

# System Logics: Organizing Your Offerings to Solve People's Big Needs

By Dev Patnaik

*In marketing and branding, the mantra of the development process is “respond to customer needs.” But as Dev Patnaik makes clear, not all needs are created equal. Here, supported by examples and case studies, he describes a hierarchy of customer needs and suggests how corporations can use this design-based analysis-system logics-to inform their strategic and tactical decision making.*



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Tom is a fairly likable fellow in his early thirties who, at the time of this writing, remains a bachelor. Not too long ago, Tom caught the eye of an attractive female friend we'll call Sally. Tom really wanted to ask Sally out on a date, although he knew that the clichéd dinner and a movie might raise the stakes too high. So Tom asked her out for coffee instead. Sally said yes. Coffee was, after all, something that she could agree to easily. Going out for coffee suggested a late afternoon engagement, probably in a little café, where they could sit, talk casually, and (should things not work out) make a quick exit.

The appointed day arrived, and Tom took Sally over to the local 7-Eleven, where he proceeded to buy two styrofoam cups of joe that the two could quaff on the curb outside. Sally

was outraged. How could Tom be so stupid? Clearly, when he asked Sally out for coffee, she had expected the experience of having coffee in a nice café, not just a dose of caffeine. Frustrated and disillusioned, Sally decided not to answer Tom's repeated phone calls. To this day, our friend remains confused by the whole event.

The above anecdote is a fabrication. Most of us are able to discern the difference between having a cup of coffee and “going out for coffee.” After all, it would be absurd to think Sally's desire to go on a date would be satisfied by a beverage. And yet, absurd as it may sound when framed as individuals, this is something that companies do to customers everyday. Take, for example, airlines that claim to have reinvented travel by creat-

ing a business-class chair that reclines to 180°. Or computer manufacturers that bring job satisfaction to the oppressed worker by introducing a faster microprocessor. Or even, for that matter, coffee purveyors who think they can put Starbucks out of business merely because their coffee tastes better.

These firms fail to realize on an organization-wide level what we all understand as individuals. People have differing types of needs, ranging from the immediate to the far-reaching. Firms seeking to solve these needs must provide a range of solutions. Some of these solutions may require improvements to individual features, while others may require massive changes in thinking. The challenge, then, is to be able to discriminate among these needs, and rigorously map out effective solutions.

#### **All needs are not created equal**

People face various challenges as they go about their daily lives. The problems they face, the goals they work to achieve, and the long-term ambitions they have can all be characterized as needs. After all, describing a situation in terms of the needs that are present is particularly useful for those who seek to change it. For our purposes, we can hold needs, wants, and desires to mean the same thing. In doing so, we recognize that there's probably a difference between the need that one has for oxygen, the need to believe in a higher power, and the need to purchase that new BMW. All needs are not created equal.

No typology of needs can be introduced without tipping one's hat to Abraham Maslow. It was Maslow, after all, who first succeeded in creating a coherent classification of needs that was relevant to conditions in modern society. Classifying needs from survival to self-fulfillment, Maslow's Hierarchy isn't specific enough to directly help product developers. It may be useful, however, to build on his work to offer a framework that is more prescriptive than descriptive.

Some human needs are purely a result of the current scenario and will disappear when the prevailing situation changes. Some needs are actually created by the solutions to other needs. The most universal needs suggest deep-seated,

longer-lasting problems that may not be fixed by a single solution. In this way, needs can be characterized by their connection to current solutions, situations, or behaviors.

During the course of several design and strategy investigations, Jump Associates has had the opportunity to study a number of different types of people and the challenges they faced in the course of their daily lives. Depending on the project, we've studied subject groups ranging from office workers to medical equipment technicians to motorcycle enthusiasts. Direct observation, as well as interviews, gave us extensive lists of needs both individual and collective.

Table 1 shows examples of needs from two separate studies. While each gave us radically different information, one general pattern remained the same: People's needs varied in level of abstraction, due in large part to differences in their connection to the immediate situation. Because the data seems rather obtuse when presented without the necessary background information, we've also included a list for Sally, our archetypal coffee drinker. Each list is, of course, highly abbreviated and shows just a few needs to convey the basic idea.

#### *QUALIFIER NEEDS*

Qualifier Needs represent the most immediate types of needs people face. These are often the result of problems with existing solutions. For instance, Sally might need to hold her coffee cup without spilling it. That need is derived directly from the fact that she's drinking coffee in the first place. If coffee weren't hot or didn't stain, Sally might not be so worried about spilling it.

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The same Qualifier Needs exist for everyone who uses a particular set of solutions in similar ways. These needs may disappear if current solutions are redesigned or replaced. People are likely to be aware of Qualifier Needs, and, if asked, may describe such needs in terms of changes or additions to specific qualities of a product or service.

**ACTIVITY NEEDS**

Activity Needs are the result of specific activities a person performs or wants to perform. Activity Needs are the same for all people who want to do the same thing. Sally wants to drink coffee;





that need was met by Tom's 7-Eleven outing. Like Qualifier Needs, Activity Needs may disappear if current solutions are made obsolete. Sally's need to drink coffee may evaporate if she were to discover something better to drink. People are often aware of their Activity Needs, although they may describe them in terms of existing product or service solutions.

**CONTEXT NEEDS**

Context Needs are a result of the situation in which people live, work, or operate. The same need will exist for people operating in the same industry, profession, region, culture, and so on.

**Table 1a: Different Types of Needs**

*Needs vary in how connected they are to a situation*

	<b>Sally</b>	<b>Student in Wheelchair</b>	<b>Industrial Plant Mgr.</b>
 <p><b>Common Needs</b> <i>Needs of nearly everyone.</i></p>	Need to socialize. Need to be loved. Need to feel safe.	Need to socialize. Need to be a part of society. Need to move around.	Need to make money. Need to keep a job. Need to enjoy a job.
 <p><b>Context Needs</b> <i>Needs of people of the same age, profession, religion, etc.</i></p>	Need to meet the man of her dreams. Need to stay alert. Need to have a casual experience.	Need to attend class. Need to look and feel in normal. Need to have fun at parties on campus.	Need to ensure boiler is running properly. Need to maintain good feedwater quality. Need to lower fuel costs.
 <p><b>Activity Needs</b> <i>Needs of people in the same context who want to do the same things.</i></p>	Need to go on a date. Need to keep stimulated. Need to drink coffee.	Need to go across campus. Need to dress nicely. Need to participate in conversations at parties.	Need to measure pH in feedwater. Need to measure oxygen in flue gas. Need to monitor boiler efficiency.
 <p><b>Qualifier Needs</b> <i>Needs of people in the same context who want to do the same things in the same way.</i></p>	Need to go on a low-pressure date. Need to hold coffee cup without spilling. Need to get the right amount of caffeine.	Need to stay dry in the rain. Need to prevent thumbs from being cut by the break mechanism. Need to be the same height as other people at parties.	Need to take pH reading in the dark. Need to measure oxygen in flue gas inexpensively. Need to get real time data.

While Activity Needs center around specific actions, such as drinking coffee, Context Needs are more goal-oriented, such as the need to have a pleasant experience. Tom satisfied Sally's need to drink coffee, but he failed to address her Context Needs—who she is, and why they were having coffee in the first place. People may not perceive or immediately articulate their Context Needs, in part because these needs are so pervasive. People will continue to have Context Needs as long as they are a part of that context and conditions in the context remain the same.

#### *COMMON NEEDS*

Common Needs are the most fundamental and universal of all: the need to socialize, the need to be loved, the need to feel comfortable.

Individuals are usually aware of Common Needs, but they routinely try to have these needs met by meeting the more immediate Activity or Context Need. For instance, Sally's need to have a pleasant, low-pressure date with Tom is far more tangible to her than her need to socialize in general. Nevertheless, her date with Tom was merely a means to a greater end.

#### **Getting to Solutions**

Differentiating between people's Common, Context, Activity, and Qualifier Needs provides a way for firms to act on insights they have about their customers. Qualifier Needs suggest immediate actions a firm can take to improve its portfolio of current offerings. To meet such needs, a company may have to modify an existing product or service. Activity Needs may require a company to create completely new offerings that leverage their current strengths. Context Needs provide focus for a firm's activities, showing where different offerings might provide complementary effects. Common Needs indicate areas for long-term strategic action.

Such a framework captures vital customer information often lost through current research methods. Too often, product developers seeking to learn about their customers record only information they feel able to act on. What they usually end up with is a list of mostly Qualifier Needs. Useful as it is, this type of information leads only to incremental improvements in a firm's current offering. Without a way to use them, Common Needs and Context Needs are often discarded or go unexplored. When this happens, companies lose the opportunity to create more

valuable, profitable, and strategically powerful solutions for their customers.

#### **Different Types of Solutions**

Categorizing the needs one's customers have is the first step toward meeting them. This is because different types of needs call for different ways of solving them. Context Needs, for instance, require new solutions that may lie far beyond the effects of incremental product improvements. Like customers' needs, the solutions companies can offer fall within a few general categories.

#### **Solution Types**

##### *New Features*

Feature solutions amount to new products and services that incorporate some form of incremental improvement. They describe the proverbial better mousetrap. While the general concept behind these solutions remains unchanged, modifications improve the quality of the offering in some way to add more value.

This kind of solution meets immediate Qualifier Needs without significantly changing how a product is used. (One cup of coffee may taste better than another, but both are consumed in the same way.) At best, feature solutions engender changes in preference for one product over another.

##### *New Offerings*

New-offering solutions completely replace current products and services. Rather than correcting problems with current offerings, they offer a new way to do something. It's the difference between a better toaster and a completely new way to heat bread. New offerings usually satisfy a host of Qualifier Needs and Activity Needs, often causing changes in how products are used. Starbucks, for instance, introduced the Frappuccino iced-coffee drink to satisfy people's need for a shot of caffeine even when it's too hot for ordinary coffee.

##### *New Families*

New families of offerings work together to meet a variety of needs. Products within these families support each other, solving needs the

others create. Such offerings are often useless without the rest of the family. For instance, dry-erase white boards are of little help without the presence of dry-erase markers, yet both work together as parts of a conference room to support the needs related to having meetings. Together, these offerings can support changes in user behavior that satisfy both Context and Activity Needs.

Interestingly enough, it's not necessary for families of offerings to be created by the same company. For example, Starbucks coffee beans can be used with coffee makers made by a host of other manufacturers.

#### **Larger, Systemic Solutions**

While changes to existing offerings can alleviate Qualifier and Activity Needs, Common Needs and Context Needs lie outside the effects of most single products. These needs require systems of solutions that work together, bounded by a unified approach to meeting the need. When firms create such systems, they provide far greater value to customers. They satisfy needs that tend to change far less frequently than Qualifier and Activity Needs, and can therefore help create businesses that

are robust enough to outlive short-term changes in user preference or competitive threat.

Perhaps the most direct way to understand the appropriateness of systemic solutions is to take a look at what Sally had in mind for her date with Tom. If Table 1 is to be believed, then Sally's needs ranged from getting a cup of coffee to having an enjoyable experience and maybe

even discovering that Tom was the man of her dreams. Coffee she got; the rest she did not. What sort of solutions was she expecting? A café atmosphere, a known experience, a casual upscale environment and, if needed, a quick and graceful exit. In other words, she was expecting Starbucks.

Starbucks has successfully created a system of solutions, the elements of which combine to provide Sally with a rich and engaging experience that begins to meet her Common Needs to feel comfortable and socialize. The store, the service, the music, the menu, and yes, the coffee are all tied together by a coherent idea: a clearly defined coffee culture that draws on the experience of Italian espresso bars to create something distinctly American. This common idea ties together potentially disparate elements, such as coffee, compact disks, and books. Starbucks has even coined new words: Witness a customer asking for a "short skinny double-shot latte." It is this underlying theme that directs all the Starbucks products and services to work together in concert. We can call this Starbucks' underlying "system logic."

#### **Systems Logics**

A system logic is a company's philosophy of what customer's needs are and how it can organize its offerings to meet those needs. It's an underlying framework that guides and choreographs every element of what a company offers, characterizing both the practices of the business and the behavior of its customers. While a system logic can often be expressed in a simple phrase, such as "coffee culture," such a description usually requires some first-hand experience in order to be fully understood. From such an understanding, more-specific themes can evolve that guide the creation of new products and services, and in turn reinforce the logic.

As a tool of corporate strategy, a system logic is a statement of how a firm seeks to differentiate its offerings based on the needs of its customers. Firms that are diligent and disciplined enough to develop a system logic over time are able to meet customers' needs in ways that other firms cannot. In doing so, such companies create powerful enterprises that competitors find hard to beat. Any aspiring Starbucks

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competitor will have a hard time unseating the Seattle-based baristas with merely a better-tasting cup of java.

Lego is another very tangible example of a nearly timeless system logic. The children's building system has evolved over the years from generic building sets that included little more than basic bricks to highly specialized sets based on themes such as outer space and the Wild West. The kinds of pieces and sets that are available are constantly changing. Yet underlying all the variety and complexity is a basic socket-and-hole building system. Sets are made of components that combine a large number of generic bricks with a small number of highly specialized elements such as trees, swords, and flags. Every set works together, and no piece is too large to be easily held by a child.

Part of the ethos of Lego's system logic is that the company eschews fads in toy marketing in favor of a more timeless approach. Lego's system logic spans multiple product architectures: The Duplo family, for instance, is intended for younger children, for whom the main Legoland and System products would not be appropriate. The sizes and proportions of Duplo are much larger, making Duplo components incompatible with Legoland parts, even though the basic design is the same. Lego's system logic, then, is the idea of toys as a modular kit of parts, encouraging children to learn through exploration and experimentation.

Apple Computer's system logic has been described as the "Mac look and feel"—the very thing for which Apple sued Microsoft some years back. Observe how Apple's system logic manifests itself. The Macintosh operating system is highly visual, requiring a very short learning curve. Moreover, all Mac software uses the same basic commands. The number of choices available to a user is limited—in return for simplicity and ease of use. Aesthetics are given high priority. This friendly, approachable system is intended to appeal to students, families, and designers. When Apple entered the consumer electronics space, the iPod exemplified these same traits. It worked like an Apple.

A robust system logic represents an ongoing conversation between company and customer. It's a description of how a particular way of

thinking is used to meet complex needs that people have, through both the solutions that firms create and the way in which people use those solutions. Such a dialogue leads to long-term success, outliving fads, fashion, and even corporate blunders. Apple Computer stands as perhaps the best example of such insulation from incompetence. It is Apple's overt allegiance to the company's system logic, as well as the allegiance of its customers, that has allowed it to survive decades' worth of missteps and false starts—essentially a lack of foresight that would have destroyed any other firm. It is, therefore, no accident that the break in Apple's misfortunes coincided with a deliberate return to what makes a Mac a Mac.

The concept of system logics grew out of an awareness that successful companies were often leveraging something far more extensive than the benefits of a single product, and yet far more powerful than a brand promise. Take, for instance, the case of motorcycles.

Honda, Yamaha, and Kawasaki all have extremely strong brand names. Honda is, at the time of this writing, the largest motorcycle manufacturer in the world. Yet, when a motorcycle customer purchases a Honda, he or she isn't necessarily making a statement about an underlying belief system. The case is entirely different where Harley-Davidson is concerned. Harley owners are consciously paying a premium to participate in a particular idea and lifestyle. So are the thousands of Harley T-shirt wearers who've never even ridden one. Put simply, a brand is something people buy. A system logic is something people buy into. Strong brands can communicate a robust system logic, but they

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cannot have an effect on customers' needs in the absence of any meaningful solutions.

Table 2 outlines how system logics work in concert with other types of solutions, whether they are new features or entirely new product families, to provide coherent and comprehensive solutions. Every product and service these firms offer works to support the system logic they have worked so long and hard to develop.





**A Question of Fit**

Just as a system logic can determine the nature of offerings, it can also determine whether a particular offering fits at all. Over the past 10 years, McDonald's has struggled to escape its own system logic. Much of the problem faced by McDonald's in revamping its menu can be viewed as a disconnect between new offerings

and McDonald's existing system logic. Faced with shifting tastes away from hamburgers, McDonald's has experimented with everything from tacos to pasta. A notable flop was the McPizza. McPizza didn't fail because Americans don't like pizza; it failed because pizza is contrary to the McDonald's experience. Pizza is something we sit down to eat. Many of us eat it for dinner at home. It takes a while. Maybe we rent a video. Maybe we invite friends over. McDonald's is about quick in-and-out. It's about a predictable and reliable experience. More than anything, it's about kids. But although pizza is appealing to children, it fails to leverage any other element of what makes up McDonald's system logic. When we're in the mood for pizza, we're not in the mood for McDonald's, and vice versa. The task, then, for McDonald's is to explore radically new

**Table 2: Different Types of Solutions**

*Solutions vary in how systemic they are.*

	<b>Starbucks</b>	<b>Lego</b>	<b>Nike</b>	<b>Apple</b>
 <b>System Logic</b>	Coffee culture	A modular kit of parts	High-performance individualist athleticism	The Macintosh ilook and feel
 <b>Families</b>	Retail shops In-store products Grocery-aisle products	Legoland Duplo	Nike Goddess ACG Gear (footwear, clothes, and eyewear) Dri-F.I.T. sportswear	iMac iBook Power Mac Powerbook
 <b>Offerings</b>	Frappuccino Tiazza Jazz CDs Books	Lego Mindstorms Spaceships Sets Castle Sets Pirate Coves Sets	Air Jordan shoes Air Warp Inline skates Tiger Woods golf balls Dri-Fit Tech top	Power Mac G4 iPod Airport wireless cards
 <b>Features</b>	Dark roasted coffee Cappuccinos to-go Coffee ice cream	Wheels, flags, swords and other ways to itheme! building blocks	Air insole Nylon upper Tread pattern Contoured footbed	G4 microprocessor Titanium casing Appealing aesthetics Firewire connections

offerings that nonetheless reinforce the McDonald's experience. McDonald's recent salad offerings seem to fit the bill.

This is in no way an argument against innovating. Rather, it seems advisable for companies to deeply examine the needs that brought customers to their door in the first place. For instance, Nike's system logic of high-performance athleticism allows for a wide variety of offerings far beyond footwear. It doesn't, however, allow for non-athletic gear aimed at supporting couch potatoes. Nike would have a hard time convincing customers to buy into Swoosh-emblazoned wing tips. Such a "test of fit" can gauge a system logic's strength, and help to demonstrate the difference between a system logic and a brand.

### **Roadmapping Solutions**

A detailed understanding of customers' needs, combined with the creative conceptualization of new solutions, can be progressively rolled out over time. In other words, a long-term product strategy can encompass more than experimental extensions and spin-offs of existing products. Rather, each generation of offerings can be seen as a march toward meeting Context and Common Needs. Products that reinforce the system logic should help to meet a complex but well-understood pattern of needs. While Qualifier Needs, such as immediate product preferences, will undoubtedly evolve and change, the more fundamental needs will remain stable. A rich and detailed understanding of customers and their needs can then produce an evolving action plan composed of:

- Needs to be solved immediately by fixing existing offerings
- Needs to be met in the near-term through modifications of existing offerings
- Needs to be met in the medium-term through creation of new products and services
- Needs to be met over the long term through new offerings, new product categories, and even new ways of doing business

Such a plan outlines not only what solutions will be created, but also what milestones for organizational learning and change need to be achieved to make the solution both credible and viable.

### **Systemic Innovation**

Corporations are beginning to realize the importance of understanding customers' latent and unspoken needs. In the past two decades, the mantra of listening to the customer produced valuable, if only incremental results. Today, the message is to observe customers working in context to find out what those customers need, not just what they say they need. In doing so, firms hope to discover unarticulated needs that can be served through new products and services. While this approach uncovers immediate problems with immediately feasible solutions, it fails to incorporate deeper findings about longer-range needs that require more systemic innovation. An understanding of customer needs can lead to far more than immediate product improvements; it can help outline completely new business opportunities and strategic directions.

While immediate needs may be problems that are alleviated through new product designs, answering more fundamental needs may be far beyond a company's current abilities. These needs, however, may point to larger strategic directions for the firm. In doing so, these long-term needs provide the strongest foundation for long-term success. Identifying such Common Needs and then working toward solving them can be a powerful way for firms to stop predicting the future and start creating it. ■

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