

Creating Customer Value Propositions for Technology Products

MICHAEL WEISS, Carleton University

The development of a technology product requires a great number of decisions and involves many different stakeholders. For each of the stakeholders, the success of a technology product will, ultimately, be judged by the value it creates for them. Stakeholders include a company's customers, end users, the company itself, developers, domain experts, component suppliers and service providers. The goal of this paper is to articulate patterns for the creation of value propositions for customers. A value proposition is what causes a customer to buy from one company instead of one of its competitors. The patterns in this paper help companies identify the problem their product is solving for customers, and what customers want to achieve with their product (i.e., the job to be done).

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1. INTRODUCTION

The development of a technology product requires a great number of decisions and involves many different stakeholders. The decisions include the choice of technology to use, architecture, release schedule, and staffing of the project team. The stakeholders are not limited to customers, but also include end users, the company itself, developers, domain experts, component suppliers and service providers.

For each of these stakeholders, the success of a technology product will, ultimately, be judged by the value it creates for them. Value for the stakeholders can be thought of in terms of how using the product benefits them. Examples of benefits to stakeholders are how the product reduces their cost, saves them time, meets their needs, is easier to use, provides a return on their investment (ROI), and satisfies them [Coplien 2010].

The customer is a particularly important stakeholder. He or she is the one who pays for the technology product. The goal of this paper is to articulate patterns for the creation of value propositions for customers. The paper is written from the perspective of a technology company. Technology companies are often founded by developers, who are prone to look at products from a technology, not a customer perspective.

A compelling value proposition causes a customer to buy a product or service from one company over another. It describes how a company creates value, i.e., a set of benefits, for its customers. It also describes how the company

Author's address: M. Weiss, Institute of Technology Innovation Management and Commercialization, Carleton University, 1125 Colonel By Dr, Ottawa, ON K1S 5B6, Canada; email: michael_weiss@carleton.ca

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is better at delivering the value than its competitors, i.e., it articulates some unique advantage the company has. Value propositions are about how a company differentiates itself from other companies.

Value is what customers get in exchange for buying a product. For example, when someone buys a cell phone, they may do so because they want to be able to receive calls in any location. A value proposition is at the core of a business model. Other components of a business model include customers, channels, and revenue, on the one hand, and activities, partners, and costs, on the other. Good starting points for reading more about value, value propositions, and business models are [Osterwalder and Pigneur 2010; Anderson et al. 2006; Meyer 2007].

2. OVERVIEW OF THE PATTERNS

To define your customer value proposition, ask yourself these questions:

- What customer problem are you solving?
- What frustrations do customers experience with current solutions? Are they able to articulate their needs?
- How are customers solving their problem today? What is it that customers actually want to achieve?
- Are there better ways of solving the customer's problem? Do you have the required background and skills to deliver?
- How is your solution different from other solutions in the market?

When you define a value proposition, you should start by putting yourself in THE CUSTOMER'S SHOES. Do not assume that what excites you about a solution (e.g., that your application runs on Android as well as iOS) will also excite your customers. Instead, try to understand what problems they face, and how you can use your skills and technical capabilities to solve them. You may need to separate between the end user of your technology (who uses it on a daily basis) and the customer (who pays for the technology).

A good source of value propositions are frustrations that customers currently experience. These frustrations lead you to LATENT NEEDS that the customers may have, but are unable to articulate. Customers have either gotten used to workarounds using current solutions, or are simply unaware of which alternatives are technically feasible. Of course, you also want to understand what makes a product more enjoyable. Thus, you should also look for ways to please the customer by exceeding their expectations.

Next, you need to understand what current solutions the customer can access to solve their problem. To that end, you want to identify the JOB TO BE DONE, i.e., what is it that the customer actually wants to achieve. If you only focus on products that directly compete with your solution (eg your product is a car, and you are just comparing it to other cars), you may fail to recognize the customer's underlying need (eg they may be looking for a means of transportation, which increases the range of potential solutions to include trains, airplanes, etc.).

What you bring to the table as the founder of a technology company are your background, skills, and the people you know.¹ You are looking for opportunities to match your background and skills to the customer's needs. These enable you to imagine solutions that customers cannot conceive; their experience is limited to products that exist in the market. They may not be able to imagine solutions that are within your reach. In other words, you are a PEDDLER OF POSSIBILITIES. To deliver the solution, you often need to work with partners, as customers prefer a WHOLE PRODUCT from one source [Kelly 2012].

However, it is not enough merely to solve the problem as well as other solutions. Your solution must be better (i.e., cheaper, faster, easier to use, etc.) in some dimensions. Look for POINTS OF DIFFERENCE that set you apart from your competition. In fact, if you are doing this well, what you want to emphasize are the points of difference where you demonstrate an intimate understanding of your customer. You can do this through a RESONATING FOCUS on just the dimensions that matter most. This also means that you may end with multiple value propositions, one for each of your customer segments, each placing the emphasis on different dimensions.

¹ Having access to partners (e.g., channel partners through which you can reach customers) is perhaps not as obvious as the the requirement that founders have the right background and skills, but it is key to being able to deliver your product [Read 2010]

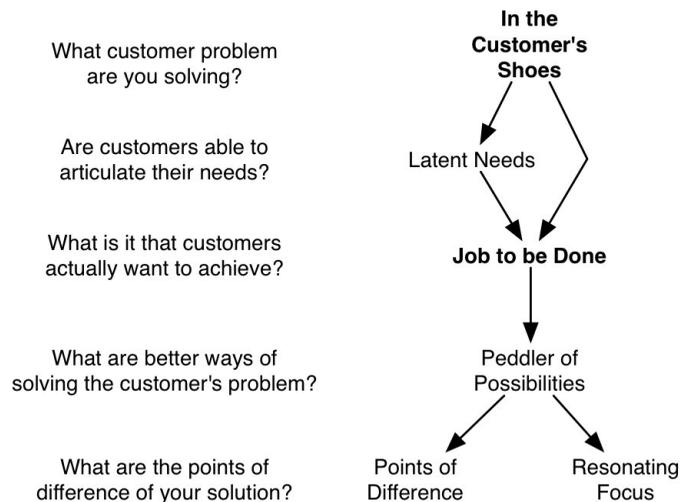


Fig. 1. Patterns for profiting from open source.

The audience for these patterns include entrepreneurs in the technology domain, as well as developers of technology products in established companies. They were motivated by the author's role as a mentor to startups spun out from a master's program on technology innovation management. Having observed the same conceptual problems new entrepreneurs had defining a value proposition in pitch after pitch, the author hopes that these patterns will help guide new entrepreneurs better articulate what value their products or services create.

A map of the patterns showing their relationships is shown in Fig. 1. Links between patterns X and Y should be interpreted as "after pattern X you may also use pattern Y". Patterns in boldface are described in this paper. The thumbnails of the other patterns can be found in the Appendix. The figure also shows which questions are linked to which patterns.

3. IN THE CUSTOMER'S SHOES

"Consider what your customers will look, smell, touch and feel - from the start to end of your experience." [Lim 2011]

3.1 Context

You need to have a good idea of what your customers need.

3.2 Problem

What customer problem you are you solving?

3.3 Forces

—Your perception of what problems customers face, and which of these problems are most urgent to them may not be accurate. You may be solving a problem for which there is no urgent need.

—However, just asking customers about the problems they face will not provide you with all the answers. Customers can only tell you about problems they are aware of. Customer needs are often latent.

—Even when customers can articulate their problems, their imagination of what solutions can be provided to solve them is limited by what they know, that is, what other solutions exist in the market.

—Asking customers about their needs will only lead to incremental improvements. You will not be able to discover new and better ways of solving their problems, allowing you to differentiate your solution from competitors.

—Customers are not experts on how to solve their problems. Don't look to them to tell you how to solve a problem.

3.4 Solution

Learn what problems customers face, but look beyond needs that customers can readily identify.

In order to understand what problems the customer faces, you need to take the customer's perspective. Your product must address needs the customer has. Customer needs come in two types: needs that the customer can articulate, or perceived needs, and needs that are difficult to articulate, or LATENT NEEDS. Surveys and focus groups used in traditional market research can only tell you about perceived needs. To learn about your customers' latent needs, you need to observe customers as they go about achieving their tasks.

As customers and end users are often different people, you will need identify what problem you are solving for the people who pay for your technology (customers), and how you are helping the people who use your solution on a daily basis (end users). While your end user may define their need in terms of specific features that your solution should have, your customer (who makes the purchase decision) may be mainly interested in how much money they will be able to save if their organization uses the solution.

3.5 Consequences

—You may be surprised by the needs customers really have.

—You need to learn to speak the language of your customers. This is essential for communicating with your customers when gathering requirements and, later, describing what your solution does.

—You may need to help your customers articulate LATENT NEEDS.

—Time spent upfront on gaining a good understanding of your customer's needs takes away time from developing your solution, but allows you to build a better solution, often in less time.

—Yet, identifying the customer's problem is not sufficient, you also need to have the skills and technical capabilities to solve it.

3.6 Known Uses

One of the companies the author deals with sells software for visualizing complex data. It solves the problem of small companies that collect significant amounts of data (eg through customer surveys), but have no good ways of making sense of it, and that do not have access to expensive Business Intelligence solutions. They offer the visualization capability as a simple-to-use service.

3.7 Related patterns

This pattern complements the marketing patterns described in [Kelly 2012], especially CUSTOMER UNDERSTANDING. The unique aspect of this pattern is on needs that customers cannot articulate.

3.8 Sources

Literature [Meyer 2007] and the author's experience.

Perceived and latent needs

An example of a perceived need is a user looking for a faster portable scanner or one with greater memory capacity. An example of a latent need is that users really want to limit the number of gadgets they have to carry with them.

Currently, most portable gadgets have a single purpose. So, an industrial designer may need to take a potpourri of gadgets wherever he goes, including a digital camera for taking photos, a voice recorder for

conducting interviews or sampling sounds, a portable scanner to scan photos and articles, a sketchbook for capturing ideas when inspiration strikes, and a collection of pencils of different strength.

I happened to sit next to a well-known designer once at an event, when he emptied his bag on the table to make this very point. The designer's latent need is: there are too many gadgets to carry, but if he leaves any one of them at home, it may be the one he needs most on a given day. So, he has learned to live with this constraint; he is not content, but he lacks a viable alternative [Weiss 2012].

4. JOB TO BE DONE

"The fact that you're 18 to 35 years old with a college degree does not cause you to buy a product," Christensen says. "It may be correlated with the decision, but it doesn't cause it. We developed this idea because we wanted to understand what causes us to buy a product, not what's correlated with it. We realized that the causal mechanism behind a purchase is, 'Oh, I've got a job to be done.'" [Nobel 2011]

4.1 Context

You put yourself IN THE CUSTOMER'S SHOES to understand what problem you are solving. Now, you need to build a case for why your customers should want to buy your product.

4.2 Problem

What task are customers trying to achieve with your product?

4.3 Forces

—Customers are already solving their problems, although it may be in a less efficient way than using your product. You need to get to the bottom of what task your customers are trying to achieve, and how you can improve on the current solutions they use.

—Many technology companies limit their attention to product features, and with that, to products that directly compete with their solution in terms of those features (eg other cars). By doing so, they fail to recognize the customer's underlying need (eg they may be looking for any kind of means of transportation).

4.4 Solution

Identify the job to be done, i.e., what job they would "hire" your solution for.

Observe your customers as they do their work. What tools or products do they use? Are these products "fit" for the task they are trying to accomplish? What problems do customers face when using existing solutions? What customers are trying to accomplish is the "job to be done". The gap between what current products can do and the requirements of the job the customer needs to get done creates an opportunity for your product.

Thinking about the customer's needs in terms of a job to be done will leave you with a deeper understanding of what the customer needs, and what current solutions you are competing against. Alternative solutions are not restricted to other products in the same category as yours (e.g., other makes of cars), but include alternative ways of achieving the customer's goals (e.g., traveling by train instead of by car).

In addition to observing the customer, the Internet is an excellent resource for finding information about competing solutions, not only in terms of features your product should have, but in terms of customer feedback on existing solutions (e.g., review on product websites), and the frustrations customers experience using those competing solutions.

4.5 Consequences

—You understand how customers currently achieve their tasks.

—You do not limit your attention to products that directly compete with your solution, but are aware of all competing solutions.

4.6 Examples

Apple's products are designed with a customer's job in mind. When Apple introduced the iPod, there were existing products that customers were using to listen to music. However, many of these devices were difficult to use and it was hard to obtain music for them. Apple recognized the job to be done as customers looking for a convenient way to entertain themselves (listen to music). The competition for the iPod was not other MP3 players, but the whole distribution model of how customers would get to the music.

The evolution of e-readers is another good example [Adner 2012]. One of the first e-readers was introduced by Sony. The PRS-500 excelled in terms of hardware features: it was the first e-reader to use e-ink technology which dramatically improved readability and reduced battery consumption, problems faced by previous entrants to the e-reader market. However, what Sony failed to address was the real job customers wanted to achieve.

Customers did not only want a portable device for reading books, but also needed access to a selection of content comparable to existing bookstores, at a competitive price. The job to be done could be described as "carry a library of books with you and conveniently acquire new content". The solution to this problem was later provided by Amazon through its Kindle and associated service for downloading books directly from the Kindle device.

4.7 Related patterns

Some users will also come up with their own solutions. Such USER INNOVATORS are a rich source of product ideas.

4.8 Sources

Literature [Christensen and Raynor 2003] and author's experience.

Alternative solutions

Let's apply the lessons from this pattern to the scanner example. If your product is a portable scanner, you might just be comparing it to other portable scanners on the market. However, your real competition may be far broader than originally conceived, but so are your solutions. A new solution to a problem that the customer faces may involve another type of technology or an alternative approach.

Solutions competing with a portable scanner include copiers (if one is nearby), the user's memory (often unreliable), pen and paper (slow and tedious), as well as a camera-equipped smartphone (a very viable alternative, see below). Not all of these solutions are necessarily good solutions. However, once a customer has adopted a solution, it can create a "lock in" effect. This means that your solution needs to be sufficiently compelling for customers to switch to it [Weiss 2012].

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In formatting these patterns I owe a tremendous amount to the format Allan Kelly has used in his own papers, which I tried to emulate.

APPENDIX

Here are short forms of the patterns not described in this paper. Unless otherwise noted, these patterns will be described in future papers:

LATENT NEEDS	Often, customers cannot articulate their needs. Therefore, look for frustrations that customers experience.
PEDDLER OF POSSIBILITIES	Your background and skills enable you to imagine solutions that users cannot conceive.
POINTS OF DIFFERENCE	Your solution must be better than alternatives. Therefore, look for points of difference that set you apart.
RESONATING FOCUS	Resonate with your customer's needs by emphasizing the points of difference that matter most to your customer.
USER INNOVATORS	Look for customers who solve their problems themselves. This makes them a rich source of new product ideas.
WHOLE PRODUCT	Bundle your product with additional products or services that are required for customers to realize its value [Kelly 2012].

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