams, where a given customer's payments combine different revenue models. For example, almost all of Walmart's revenues are transactional, but the Sam's Club unit, a membership-based discount warehouse club (similar to Costco), collects annual membership fees. Since Sam's Club members also pay by the transaction for products they buy at the warehouse, Sam's Club receives hybrid revenue streams.

The important questions here related to the revenue model include:

- What are the options and pros and cons for the revenue model?
- What must a company charge to make the business model successful?
- What is the expected cost of delivering the product or service? How does the gross margin compare to other similar products/services?
- What are the price points you believe are achievable?
- Will it be adequate to support the business model?
- Is your market price sensitive? If so, where do you sit on the price curve?

[16] Ibid.

- Would the choice of revenue model have an impact on the design of the product/service or the market size?
- How does your revenue model, including credit terms, impact cash flows to the venture?

The Customer Acquisition Strategy

- How will your product/service be sold?
- What type of marketing will be necessary to reach the target customers?
- What will customer acquisition costs be?
- How will you position your product or service?
- Are there sufficient early adopters to support the company?
- What distribution channels will you use and what selling methods are appropriate for each channel?
- Are there options for using existing partners or will you require a direct sales force? Dealers? Representatives?
- What are the basic economics of selling through partners/alliances or directly?
- In either case, will a sales support function be required? If so who will provide it?
- How does the sales cycle and adoption rate affect the financial model?

The Production and Distribution Process

- What is actually being produced or what service is being offered?
- What must be done to develop the product or service and at what cost?
- What are the critical activities to produce the product or service offering?
- Which activities should be done in house and which can be outsourced?
- What are the constraining factors (e.g., limited raw materials, specialized talent, development of new technology)?
- What initial and ongoing production costs and capital investment assumptions should be used?
- How will your product or service be tested?
- How will you maintain quality control on your product or service?
- How will the product be distributed? If a service, how and where will it be performed?
- If it will require physical distribution, how will the logistics be handled and who will be responsible for the inventory?
- Have you identified business risks and developed a risk management strategy to address them?
- Will your production or distribution of product or service require special licensing, approvals, or certification?

Resource Acquisition Strategy

- What are the critical activities for the company to perform? How will those be staffed and financed?
- How will you attract the founding team?

- How will you compensate the founding team? Early employees or contractors?
- What are the key milestones in creating a viable venture for your product or service?
- How will you fund the company and with which milestones as the goal?
- If you will be raising funds, how much will you need? Can fundraising be accomplished in stages?
- What are the economics of the venture? How will they affect both the amount of money needed and your ability to attract it?
- Do you have a detailed and realistic timetable and set of benchmarks by which to measure progress?
- Which sources will you approach?
- How and when might the investors get a return on their investment?
- Will you need to have supply partners—and if so, how will you attract and compensate them?

A Defensible Competitive Position

- How does the sales cycle and adoption rate affect the financial model?
- Is there a need compared to current and expected alternatives?
- How are the unmet customer needs currently being addressed?
- How will you position your product/service in the market?
- What are the strengths and weakness of your offering?
- Which companies and which types of companies make up your competition?
- What are the strengths and weaknesses of your competitors?
- What are the barriers that you must overcome or that will allow you to win?
- What are the barriers to entry for your competition?
- Is your product or service vulnerable to substitution?
- How is your product or service differentiated from the competition?
- How do you build a financial model that illustrates the economics of the venture over time?
- Are there opportunities for extension that can be exploited in the future?

Sample Presentation Outline

1. "Elevator pitch" or executive summary – concept – exciting/differentiated/valuable
2. Customer problem/need/pain
3. Your solution – product or service, or combination
4. Team – explain the team, why they are qualified to start the venture
5. Target market and market size – who is the customer/consumer, how big is the market, how fast is it growing, and/or how fast is it expected to grow?
6. Review key non-market factors – market or technology trends, infrastructure

requirements, regulatory processes or other governmental issues

7. Specifics on the solution – key differentiators, secret "sauce," technology innovation, patents pending, etc.
8. Why your venture is an exciting economic opportunity – unit economics analysis (e.g., customer life time value), or a top-down economic model showing revenue and/or profit potential or both
9. What is your go-to-market strategy? How will you get your first customer(s)?
10. Where are you and what are your next milestones and future stages?
11. A concise review of competition and specifically how your venture will compete against incumbents and new entrants
12. Financial projections – revenues, P&L, cash flows (balance sheet optional), human resources
13. What is the ask? How much are you looking to raise and why? What is the IRR?
14. Key Risks identified and plans to address them
15. Summary/Conclusion – reiterate the key points of the "elevator pitch" or executive summary; perhaps add a couple of points to support your conclusion in retrospect.