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Assemble the Invasion Force

> *"I have always found you get a lot more in this world with a kind word and a gun than you do with just a kind word."*
>
> **—-Willie Sutton**

Willie is only restating what any military leader will confirm: If you are committing an act of aggression, you'd better have the force to back it up. Or, to put this in terms closer to our immediate topic, marketing is *warfare—not wordfare.*

Which of us, about to launch an invasion, would prefer a good set of slogans to a good set of offensive and defensive weapons? Who would rather buy advertising time on television than missiles and munitions? Who would rather publish a manifesto than have guaranteed treaties with neighboring countries? Most high-tech executives—that's who.

There is a widespread perception among high-tech executives that marketing consists primarily of some long-range strategic thinking (when you can afford to take the time for it) and then a lot of tactical sales support—with nothing in between. In fact, marketing's most powerful contribution happens right in

between. It is called *whole product marketing,* a term introduced earlier, and it is the fundamental basis for assembling the invasion force.

Consider the following scenario. When I was a salesman, I had a dream. The dream was simple. There was a monster bid coming up—with a $5 million minimum—and I had *wired* the request for proposal (RFP). I had, in the words of gamblers everywhere, a *mortal lock* on. the thing. The client had met with me for long hours of consultation during which he had bought into every selling argument in favor of my product. He had then constructed the RFP so that only my product could get a 100 percent evaluation. The deal was mine. Then I woke up.

Okay—so that's a fantasy. But a version of that fantasy can be executed in the real world. We might call it *wiring the marketplace.* Again, the concept is simple. For a given target customer and a given application, create a marketplace in which your product is the only reasonable buying proposition. That starts, as we saw in the last chapter, with targeting markets that have a *compelling reason to buy* your product. The next step is to ensure that you have a monopoly over fulfilling that reason to buy.

To secure that monopoly, you need to understand 1) what a *whole product* consists of and 2) how to organize a marketplace to provide a whole product incorporating your company's offering.

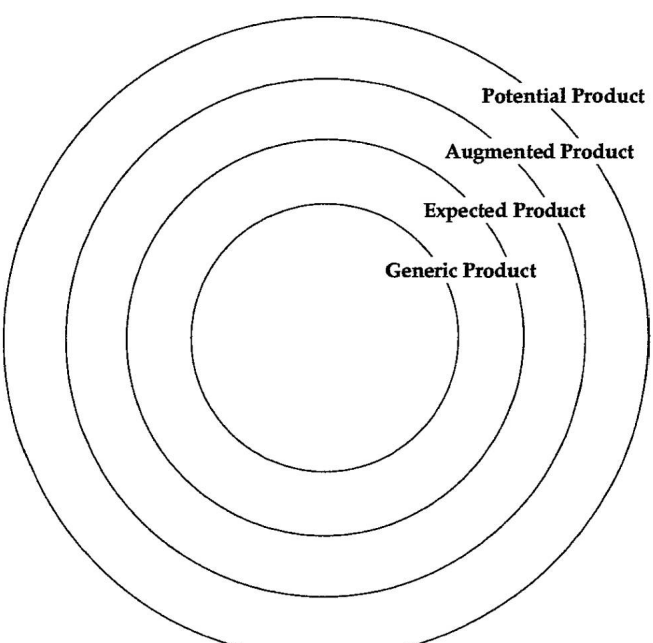
The Whole Product Concept

One of the most useful marketing constructs in all of high-tech marketing is the concept of a whole product, an idea described

in detail more than four decades ago in Theodore Levitt's *The Marketing Imagination,* and one that played a significant role a decade later in Bill Davidow's seminal *Marketing High Technology.* The concept is very straightforward: There is a gap between the marketing promise made to the customer—the compelling value proposition—and the ability of the shipped product to fulfill that promise. For that gap to be overcome, the product must be augmented by a variety of services and ancillary products to become the whole product.

The formal model, as diagrammed by Levitt, identifies four different levels of whole product completeness:

THE WHOLE PRODUCT MODEL



1. *Generic product:* This is what is shipped in the box and what is covered by the purchasing contract.
2. *Expected product:* This is the product that the consumer thought she was buying when she bought the generic product. It is the *minimum* configuration of products and services necessary to have any chance of achieving the buying objective. For example, when you buy a tablet, you need to have either a Wi-Fi network at home or a cellular connection for it to work, but either one is likely to have to be purchased separately.
3. *Augmented product:* This is the product fleshed out to provide the *maximum* chance of achieving the buying objective. In the case of a tablet, this would include email, a browser, a calendar, a personal directory, a search engine, and an app store, for example.
4. *Potential product:* This represents the product's room for growth as more and more ancillary products come on the market and as customer-specific enhancements to the system are made. The fact that for the Apple iPad there are, at the time of this writing, some 374,090 apps on its App Store that I can buy to extend its reach and value is one of its key selling points.

To cite another example, the *generic product* for the Internet browser category would be the set of functions first made popular by Mosaic, then by Netscape Navigator, then by Internet Explorer, and most recently by Firefox and Chrome. The *expected product* would include portability to each of the popular client platforms, including IOS, Android, and Windows. The *augmented product* would include plug-ins from third parties to provide additional features. And the *potential product* would be

the redefinition of the client, potentially to the exclusion of ever seeing the operating system—a world in which there are no device-specific apps, only HTML5 applets running ubiquitously. On the services side, for the generic product, there has to be at minimum an Internet service provider; for the expected product, a home page with a default search engine; for the augmented product, a variety of prearranged experiences presented as buttons or the like; and for the potential product, perhaps a complete reconstruction of consumer purchasing.

Now, at the introduction of any disruptive innovation, the marketing battle initially takes place at the level of the generic product—the thing in the center, the product itself This is the hero in the battle for the *early market.* But as marketplaces develop, as we enter the *mainstream market,* products in the center become more and more alike, and the battle shifts increasingly to the outer circles. To understand how to dominate a mainstream marketplace we need to take a closer look at the significance of what Paul Harvey might once have called *the rest of the whole product.*

The Whole Product and the Technology Adoption Life Cycle

First, let's look at how the whole product concept relates to crossing the chasm. If we look at the Technology Adoption Life Cycle as a whole, we can generalize that the outer circles of the whole product increase in importance as one moves from left to right. That is, the customers least in need of whole product support are the technology enthusiasts. They are perfectly used to cobbling together bits and pieces of systems and figuring

out their own way to a whole product that pleases them. In fact, this is in large part the pleasure they take from technology products—puzzling through ways to integrate an interesting new capability into something they could actually use. Their motto: Real techies don't need whole products.

Visionaries, by contrast, take no pleasure in pulling together a whole product on their own, but they accept that, if they are going to be the first in their industry to implement the new system—and thereby gain a strategic advantage over their competitors—then they are going to have to take responsibility for creating the whole product under their own steam. The rise in interest in systems integration services is a direct response to increasing visionary interest in information systems as a source of strategic advantage. Systems integrators could just as easily be called whole product providers—that is their commitment to the customer.

So much for the market to the left of the chasm, the early market. To get to the right of the chasm—to cross into the mainstream market—you have to first meet the demands of the pragmatist customers. These customers want the whole product to be readily available from the outset. They like a product such as Microsoft Office because virtually every desktop and laptop supports it, files are exchangeable without fuss, there are books in every bookstore about how to use it, not to mention seminars for training, hotline support, and a whole cadre of temporary office workers already trained on its core products of Word, Excel, and PowerPoint. If instead the pragmatists are offered a "great deal" on an alternative suite of products—say, Google Apps, for example—they are reluctant to switch because they fear some part of the whole product will be missing, and they will be left holding the bag.

The same logic holds for why pragmatists prefer ARM's smartphone microprocessors to Intel's Atom, Google Search to Microsoft's Bing, Apple's iPhone to RIM's BlackBerry, HP printers to Epson's, Cisco routers to Huawei's. In every case, there is a risk that they are preferring an inferior product—if you look only at the generic product. But in every case, they are preferring the superior product if you look at the *whole* product.

To net this out: *Pragmatists evaluate and buy* whole *products.* The generic product, the product you ship, is a key part of the whole product, make no mistake. But once there are more than one or two comparable products in the marketplace, then investing in additional R&D at the generic level has a decreasing return, whereas there is an increasing return from marketing investments at the levels of the expected, the augmented, or the potential product. How to determine where to target these investments is the role of whole product planning.

Whole Product Planning

As we have just seen, the whole product model provides a key insight into the chasm phenomenon. The single most important difference between early markets and mainstream markets is that the former are willing to take responsibility for piecing together the whole product (in return for getting a jump on their competition), whereas the latter are not. Failure to recognize this principle has been the downfall of many a high-tech enterprise. Too often companies throw their products into the market as if they were tossing bales of hay off the back of a truck. There is no planning for the whole product—just the hope that their product will be so wonderful that customers

will rise up in legions to demand that third parties rally about it. Well, God did divide the Red Sea for Moses.

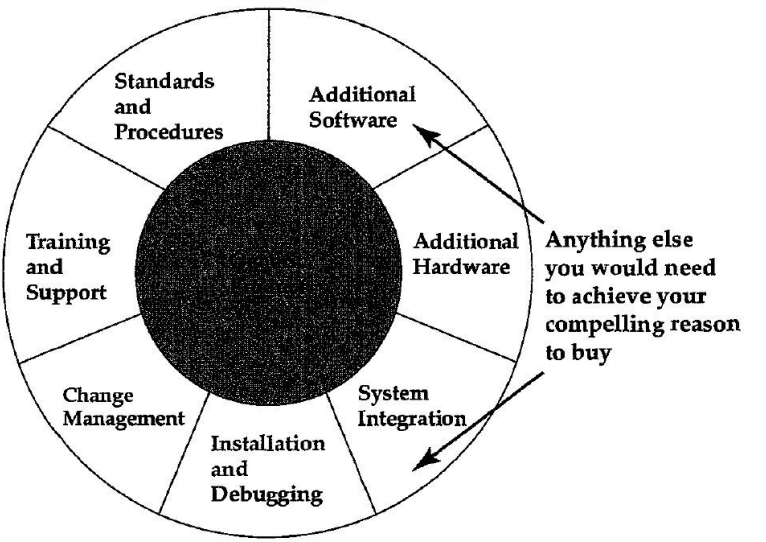
For those who wish to take a more prudent course, however, whole product planning is the centerpiece for developing a market domination strategy. Pragmatists will hold off committing their support until they see a strong candidate for leadership emerge. Then they will back that candidate forcefully in an effort to squeeze out the other alternatives, thereby bringing about the necessary standardization to ensure good whole product development in their marketplace.

A good generic product is a great asset in this battle, but it is neither a necessary nor a sufficient cause of victory. Oracle did not have the best product when the market standardized on it. What Oracle offered instead was the best case for a viable whole product—a query language (SQL) based on an IBM standard plus all the major portability across hardware platforms plus an aggressive sales force to drive product into the market quickly. That is what the pragmatists in the IT department got behind.

In short, winning the whole product batde means winning the war. And because perception contributes to that reality, looking like you are winning the whole product battle is a key weapon to winning the war. On the other hand, *pretending* you are winning the whole product battle is a losing tactic—people check up on each other too much in the high-tech marketplace. These distinctions will become critically important in our next chapter, where we deal with *positioning.*

For now, our focus should be on the minimum commitment to whole product needed to cross the chasm. That is defined by the whole product that assures that the target customers can fulfill their compelling reason to buy. To work out how much whole product this is, you only need a simplified version of the whole model:

The Simplified Whole Product Model



In the simplified model there are only two categories: 1) what we ship and 2) whatever else the customers need in order to achieve their compelling reason to buy. The latter is the *marketing promise* made to win the sale. The *contract* does not require the company to deliver on this promise, but the *customer relationship* does. Failure to meet this promise in a business-to-business market has extremely serious consequences. As the bulk of purchases in this marketplace are highly reference oriented, such failure can only create negative word of mouth, causing sales productivity to drop dramatically.

Classically, high tech has delivered 80 to 90 percent of a whole product to any number of possible target customers, but 100 percent to few, if any. Anything less than 100 percent, unfortunately, means that the customers either supply the remainder themselves or feel cheated. Significantly less than 100

percent means that the target market simply does not develop as forecast—even if the generic product, the product in the box being shipped, is superior to anything else in its class.

In short, if you wanted to trace disillusionment with high tech's inability to deliver on its promise to its investors and its customers, lack of attention to whole product marketing is the closest thing to a wellspring. This is actually great news—it means that the converse applies as well. By solving the whole product equation for any given set of target customers, high tech has overcome its single greatest obstacle to market development.

Let's look at an example to see how this works out.

The 3-D Printer, Revisited

Let's revisit our "after" scenario for the 3-D printer, the one where we are manufacturing designer lighting fixtures on demand. Here it is again:

New approach: David and his client have been reviewing catalogs and images over the Web for the better part of a week, and they have finally settled on a design. This is a variation on a couple of actual products that David has sketched out with input from the client. They take this design to a fixture wholesaler who supports 3-D printing. The wholesaler works with a freelance designer who is able to scan David's drawing and convert it into a CAD file. At the same time, the wholesaler works with David to select an appropriate material and finish for the fabricated fixture. Then both the CAD file and the material are fed into the printer, and out comes a finished fixture. If the client still wants to tweak it some more, this can be readily done by updating the file and printing it out

again. Further, by adjusting the parameters in the file, fixtures of different scales can be produced, all sharing the same design.

Now, let's analyze this scenario in light of its implied whole product commitments. There are several:

- *The wholesaler works with a freelance designer who is able to scan David's drawing and convert it into a CAD file.* The implication is that there is an industry-standard file format for such designs, perhaps one coming from AutoCAD, sufficiently ubiquitous that its presence can be taken for granted.
- *The wholesaler works with David to select an appropriate material and finish for the fabricated fixture.* Here the assumption is that there preexists a fabrication material that can meet the demanding standards of David and his client. At the time of this writing, this is one of the weaker elements in the scenario.
- *If the client still wants to tweak it some more, this can be readily done by updating the file and printing it out again.* This assumes that the materials can be recycled or are cheap enough to discard. It also assumes that the printing can be done quickly enough that there is not a perennial backlog of print orders to get in the way.
- *By adjusting the parameters in the file, fixtures of different scales can be produced, all sharing the same design.* This assumes that the printer has few limitations on the size of the objects it can produce. Again, at the time of this writing, this is also a weak point in the scenario.

And so it goes. The point is, even a single target customer scenario implies a chain of commitments that any product manager serious about delivering a whole product to an emerging market opportunity must pursue to a satisfactory conclusion.

Now, in the case of a 3-D printer, one can readily imagine a fairly lengthy list of potential target customers and target applications. In addition to interior designers like David, one could imagine:

- *Industrial designers* prototyping parts for a piece of machinery. They would likely need a variety of durable materials in order to create and test the part under realistic conditions.
- *Toy manufacturers* creating custom toys. They would likely want vibrant primary colors to be part of the mix, not to mention assurances of zero toxicity.
- *Museum curators* making models of decaying artifacts. This would require a holographic scanner to create the 3-D file that the machine would replicate.
- *Footwear manufacturers* making shoes on demand. This would require material that was both fashionable and comfortable to wear, not to mention long lasting.
- *Antique car enthusiasts* making replacement parts that are no longer commercially available. Now we have to accept precision CAD files and extrude work in metal that can stand up to the stress of an operating engine.

As even this cursory listing indicates, *every additional new target customer will put additional new demands on the whole product.* That is, the total sum of products and services needed in order to get the desired benefit changes any time you change the value

proposition. It soon becomes clear to even the most optimistic product marketing managers that they cannot go after all markets at once, that at minimum they have to sequence and prioritize opportunities, and that each opportunity has very real support costs.

Now, given the need for a whole product in order to fulfill the customer's reason to buy, what is the responsibility of the 3-D printer hardware vendor—and specifically of the product manager who has the 3-D printer as his responsibility—for seeing that this whole product is in fact delivered? The answer is, it has nothing to do with responsibility, it has to do with marketing success. If you leave your customer's success to chance, you are giving up control over your own destiny. Conversely, by thinking through your customer's problems—and solutions—in their entirety, you can define—and work to ensure that the customer gets—the whole product.

At no time is this marketing proposition more true than when crossing the chasm. Prior to the chasm there is some hope that the visionaries will backfill the whole product through their own systems integration efforts. Once the product is established in the mainstream, there is some hope that some third party will see an opportunity for itself to make money fleshing out the whole product. *But while you are crossing the chasm, there is no hope of any external support that is not specifically recruited by you for this purpose.*

Some Real-World Examples

To see how this works out in actual practice, let's turn now to some specific industry examples. Basically, there are two types of scenarios we want to work through—one where there is installed

competition, and the otherwhere there is not. In the former case, it is as if one were trying to invade Normandy from England, and the installed market leader were playing the role of the Nazi forces. In the latter, it is as if one had crossed the Pacific in 1492, landed on a new continent, and decided to set up shop selling wares to the natives. Neither task is for the faint of heart.

Aruba and Wireless Networks for Enterprises

To begin with the competitive example, imagine yourself back m 2006, leading a wireless networking company focused on bringing Wi-Fi to the enterprise. The name of the company is Aruba, which you may or may not have heard of. But you will have heard of the competitor they were targeting: *Cisco]*

Aruba at this point was growing very fast, but off a very small base, from $12 million in 2005 to $72 million in 2006—pretty amazing, to be sure, but enough to take on a competitor four hundred times its size? Welcome to the world of Silicon Valley start-ups. This is what you do. The only question to answer is, how?

The first rule is you have to leverage a point of disruption, one that puts the incumbent a bit back on its heels. In this case, wireless networks taken to their extreme threatened to cannibalize wireline networks, which were and still are the heart and soul of Cisco's franchise. Moreover, a new standard had just been released for Wi-Fi (802.11n, to be precise), which for the first time promised wireline performance delivered over the air. So there was a l0x value proposition potentially in play—arguably the single most pragmatic definition of a disruptive innovation.

The second rule is, remember the fish-to-pond ratio principle from the prior chapter, and target a market segment that is big enough to matter, small enough to lead, and a good fit with

your crown jewels. Here small enough to lead means, in part, too small for the much bigger incumbent to spend a lot of time focusing on. Big fish have trouble competing in small niches.

For Aruba, applying this rule led them to the U.S. college and university market. At the time more and more students were coming to college with laptops. Arguably this was the first BYOD (bring-your-own-device) market segment, and as such it wanted networking services available everywhere, not just through a cable into a dorm room. Moreover, these students were not just doing searches and email anymore—they were also streaming music and video, which created an added push to adopt next-generation wireless standards early. And finally, colleges and universities like to support next-generation technology efforts from plucky start-ups, so they were more collaborative than a lot of other target markets would have been. All in all, targeting this market was a great call.

Now we come to the third rule, the one this chapter is about: Surround your disruptive core product, the thing that got you to the dance, with a whole product that solves for the target customer's problem end to end. That will keep you on the dance floor for a long time to come.

The way you design a whole product is to work backward from the target customer's use case, filling in the blanks as you go along, either with new R&D, an acquisition, a partnership, or an alliance. In the case of the college IT department deploying networking services across their campuses, the core product consisted of the following:

- A very large number of access points, as many as several thousand, to cover every point of access from the dorm to the library to the classroom to the student union, to

sports facilities, and ultimately even to off-campus pubs (where a lot of professors keep their office hours).

- One or more mobility controllers, to manage all this traffic from a central point of control. This level of control had not been necessary in prior deployments where Wi-Fi networks were minor extensions to the wireline network, say covering guest services in a few conference rooms. But once the wireless network becomes the primary carrier of traffic, they are mandatory. For example, at the end of any exam, the entire class of students uploads their answers all at the same time, which can create a spike of demand—you don't want that to bring down your network, or to lose any test traffic, either.
- A network management system to support the network administrators, giving them the ability to dial service levels up or down, authenticate users, authorize access, as well as troubleshoot network outages and the like.

That covers the core product. What then would go into making up the whole product? Consider the following:

- The campuses still had wireline networks as well, even though they were not building them out as aggressively as they originally had planned. As a result, the network management system had to work both with the new and the old equipment. This led Aruba to partner with, and eventually acquire, AirWave, a network management system that grew up managing Cisco routers and switches.

- Additionally, most campuses had a student and faculty directory already in place, frequently Active Directory from Microsoft, so partnering here also became a priority.
- Then there were the students themselves, who were, well, let's say creative. As one network administrator said to Aruba, "Our security system is less focused on protecting our students from the world than it is on protecting the world from our students!" The era of Napster had come and gone by this point, but the era of BitTorrent file sharing, with or without authorization, was in full swing. Network administrators needed to shape this traffic at a minimum, if not shut it down upon demonstrable violations. This led Aruba to partner with and eventually to directly purchase from Bradford a network operations control center of the sort more often seen in telecommunications companies.
- In the continuing quest to compete for new students, colleges and universities had begun streaming content directly to digital devices, specifically video, both for education and for entertainment. This requires special video codecs to supply, which Aruba turned to a company called Video Furnace.
- As the market continued to develop, Aruba created an advisory board from its leading university customers, one member of which had the novel idea that, instead of using wireless to extend wireline, how about the other way around? Specifically, he asked for a remote access port that could be hooked into a wireline VPN (virtual private network) so that people at home or at other

remote locations could be part of the same network management system as well (no new log-ons, passwords, etc.). This Aruba had to invent, and it has subsequently become a key differentiator in its product line.

As you can see, nothing in the whole product is a showstopper from the point of a competitor seeking to neutralize Aruba's differentiation, but taken as a whole, for a large competitor who has much bigger fish to fry, it takes more focus to accomplish this outcome than it is worth. And from the customer's point of view, the fact that companies like Aruba are willing to go the extra mile just for them builds a level of loyalty that is long-lived indeed. This is the core dynamic that enables start-ups to cross the chasm despite direct opposition from installed incumbents.

Lithium and Customer-Enabled Tech Support

Now let's turn to the other scenario for crossing the chasm, the one where (good news) there is no enemy fortifying the shore against invasion because (bad news) people have yet to discover there is anything there to defend. Here the vendor must create a market out of whole cloth. Under these conditions, the pragmatist buyers who are the key to the mainstream market do not reject the new product so much as simply watch for signs of its adoption. They don't say no, in other words; they just don't say yes. Talk about extended sales cycles!

In this situation, entrepreneurs are fighting a race against time. Like the intrepid explorers and colonists of the sixteenth and seventeenth centuries, they have landed in terra incognita and have a fixed amount of supplies (working capital) to see them through to selfisufficiency. The question is not whether someday someone will make a successful colony; the question

is whether it will be them, or whether they will die in the attempt. Have we landed at Plymouth Rock or Jamestown?

Let's look at a specific example. Lithium is a SaaS (software - as-a-service) company that creates online communities of consumers and customers, to co-create and share digitally delivered marketing, sales, and customer support content. When they were founded just after the dot-com bust at the beginning of the century, this was a novel idea, and Lithium's claim to fame was that its founders were online game developers who had learned a ton about how to motivate voluntary behavior through virtual rewards. The idea caught on with early adopters, but as you might expect, the pragmatists adopted a wait-and-see attitude. To cross the chasm, Lithium had to target a pragmatist enclave disaffected with the status quo. They found that enclave in tech support.

Tech support organizations are, as a rule, overworked and underappreciated. The problem is that most tech products interoperate with so many other tech products, it is a real challenge to figure out what or who is at fault when something goes wrong. The people who might know these answers get paid way too much to staff a customer support hotline, and the people on the hotline—who often as not are in a call center somewhere across the Pacific Ocean—have to work with scripts as best they can. Anyone who has been on one of these calls can testify how frustrating a customer experience it can be.

So what if we could end all that? What if you could go online and get expert advice from the very best minds in the industry, and better still, get it all for free? Wouldn't that be cool? Dell thinks so. So does HP, and Lenovo, and Autodesk, and Microsoft. Welcome to the world of customer-enabled tech support.

The key idea here is to create an online community where customers can answer other customers' questions before they

even get to a customer support hotline. Why would people with such expertise spend their time doing this? Technology enthusiasts (remember them from the very beginning of the Technology Adoption Life Cycle model?) like to help other people. It is their passion. If you add some game-oriented rewards and social recognition (what people now call *gamification,* although that word still grates on an ex-English-professor's ears), it works even better.

The core product here is a branded website that lets customers both ask and answer questions, lets them rate the quality of the answers, which over time allows the best answerers to emerge, garnering these providers the highest status awards. That is the core product, and it is highly disruptive wherever the, status quo consists of out-of-date knowledge bases being consulted by inexpert call center employees, backed up by harried engineers who have neither time nor patience to answer the same questions over and over again.

But the truth is, creating a wiki-like site to perform these kinds of functions is not that hard. So what could Lithium do to build a whole product that would win over the skeptical pragmatists? To be fair, they did have one thing going for them right out of the chute. The cost reduction of deflecting a call from a call center to a website is substantial—as much as ten times. And since call centers are cost centers in most tech enterprises, reducing costs is always top of mind. But here's what Lithium did over and above that allowed them to cross the chasm and win the market leading position in this niche. (Full disclosure: In case I sound a bit enthusiastic here, I should reveal that I joined the company's board of directors in 2012.)

• Helped customers create their *tribal knowledge bases.*

Lithium provided consulting support to help customers

curate the ever-growing body of user-contributed content, turning community conversations into knowledge articles, making this content easier to find and easier to consume. This approach to crowd-sourcing increases customer satisfaction, reduces mean time to getting the right answer, increases call deflection, and increases customer loyalty, especially among the committed few who contribute much of the most valuable content.

- Extended the support to *mobile devices.* Most Web content is challenging to consume on a mobile device, but increasingly that is what the consumer or customer has ready to hand when they need an answer. This not only makes fife more convenient for the end user; it dramatically increases call deflection because the consumer can switch from one to the other while using the same device.
- Integrated their service with the enterprise's CRM (Customer Relationship Management) system. This connects the customers using Lithium with enterprise employees, allowing the latter to address unanswered questions, capture feedback and insights to feed back to developers, and further improve the knowledge base that drives the overall system.
- Extended support to the social web (Facebook, Twitter, Google+, etc.). This is part of an "omni-channel" movement throughout tech to engage the consumer and customer on the device and in the environment that best suits them. It allows for the knowledge base and the community population to extend themselves seamlessly by adding links to other sites and individuals.

By extending their core product to create a whole product, Lithium was meeting the needs both of their immediate target customers—consumer tech companies—and their customers' customers, the consumers themselves needing help and the technology enthusiasts looking to share their expertise.

Partners and Allies

"Strategic alliances" with partners and allies have always been trendy items in high-tech marketing. One expects to see ads on Facebook reading:

> Large, well-heeled company with established distribution channels and aging product line seeks small, entrepreneurial, cash-starved technology leader with hot new product. Photos available upon request. . . .

As a rule, however, these types of alliances do better in PowerPoint presentations than on the street. To start with, the company cultures' are normally too antithetical to cooperate with each other. Decision cycles are wildly out of sync, leading to enormous frustration among the entrepreneurs and patronizing responses from the established management. To make matters worse, each side has probably misrepresented itself one way or another during partnership negotiations, such that there is plenty of ammunition for each group to fire at the other once tempers get hot. This is particularly likely to be the case when the entrepreneurs have been angling for acquisition as an exit strategy. So, for the most part, despite the impeccable logic of these mergers, they are very tough to bring off.

Of course, some strategic alliances have been extremely successful. Consider the relationship that developed among SAP, Hewlett-Packard, and Andersen Consulting to displace IBM as the premier enterprise vendor by bringing client-server Enterprise Resource Planning (ERP) systems to market. Or consider the alliance between Intel and Microsoft, what some have called the Wintel duopoly, which to this day orchestrates the PC industry. And more recently, Cisco, EMC, and VMware have teamed up to create a Unified Computing Environment for cloud computing that is having substantial success.

All these alliances have been hugely powerful and moved mountains of market cap. Note, however, that they are among relatively equally matched peers. And even with that proviso, the complexities of developing and maintaining such strategic alliances in the field, where sales actually happen, are sufficient to make even the most experienced organizations struggle. They are certainly not the province of mere product managers seeking to ensure that their niche-segment target customers achieve their compelling reasons to buy

What does work for product managers, on the other hand, are tactical "whole product" alliances. These alliances have one and only one purpose: *Accelerate the formation of whole product infrastructure within a specific target market segment in support of a segment-specific compelling reason to buy.* The basic commitment is to codeliver a whole product and market it cooperatively. This benefits the whole product manager by ensuring customer satisfaction. It also benefits the whole product partners by expanding their marketplace without them having to do any of the marketing. As long as each side lives up to its part of the bargain, there is good reason to expect success.

Whole product alliances are readily initiated and managed

at the product marketing manager level. Typically, the initial opportunity is first brought to the company's attention either by the salespeople or by customer support staff, one of whom has bumped into the potential ally at a particular customer's site. But they can also be anticipated through the exercise of thinking through the whole product solution to the customer's buying objective. The main point, again, is that these are tactical alliances growing out of whole product needs, not strategic alliances growing out of. . . well, whatever strategic alliances grow out of (my personal feeling is that the number-one cause of strategic alliances is too many staff people with not enough to do).

Partners and Allies: The Example of Rocket Fuel

To see how this might work out in a few specific instances, let's first consider the example of Rocket Fuel, a Mohr Davidow investment that has achieved meteoric growth in the digital advertising sector. Like most things in the new digital economy, it "takes a village" to create, launch, monitor, and monetize a digital ad campaign. Rocket Fuel's role in this ecosystem is to increase the yield of digital advertising by placing the right ad in front of the right person at the right time—all done by artificial intelligence algorithms made increasingly effective through machine learning. Needless to say, this is a highly specialized capability.

Specialized offerings must focus intensely on what is *core* to their differentiation, which means that spending anything on context dilutes their ability to scale their value and size. As a result, companies taking this path must look to leverage existing systems and players wherever they can. This requires a whole host of "silent" partners and allies, totally necessary to the whole

product, economically aligned with, in this case, Rocket Fuel's value proposition, but not able or willing to actively engage in a lot of partnering activities.

The key tactic here is to build very clean interfaces for accessing other systems and letting them access you—whether they be computer systems like *digital ad exchanges,* where publishers can put their inventory and advertisers can bid on it in real time, or whether they be industry participants like *ad agencies* and *media buyers,* who have big budgets they need to put to work effectively and efficiently. In the case of Rocket Fuel their goal is to look like "any other" *media partner,* just one that delivers much more bang for the same buck.

In addition to the principals directly involved, there are peripheral partnering relationships that can grease the skids to accelerate adoption in your target market. In the case of Rocket Fuel the Interactive Advertising Board played a key role in standardizing contracts such that a small company could play across a broad footprint without having to have a legal department the size of Chicago. And the reporting capabilities of the *ad servers,* like DART and Atlas, helped make transparent the performance metrics upon which Rocket Fuel was basing its entire value proposition—no more "I know I waste half of my ad budget, but I just don't know which half" Now Rocket Fuel's customers did, with no-investment required from the company itself

The net of all this is that the advertising industry as a whole, realizing that consumer attention has migrated online in a big way, has collectively rallied around companies like Rocket Fuel and AudienceScience and Visible Measures (to name three of MDV's investments in the area) because everyone in the ecosystem has a vested interest in engaging consumers across this new medium. The lesson for everyone else is clear: If you want to go

fast, go alone; if you want to go far, go with others. In the age of the Internet you need to do both at the same time, and that's where whole product partners can make all the difference.

That said, Rocket Fuel is something of a special case—not all fast-growing businesses in digital commerce depend so intensely on big data and analytics. Some actually depend primarily on people! Take Infusionsoft, for example.

Partners and Allies: The Example of Infusionsoft

Infusionsoft is another MDV-mvested software-as-a-service company, one that provides sales and marketing services (what the tech industry calls CRM—Customer Relationship Management) to small businesses (typically fewer than twenty-five employees, many no more than one or two). It was founded to help truly small business owners make the transition to online marketing, a capability that can be transformative if used properly, but highly daunting to adopt, especially for those new to either digital or marketing or both.

This created an initial conundrum for Infusionsoft—how do you attract typically late-adopting target customers to a technology they are not themselves engaging with? Online marketing only works, after all, if your target customer is online. The company solved this problem by partnering with a cadre of *small business marketing experts* who made their living selling seminars to small business owners advocating the new online approach. These gurus were able to attract prospects in droves, and what better way to stay in touch with them than to help them install an online marketing capability? The software reinforced the teachings, and the teachings reinforced the software. To be

sure, this was still a congregation of early adopters, but it helped Infusionsoft meet its first growth milestones.

To cross the chasm, however, the company needed to expand beyond the early market for marketing innovation and access the pragmatist majority. It experimented with a number of possible beachhead markets, and had particular success with professional speakers (a more generalized version of the marketing guru segment), fitness studios, and dentists (these last two both having a "retention marketing" objective that particularly lent itself to online reminders).

In conjunction with these forays it also tried an experiment that failed. Instead of charging customers what had been a hefty up-front fee to get them up and running, it waived the fee entirely, thereby vastly increasing the number of prospects willing to sign up. Unfortunately, a large number of those same customers churned out after a short period. Painful as that was, it taught an important lesson about the whole product: Onboarding, both for technical and for business process reengineering reasons, had to be carefully supervised.

By adding back a lower-cost version of their onboarding service, Infusionsoft was able to drive down its churn and achieve its targeted retention rate goals. But this raised a second challenge: How could you scale the company to meet the escalating demand without creating a low-margin call center environment? This challenge was made even more acute when the company expanded from a pure marketing service to an end-to-end CRM offer.

The good news here is that nature abhors a vacuum. The fact that Infusionsoft customers were willing to pay several thousand dollars to be guided through their onboarding and coached through their first several marketing campaigns was not lost on

the service providers in their ecosystem. A number of them began to throw their hats in the ring to provide the same service.

This led the company to host an Implementation Accelerator workshop, in which they brought twenty-five customers together with a complete suite of experts for a two-day "marketing hackathon." Included in the effort were Infusionsoft *success coaches* to help with inventing marketing strategy and tactics, *copywriters, script writers* and *videographers, software object designers,* and *webmasters,* not to mention Infusions oft's own tech support staff. What some customers were able to accomplish in two days exceeded what many had done in an entire year. Clearly smoothing the pathway to a whole product was a critical success factor.

This led the company to create a training and certification program that in the past two years has graduated more than two hundred *Infusionsoft Certified Consultants,* not one of whom is on the company's payroll. Moreover, because each hand washes the other, these same consultants are a strong source of referrals, driving more than half of the company's new customer enrollments in the most recent fiscal year.

The lesson here is clear: While strategic partnerships often struggle mightily to sustain their engagement and maintain their relevance, whole product partnerships built around whole products for specific target markets with compelling reasons to buy do not. That said, let's see how these same principles can be applied in a strategic partnering scenario.

Partners and Allies: The Example of Mozilla

While I clearly favor the tactical path, there are cases in high tech when you simply have to take a top-down, orchestrate-

the-industry approach. Such was the challenge facing the team at Mozilla in 2011 when they made the commitment to expand their world-renowned Firefox browser franchise from the desktop to the mobile device.

Firefox is an open-source Web browser that came into existence largely to remediate the flaws in Microsoft's Internet Explorer 7.0. That particular piece of technology put the end user's computer at the mercy of spammers in unacceptable ways, and the team at Mozilla led an effort to create a "people's choice" alternative. It worked, with 100 million downloads in the first year, leading it to becoming the third most popular browser in the world behind Internet Explorer and Google Chrome. It also worked in another way, spurring both Microsoft and Google to adopt "Do Not Track" optionality into their latest releases, thereby helping to fulfill Mozilla's populist mission.

Mission accomplished? Well, not so fast. How about the next two billion people who are expected to come on to the Internet in the next few years for the first time, people from developing economies who have never had Web access before? They will be using mobile devices for sure—what browser will be their standard?

To continue its mission of populist values, Mozilla needed to orchestrate the mobile industry to create a mobile browser that could perform at a smartphone level, competing directly with Apple and Google Android devices, and to organize the entire ecosystem to support this open-source platform as a de facto standard. Mobile is an amazingly diverse sector, ranging from very conservative national telephony franchises to over-the-top technology disrupters coming from all sides. How could a siriall not-for-profit company in Mountain View, California, hope to paint anything coherent on such a large canvas?

Here's what they did do:

1. Targeted the "next two billion" Web users, embracing the constraint that they would not be able to afford anything more than free open-source software, but who would be willing to accept a product optimized for price/performance as opposed to the latest features, and who would require a hyper-low-cost platform, which they had the technology to deliver.
2. Recruited two key *mobile operators*—-Telefonica and Deutsche Telekom—to anchor this effort because, as their CEO at the time, Gary Kovacs, put it, "They write the checks."
3. Leveraged their support to recruit two key *device manufacturers*—-ZTE and TCL (formerly Alcatel) to supply Firefox-enabled devices.
4. Held summits, councils, and multi-party planning days over the course of more than a year to get the ecosystem aligned both at the executive and the operating levels.
5. Fought to maintain a common core set of standards for the platform, despite pressure from every side to support "specials," so that the end result was truly scalable at a global level.
6. Led a launch at the 2013 Mobile World Congress where Kovacs was joined onstage by twenty-three other CEOs, each of whom had signed a commitment to launch a Firefox-enabled device in at least one country.

Not bad for an organization whose mission in life is to champion individual rights in an age of superpowers.

A key takeaway here is that the steps of market development outlined in this book structured their entire effort:

- They began with a target customer (disenfranchised citizens in developing economies who would be making their very first purchase of an Internet-enabled service) with a compelling reason to buy (access to all the content on the Web for free, plus communications for personal, family, and business purposes).
- They figured out the whole product and determined for that product that the operators and the OEM device manufacturers were the critical anchor partners.
- They then went after partners who shared, their interest in the next two billion, with franchise interests in developing economies, and used their focused requests to create a big enough sales opportunity to get the attention of two world-class OEMs.
- When it came time to "create the competition" (something we will get to in the next chapter), the whole ecosystem knew it was Apple and Google, two extremely powerful ecosystems who in flexing their muscles were making both operators and OEMs increasingly nervous such that they were ready to support the entry of a balancing force.

Finally, at no point did they try to make the story or the value proposition about themselves. It was always an effort in service to the world and to the industry, so people could buy in based on their own self-interest, not just in order to get a "good deal." That is a true key to whole product management success.

The net result of the partnering activities we have been reviewing in the cases of Rocket Fuel, Infusionsoft, and Mozilla is the *creation of a market.* For markets represent more than just a buyer and a seller. They are an ecology of interrelated interests interoperating

to create what business schools call value chains. For any company crossing the chasm, fostering the initial partnerships to create the whole product is the equivalent of seeding the value chain, getting it started. Once value starts being generated, a free-market system becomes self-reinforcing, and the whole product manager's job then is simply to let go and get out of the way.

To sum up, whole product definition followed by a strong program of tactical alliances to speed the development of the whole product infrastructure is the essence of assembling an invasion force for crossing the chasm. The force itself is a function of actually delivering on the customer's compelling reason to buy in its entirety. That force is still rare in the high-tech marketplace, so rare that, despite the overall high-risk nature of the chasm period, *any company that executes a whole product strategy competently has a high probability of mainstream market success.*

Recap: Tips on Whole Product Management

1. Use the doughnut diagram to define—and then to communicate—the whole product. Shade in all the areas for which you intend your company to take primary responsibility. The remaining areas must be filled either by the customer or by partners or allies.
2. Review the whole product to ensure it has been reduced to its minimal set. This is the KISS philosophy (Keep It Simple, Stupid). It is hard enough to manage a whole product without burdening it with unnecessary bells and whistles.

3. Review the whole product from each participant's point of view. Make sure each vendor wins, and that no vendor gets an unfair share of the pie. Inequities here, particularly when they favor you, will instantly defeat the whole product effort—companies are naturally suspicious of each other anyway, and given any encouragement, will interpret your entire scheme as a rip-off.
4. Develop the whole product relationships slowly, working from existing instances of cooperation toward a more formalized program. Do not try to institutionalize cooperation in advance of credible examples that everyone can benefit from it—not the least of whom should be the customers. Also, do not recruit directly competing partners to serve the same need in the same segment—this will only discourage them from making a full commitment to your program.
5. With large partners, try to work from the bottom up; with small ones, from the top down. The goal in either case is to work as close as possible to where decisions that affect the customer actually get made.
6. Once formalized relationships are in place, use them as openings for communication only. Do not count on them to drive cooperation. Partnerships ultimately work only when specific individuals from the different companies involved choose to trust each other.
7. If you are working with very large partners, focus your energy on establishing relationships at the district sales office level and watch out for wasting time and effort with large corporate staffs. Conversely, if you are working with small partners, be sensitive to their limited resources and

do everything you can to leverage your company to work to their advantage.

8. Finally, do not be surprised to discover that the most difficult partner to manage is your own company. If the partnership really is equitable, you can count on someone inside your company insisting on taking a bigger share of the benefit pie In fighting back, look to your customers to be your truest and most powerful allies.

6

Define the Battle

On the eve of our invasion, let us regroup. We have already established the point of attack, a target market segment plagued by a problem that gives it a truly compelling reason to buy. We have already mapped out the whole product needed to eliminate this problem and have recruited the necessary partners and allies to deliver it. The major obstacle now is competition. To succeed in securing our beachhead we need to understand who or what the competition is, what their current relationship to our target customer consists of, and how we can best position ourselves to drive them out of our target market segment.

This is what we mean by defining the battle. *The fundamental rule of engagement is that any force can defeat any other force—if it can define the battle.* If we get to set the turf, if we get to set the competitive criteria for winning, why would we ever lose? The answer, depressingly enough, is because we don't do it right. Sometimes it is because we misunderstand either our own strengths and weaknesses, or those of our competitors. More often, however, it is because we misinterpret what our target customers really want, or we are afraid to step up to the responsibility of making sure they get it.

How far must one go to serve one's customers? Well, in the

case of crossing the chasm, one of the key things a pragmatist customer insists on seeing is viable competition. If you are fresh from developing a new value proposition with visionaries, that competition is not likely to exist—at least not in a form that a pragmatist would appreciate. What you have to do then is create it.

Creating the Competition

In the progression of the Technology Adoption Life Cycle, the nature of competition changes dramatically. These changes are so radical that, in a very real sense, one can say at more than one point in the cycle that one has no obvious competition. Unfortunately, where there is no competition, there is no market. By way of introduction, therefore, we need to rethink the significance of competition as it relates to crossing the chasm.

In our experience to date with developing an early market, competition has not come from competitive products so much as from alternative modes of operation. Resistance has been a function of inertia growing out of commitment to the status quo, fear of risk, or lack of a compelling reason to buy. Our goal in the early market has been to enlist visionary sponsors to help overcome this resistance. Their competition, in turn, has come from others within their own company, pragmatists who are vying with visionaries for dollars to fund projects. The pragmatists' competitive solution, in general, is to invest dollars to chip away at problems a piece at a time (whereas the visionaries aspire, like Alexander the Great with the Gordian knot, to cut through them with a single mighty—and mighty expensive—stroke). Pragmatists work to educate the company on the risks and costs involved. Visionaries counter with charismatic appeals to taking bold and

decisive actions. The competition takes place at the level of corporate agenda, not at the level of competing products.

That's how competitions work in the early market. It is not at all how they work in the mainstream, in part because there are not enough visionaries to go around, and in part because visionaries themselves like to play not in the mainstream but rather out in front of it. Now we are in the true domain of the pragmatist. *In the pragmatist's domain, competition is defined by comparative evaluations of products and vendors within a common category.*

These comparative evaluations confer on the buying process an air of rationality that is extremely reassuring to the pragmatist, the sort of thing that manifests itself in evaluation matrices of factors weighted and scored. And the conclusions drawn from these matrices will ultimately shape the dimensions and segmentation of the mainstream market. Traditional desktop PCs, where Windows still has the edge, are still thought best for office automation, while laptops, where Apple has made a big incursion, are better for working on the go, tablets (an even stronger Apple position) for leveraging computing in meetings, and smartphones, where Google Android holds the high ground, for being online 24/7, all of which has led to an increasing preference for wireless over wireline networks, putting Cisco on notice. All this is music to the ears of pragmatist buyers who do not like to buy until there is both established competition and an established leader, for that is a signal that the market has matured sufficiently to support a reasonable whole product infrastructure around an identified centerpiece.

In sum, the pragmatists are loath to buy until they can compare. *Competition, therefore, becomes a fundamental condition for purchase.* So, coming from the early market, where there are typically no perceived competing products, With the goal of penetrating the mainstream, you often have to go out and *create your competition.*

Creating the competition is the single most important marketing communication decision made in the battle to enter the mainstream. It begins with positioning your product within a buying category that already has some established credibility with the pragmatist buyers. That category should be populated with other reasonable buying choices, ideally ones with which the pragmatists are already familiar. Within this universe, your goal is to position your product as the indisputably correct buying choice.

The great risk here is to rig the competition, that is, to create a universe that is too self-serving. You can succeed in creating a competitive set that you clearly dominate, but this set, unfortunately, is either not credible or not attractive to the pragmatist buyers. For example, I might claim that I am the greatest high-tech marketing consultant with a Ph.D. in Renaissance English literature. This claim might be credible, but it is not particularly attractive. On the other hand, I might claim that I am the greatest marketing consultant of all time—an attractive claim, perhaps (although it is not obvious to me how one can be a great consultant and egotistical at the same time), but, m any event, not a credible one.

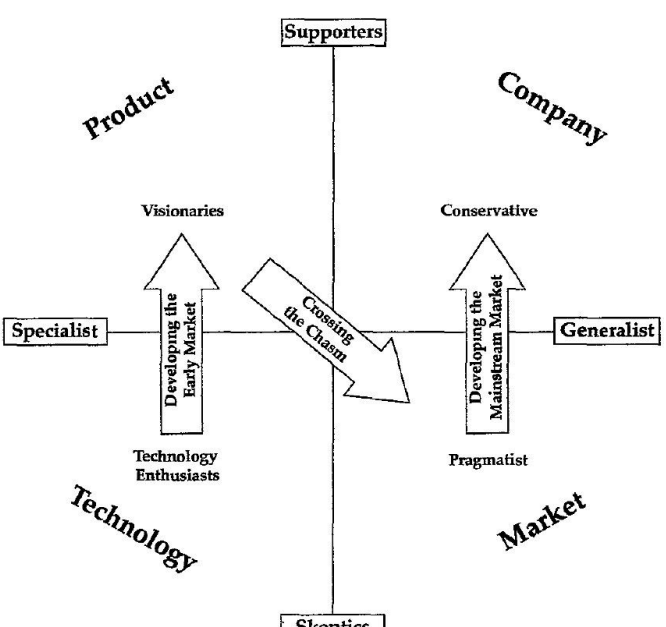
So, how can you avoid selecting a self-serving or irrelevant competitive set? The key is to focus in on the values and concerns of the pragmatists, not the visionaries. It helps to start with the right conceptual model—m this case, *the Competitive Positioning Compass.* That model is designed to create a value profile of target customers anywhere in the Technology Adoption Life Cycle, identify what to them would appear to be the most reasonable competitive set, develop comparative rankings within that set on the value attributes with the highest ranking in their profile, and then build our positioning strategy development around those comparative rankings. Here's how it works:

The Competitive Positioning Compass

There are four domains of value in high-tech marketing: technology, product, market, and company. As products move through the Technology Adoption Life Cycle, the domain of greatest value to the customer changes. In the early market, where decisions are dominated by technology enthusiasts and visionaries, the key value domains are technology and product. In the mainstream, where decisions are dominated by pragmatists and conservatives, the key domains are market and company. Crossing the chasm, in this context, represents a transition from product-based to market-based values.

The Competitive-Positioning Compass illustrates these dynamics:

THE COMPETITIVE-POSITIONING COMPASS



There is a lot of information packed into this model, so let's sort it out piece by piece:

- The directionality provided by the compass comes in the form of the two labeled axes. The horizontal dimension shows the range of buyer interest in and understanding of high-technology issues. In general, the early market is dominated by specialists who, by their nature, are more interested in technology and product issues than in market standing or company stature. By contrast, the mainstream is dominated by generalists who are more interested in market leadership and company stability than in the bits and bytes or speeds and feeds of particular products.
- The vertical dimension overlays a second measure, the buyer's attitude toward the proposed value proposition, ranging from skepticism to support. Markets begin in a state of skepticism and evolve to a state of support. In the case of the early market, the technology enthusiasts are the skeptical gatekeepers; in the case of the mainstream market, it is the pragmatists. Once they have given their blessings, then their companions—visionaries and conservatives, respectively—feel free to buy in.
- The model also points to the fact that people who are supportive of your value proposition take an interest in your products and in your company. *People who are skeptical of you do not.* This means that, at the beginning of a market, when skepticism is the common state, basing communications on product or company strengths is a mistake. You have no permission to tout these elements

because the market players do not yet believe you are going to be around long enough to make a difference.

- However, there are ways to win over skeptics. Even the most skeptical specialists are always on the lookout for new technology breakthroughs. Thus, although you cannot initially get them to sponsor your product, you can get them involved in understanding its technology, and from that understanding, to gain an appreciation for the product itself. The more they appreciate the technology, the easier it becomes for them to support the product.
- Similarly, skeptical generalists may not take an interest in an unproven company but are always interested in new market developments. If you can show the generalists that there is an emerging unmet market requirement, one that you have specifically positioned your products and your marketing efforts to meet, then out of their appreciation for the market opportunity, they can learn to appreciate your company.
- These are the two "natural" marketing rhythms in high tech—developing the early market and developing the mainstream market. You develop an early market by demonstrating a strong technology advantage and converting it to product credibility, and you develop a mainstream market by demonstrating a market leadership advantage and converting it to company credibility.
- By contrast, the "chasm transition" represents an unnatural rhythm. Crossing the chasm requires moving from an environment of support among the visionaries back into one of skepticism among the pragmatists. It means moving from the familiar ground of

product-oriented issues to the unfamiliar ground of market-oriented ones, and from the familiar audience of like-minded specialists to the unfamiliar audience of wary generalists.

Now let's tie all this back into creating the competition. If we are going to succeed in winning over the lower right quadrant, the skeptical pragmatists, then any dialogue about an emerging competitive set has to be based in market-oriented concerns. That's what the pragmatists care about. In other words, we must shift our marketing focus from celebrating product-centric value attributes to market-centric ones. Here is a representative list of each:

PRODUCT-CENTRIC	MARKET-CENTRIC
Cool product	Most complete whole product
Easy to use	Solid user experience
Elegant architecture	Compatibility with standards
Product price	Whole product price
Unique functionality	Situational value
	Fit for purpose

In the previous chapter, the entire basis of the focus on whole product and partners and allies was to move our leadership premise from the left-hand list to the right. That is, lacking an existing market leadership position, we wanted, within the confines of a manageable market segment, to create the valued attributes of one, and thereby bring a state of true market leadership into existence. Now we need to communicate what we have accomplished so as to win the pragmatist buyers' support.

To sum up, it is the market-centric value system—supplemented (but not superseded) by the pro duct-centric one—that must be the basis for the value profile of the target customers when crossing the chasm.

This value profile, in turn, will model how the target customers are likely to perceive the competitive set and what position they are likely to accord to a new player coming into that set.

More specifically, creating the competition involves using two competitors as beacons so that the market can locate your company's unique value proposition. The first of these two competitors we will call the *market alternative.* This is a vendor that the target customer has been buying from for years. The problem they address is the one we will address, and the budget that is allocated to them represents the money we as the new entrant are going to preempt. To earn the right to this budget, we are going to use a disruptive innovation to address a stubbornly problematic limitation in the traditional offer.

The second reference competitor we will call the *product alternative.* This is a company that is also harnessing the same disruptive innovation we are-—or at least close to it—and is positioning itself like us as a technology leader. Their very existence gives credibility to the notion that now is the time to embrace this new discontinuity. Our intent here is to acknowledge their technology but to differentiate from them by virtue of our own segment-specific focus.

Let's see how this plays out m a couple of concrete examples.

Creating the Competition: The Example of Box

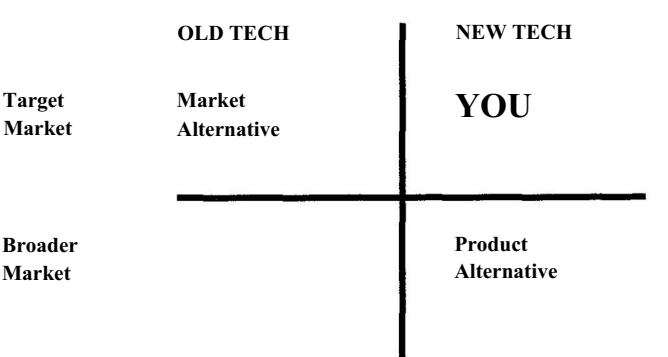
With the advent of consumer computing at the turn of the twenty-first century, a host of new offerings raced to take advantage of

the proliferation of cloud computing services. One of the most successful was Dropbox, a very simple file-sharing utility that let consumers exchange photos, music, and the like. It was so easy to use that workgroups in enterprises began to leverage it as well. Not surprisingly, however, given its focus on consumer ease of use, Dropbox did not invest as heavily in enterprise features as IT departments demand, and so the search went out for a more enterprise-oriented alternative. Enter Box.

The challenge Box faced was that enterprises already had a widely proliferated solution for end-user file sharing called SharePoint from Microsoft. At the same time Dropbox was a better-known brand with an established consumer appeal. How could Box win here?

Actually, it turns out this is the perfect positioning situation. SharePoint represented the viable *market alternative* while Dropbox represented the viable *product alternative.* All Box had to do was position itself at the intersection—Dropbox's ease of use meets SharePoint's enterprise standards. Best of both worlds.

This intersection is easily captured in a simple 2x2 matrix, as follows:



The two alternatives called out in this diagram are your *reference competitors.* In the case of Box, by calling out Microsoft as its market alternative, it makes clear that it is going after the same use cases and the same budget inside the enterprise. At the same time, by calling out Dropbox as its product alternative, it makes clear that its disruptive innovation is radical ease of use. The company still has to deliver on these promises and still has to compete vigorously to win, but nobody is confused about what game it is playing.

Creating the Competition: The Example of WorkDay

Back in the 1990s, at the beginning of the client-server software era in which PCs replaced terminals as end-user access devices, the first great success in packaged enterprise applications was PeopleSoft. It crossed the chasm targeting the HR department, providing a whole suite of interactive functions that had never been made available before.

As the decade unfolded, however, and the market shifted from a "best of breed" orientation to a preference for integrated suites, PeopleSoft lost ground to two much larger rivals, Oracle and SAP. Then in the tech downturn of 2002, Oracle initiated a hostile and highly contested takeover that led ultimately to its acquisition of the firm.

The founders of PeopleSoft, however, were not done yet. They could see that another shift was under way in enterprise software, perhaps even more profound than the transition to client-server: software-as-a-service applications running on top

of cloud computing. It was still early days, but they set out once again to disrupt the HR marketplace.

What did they have to do to communicate their new position? Well, the market already knew them as the founders of PeopleSoft, so they just used that very product as their market alternative. And for their product alternative, they picked the hottest SaaS company on the planet, Marc Benioffs Salesforce.com.

Again, the message was unmistakable. We are going after the installed base of PeopleSoft customers, the people "we" sold and that Oracle now "owns." And we are bringing to them all the benefits of software-as-a-service—pay as you go, continuous releases, low switching costs—the very things that the old client server paradigm simply cannot match.

Just to be perfectly clear here, as I noted before with Box, WorkDay still has an uphill battle taking on an entrenched incumbent like Oracle. But by thoughtful use of reference competitors, what they do not have to struggle with is explaining their value proposition.

Let's close this section by looking at two companies that have not been so fortunate.

Failing to Create the Competition: The Examples of Segway and Better Place

Segway at its launch was something of the Google Glass of its era—an extraordinary technology that looked, well, pretty dorky. In case you have never seen one, a Segway looks like an upright lawn mower that you stand on, and simply by leaning in the direction you want to go, it motors you there. This is all made

possible by truly superior gyroscopic technology that keeps you balanced, or rather just off balance, to move you along.

The company was backed by Kleiner Perkins, at the time arguably the leading venture capital firm m the world, and was launched with great fanfare as the new people mover. Anybody who walked for a living was going to now ride—mail carriers, cops on the beat, meter readers, door-to-door salespeople, you name it. And then, well, they ran into the problem of stairs. And that definitely restricted the field of application.

Still, there are plenty of flat places around, and more every day with all the investment in access, so why hasn't the product been able to make any headway? One explanation is that it was unable to find a pair of reference competitors that made its position make sense. There really is no market alternative out there. That is to say, there is no people mover budget to target. The closest you could get would be motorbikes or motorized wheelchairs or maybe golf carts, but none of these was close enough. And on the product side, there were no other companies leveraging this kind of disruptive technology in other market segments, so again, no way to cross-reference to success elsewhere.

Segway was all by itself, and that is not a good place to be when you are trying to cross the chasm. The same held true for what looked like a much more reasonable proposition in the electric vehicle space, Shai Agassi's Better Place.

Better Place was founded on a terrific value proposition. Electric vehicles were clearly the coming thing, but charging them took so long, you could only drive them under restricted use cases. But what if the battery packs were swappable? Then you could go into a recharging station, drop off the old pack, insert a new one, and be on your way. Of course, you might risk

getting stuck with a dud pack, so the way to solve for that was to have the infrastructure run, end to end, as a public utility, with the consumer simply "buying miles" the way a cell phone customer buys minutes.

The idea was compelling enough to raise $850 million. But it never could get off the ground. Here the company did have a clear product alternative—the other electric vehicles on the market, the most successful of which to date has been the Tesla. But it had no market alternative. Public transportation, Zipcars, cell phones—they were all analogies. There was no budget to repurpose anywhere. Moreover, on the product side, where Renault took the lead with the first car, the end result was not sufficiently compelling to attract enough consumers to utilize the infrastructure at anything like an economic capacity. The whole effort ended up twisting slowly in the wind and was wound down in 2013.

In Closing

In light of these cautionary tales, let me just close this section with a word of warning. If you try out this exercise of choosing the competition, and have trouble finding either a single, clear market alternative, or a credible second vendor leveraging your type of disruptive technology, this is a clue. It means that you are probably not ready to cross the chasm.

Chasm crossing requires a single target beachhead segment, and in that segment, there needs to exist already the budget dollars to buy your offer. To be sure, the budget will be "misnamed," because it will be allocated to some brain-dead, ineffective Band-Aid approach to solving what has become a broken, mission-critical process. But it must exist, or else you will lose a full year just m educating the market to put aside money that might be used to buy your product in the following year.

Choosing your market alternative wisely is the solution to this problem. But it has to be credible. And understand that, as soon as you call out your choice, you are in for a fight. That market alternative, whoever it may be, had plans for the money you are targeting. Indeed, it considers that budget as *its* budget, and it will not take kindly to your actions.

That's where the product alternative comes in. You need to make clear to everyone involved that a technology shift is under way here and that old solutions simply cannot hope to keep up. Trade magazines on their best day cannot be interactive. Direct mail programs on their best day cannot catch me at the golf course. General agents on their best day cannot provide round-the-clock answers to consumer questions—at least not cost-effectively. It is not your intent to deride the performance of the established Old Guard. Indeed, you should honor it, as your target customer has long-standing relationships with these vendors. Rather, it is to suggest that a new wave is coming, and that you intend to domesticate that technology to the same ends as these tried-and-true solution providers.

So, market alternatives call out the budget and thus the market category, and product alternatives call out the differentiation. It sounds a lot like positioning, the topic to which we will now turn.

Positioning

Creating the competition, more than anything else, represents a watershed moment in positioning. Positioning is the most discussed and least understood component of high-tech marketing. You can keep yourself from making most positioning gaffes if you will simply remember the following principles:

1. *Positioning, first and foremost, is a noun, not a verb.* That is, it is best understood as an attribute associated with a company or a product, and not as the marketing contortions that people go through to set up that association.
2. *Positioning is the single largest influence on the buying decision.* It serves as a kind of buyers' shorthand, shaping not only their final choice but even the way they evaluate alternatives leading up to that choice. In other words, evaluations are often simply rationalizations of preestablished positioning.
3. *Positioning exists in people's heads, not in your words.* If you want to talk intelligently about positioning, you must frame a position in words that are likely to actually exist in other people's heads, and not in words that come straight out of hot advertising copy.
4. *People are highly conservative about entertaining changes in positioning.* This is just another way of saying that people do not like you messing with the stuff that is inside their heads. In general, the most effective positioning strategies are the ones that demand the least amount of change.

Given all of the above, it is then possible to talk about *positioning* as a verb—a set of activities designed to bring about *positioning* as a noun. Here there is one fundamental key to success: When most people think of positioning in this way, they are thinking about how to make their products *easier to sell.* But the correct goal is to make them *easier to buy.*

Companies focus on making products easier to sell because that is what they are worried about—selling. They load their marketing communications with every possible selling argument, following the age-old axiom that if you throw a lot

of mud at a wall, some of it is bound to. stick. Prospective customers shrink from this barrage, which in turn causes the salespeople to chase after them that much harder. Even though the words appear to address the customers' values and needs, the communication is really focused on the seller's attempt to manipulate them, a fact that is transparently obvious to the potential consumer. It's a complete turnoff—all because the company was trying to make its product easy to sell instead of easy to buy.

Think about it. Most people resist selling but enjoy buying. By focusing on making a product easy to buy, you are focusing on what the customers really want. In turn, they will sense this and reward you with their purchases. Thus easy to buy becomes easy to sell. The goal of positioning, therefore, is to create a space inside the target customer's head called "best buy for this type of situation" and to attain sole, undisputed occupancy of that space. Only then, when the green light is on, and there is no remaining competing alternative, is a product easy to buy.

Now, the nature of that best-buy space is a function of who is the target customer. Indeed, this space builds and expands cumulatively as the product passes through the Technology Adoption Life Cycle. There are four fundamental stages in this process, corresponding to the four primary psychographic types, as follows:

1. *Name it and frame it.* Potential customers cannot buy what they cannot name, nor can they seek out the product unless they know what category to look under. This is the minimum amount of positioning needed to make the product easy to buy for a technology enthusiast.

The goal here is to create a technically accurate description of the disruptive innovation that puts it into its ontologically correct category with a descriptive modifier that sets it apart from the other members of that category. Think Linnaeus cataloging the world of biological organisms.

Here are three such examples of naming and framing:

- Verinata is a genetic test that isolates and analyzes fetal cells extracted from a mother's blood sample to detect Down syndrome.
- HANA is a database system that operates in memory in its entirety, eliminating performance bottlenecks associated with writing to disk, reading from disk, or rehosting data into a data warehouse.
- Nicira is a software-defined network in which the network configuration and control plane is moved out of the routing and switching equipment to run on a server instead, where it can manage the entire network from a single point of control.

If you are not technically informed about these categories, these positioning statements are not likely to mean a lot to you. But for the experts in the field, they are definitive. That's what you need to communicate with technology enthusiasts.

2. *Who for and what for.* Customers will not buy something until they know who is going to use it and for what purpose. This is the minimum extension to positioning needed to make the product easy to buy for the visionary.

Visionaries do not care about the ontology of the new innovation—they care about its potential impact. What disruptive change can it enable in their environment that they can leverage for dramatic competitive advantage?

If we apply this standard to the three examples above, we would generate positioning statements like the following:

- For expectant mothers, their doctors, and their health-care insurers, Verinata provides a pregnancy screening test that is less painful, safer, and cheaper than amniocentesis, while delivering the most accurate results in the industry.
- For business process owners and the IT organizations that support them, HANA enables real-time analytics to be applied to transactions as they are unfolding, redirecting them to optimized outcomes that could not otherwise be achieved.
- For network administrators operating in a cloud computing environment, Nicira enables rapid reconfiguration of a single network fabric to meet the dramatically different performance needs of multiple mission-critical applications.

The key idea here is to focus on the *So what?* and the *Who cares?* part of the value proposition. If the *who* has the clout and the budget, and the *what* is a big enough reward, then the risk of sponsoring an early market purchase is worth taking.

3. *Competition and differentiation.* Customers cannot know what

to expect or what to pay for a product until they can place it in some sort of comparative context. This is the minimum extension to positioning needed to make a product easy to buy for a pragmatist.

This is by definition a post-chasm situation, for the category is now sufficiently viable that there are multiple vendors competing to fill the same budget.

In the prior pages we talked about how when crossing the chasm you have to "create" the competition, leveraging the intersection of a market alternative and a product alternative. That is a special case. The more general case, and the one more familiar to marketing agencies with whom an entrepreneur might be working, is for more established markets. There the goal is to position offerings relative to their adoption status. Consider the following examples:

- In the category of smartphones, Apple iPhones are the design leader, Google Android phones are the price/performance leaders, while RIM BlackBerry phones are a fading star and Microsoft Windows 8 phones a late entry.
- In the category of enterprise collaboration software, Jive is strongest in IT-led deployments, Yammer in end-user grassroots deployments, and Salesforce's Chatter in customer-oriented communication applications.
- Among public cloud computing services, Amazon Web Services is far and away the market leader, with Rackspace providing an open-source alternative, and Microsoft specializing in hosting cloud versions of its own enterprise software offerings.

These sorts of distinctions help a generalist sign off on technology purchase decisions by creating points of reference with "adopters like me."

4. *Financials and futures.* Customers cannot be completely secure in buying a product until they know it comes from a vendor with staying power who will continue to invest in this product category. This is the final extension of positioning needed to make a product easy to buy for a conservative.

   Microsoft, IBM, Oracle, Intel, SAP, EMC, and Cisco are all long-standing blue-chip companies with whom conservatives feel comfortable. Dell and HP have both put themselves behind the eight ball here with sustained underperformance in recent years. Sun got so far behind it had to get acquired by Oracle.

These four positioning strategies correspond to the four quadrants of the Positioning Compass. The key takeaway from this section is that positioning is more about the audience's state of mind than yours. Most failed positioning statements arise from vendors being unable to see themselves from someone else's point of view.

The Positioning Process

When positioning is thought of primarily as a verb, it refers to a communications process with four key components:

1. *The claim.* The key here is to reduce the fundamental position statement—a claim of undisputable market leadership within a given target market segment—to a two-sentence format outlined later on in this chapter.

2. *The evidence.* The claim to undisputed leadership is meaningless if it can, m fact, be disputed. The key here is to present sufficient evidence as to make any such disputation unreasonable.
3. *Communications* Armed with claim and evidence, the goal here is to identify and address the right audiences in the right sequence with the right versions of the message.
4. *Feedback and adjustment.* Just as football coaches have to make halftime adjustments to their game plans, so do marketers, once the positioning has been exposed to the competition. Competitors can be expected to poke holes in the initial effort, and these need to be patched up or otherwise responded to.

This last component makes positioning a dynamic process rather than a one-time event. As such, it means marketers revisit the same audiences many times over during the life of a product. Establishing relationships of trust, therefore, rather than wowing them on a one-time basis, is key to any ongoing success.

The Claim: Passing the Elevator Test

Of the four components, by far the hardest to get right is the claim. It is not that we lack for ideas, usually, but rather that we cannot express them in any reasonable span of time. Hence the elevator test: Can you explain your product in the time it takes to ride up in an elevator? Venture capitalists use this all the time as a test of investment potential. If you cannot pass the test, they don't invest. Here's why:

1. *Whatever your claim is, it cannot be transmitted by word of mouth.* In this medium the unit of thought is at most a sentence or two. Beyond that, people cannot hold it in their heads. Since we have already established that word of mouth is fundamental to success in high-tech marketing, you must lose.
2. *Your marketing communications will be all over the map.* Every time someone writes a brochure, a presentation, or an ad, they will pick up the claim from some different corner and come up with yet another version of the positioning. Regardless of how good this version is, it will not reinforce the previous versions, and the marketplace will not get comfortable that it knows your position. A product with an uncertain position is very difficult to buy.
3. *Your R&D will be all over the map.* Again, since there are so many different dimensions to your positioning, engineering and product marketing can pick any number of different routes forward that may or may not add up to a real market advantage. You will have no clear winning proposition but many strong losing ones.
4. *You won't be able to recruit partners and allies,* because they won't be sure enough about your goals to make any meaningful commitments. What they will say instead, both to each other and to the rest of the industry, is "Great technology—too bad they can't market."
5. *You are not likely to get financing from anybody with experience.* As just noted, most savvy investors know that if you can't pass the elevator test, among other things, you do not have a clear—that is, investable—marketing strategy

So how can we guarantee passing the elevator test? The key is to define your position based on the target segment you intend to dominate and the value proposition you intend to dominate it with. This is the *who for and what for* positioning statement that resonates with visionaries and kicks off the early market competition. At the same time, you also want to foreshadow your mainstream market future, leveraging the *competition and differentiation* positioning we discussed relative to market and product reference competitors.

Here is a proven formula for getting all this down into two short sentences. Try it out on your own company and one of its key products. Just fill in the blanks:

- For (target customers—beachhead segment only)
- Who are dissatisfied with (the current *market alternative)*
- Our product is a (product category)
- That provides (compelling reason to buy).
- Unlike (the *product alternative),*
- We have assembled (key whole product features for your specific application).

Let's try this out with a few examples, starting with some we have already looked at earlier in the chapter.

Verinata

- For older pregnant mothers and others
- Who want an alternative to amniocentesis to screen for Down syndrome
- Verinata provides a genetic analysis of fetal DNA
- That does not involve inserting a needle into the womb.

- Unlike other genetic tests for fetal abnormalities,
- The Verinata test is the most accurate on the market.

HANA

- For online retailers and others
- Who want to better assist their customer agents to up sell and cross-sell consumers during their purchasing transactions,
- HANA is a database for online transaction processing
- That supports applying analytics in real time to determine the very best offer to make.
- Unlike database solutions from Oracle, the market leader,
- HANA does not require melding and maintaining two separate environments for transaction processing and analytics.

Now what is often interesting about writing a statement like this is not what you write down but what you have to give up. In the case of Verinata, there is nothing about it being the cheapest test. And in the case of HANA, there is a narrow focus on retailers even though we know there are many other applications for in-memory databases outside of retail. Wouldn't it have been better in both cases to have included extra value statements for a bigger effect?

The answer here is an emphatic *no.* Indeed, this is just what defeats most positioning efforts. *Remember, the goal of positioning is to create and occupy a space inside the target customers' head.* Now, as we already noted, people are very conservative about what they let you do inside their head. One of the things they do not

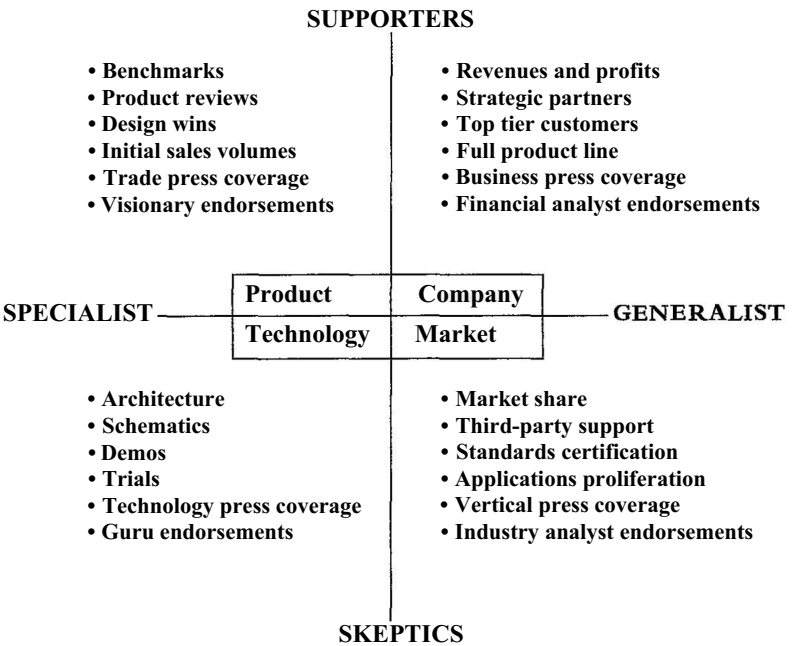
like is for you to take up too much space. This means they will use a kind of shorthand reference: Mercedes ("top-of-the-line, conservative"), BMW ("upscale performance sedan, yuppie"); Lincoln ("American top-of-the-line, tired"), Lexus ("New kid on the block, current best buy"). That's all the space you get for your primary differentiation statement. It's like a telegram with less than one line. If you don't make the choice to fill the space with a single attribute, then the market will do it for you. And since the market includes your competition trying to de-position you, don't count on it to be kind.

One final point on claims before moving on to other issues: *The statement of position is not the tagline for the ad.* Ad agencies come up with taglines, not marketing groups. The function of the statement of position is to control the ad campaign, to ensure that however "creative" it may become, it stays on strategy. If the point of the ad is not identical with the point of the claim, then it is the ad, not the claim, that must be changed—regardless of how great the ad is.

The Shifting Burden of Proof

The toughest thing about high-tech marketing is that just about the time you get the hang of something, it becomes obsolete. This is even true of something as innocent as providing evidence. That is, like everything else m high tech, the kind of evidence that is needed evolves over the course of the Technology Adoption Life Cycle. This can be summarized within the structure of the Competitive Positioning Compass:

POSITIONING: THE EVIDENCE



By working your way up the left and then up the right of the compass, you can trace the evolution of desired evidence as the market evolves from the technology enthusiast to the visionary to the pragmatist and conservative. The key point to notice is the transition from product to market, corresponding to crossing the chasm. This is simply a corroboration of a point we have been making all along, that pragmatists are more interested in the market's response to a product than m the product itself.

What is particularly awkward for a high-tech company making this transition is that for the first time the major sources of desired evidence are not directly under its control. This is not a matter of having the right features or winning the right benchmark war.