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Problem: Discover the Job-to-Be-Done

No problem, no opportunity. No one will pay you to solve a nonproblem.

—Vinod Khosla, Founder, Sun Microsystems and Khosla Ventures

WHEN MIKE MAPLES JR., an experienced executive who had worked in telecommunications, decided to start a new venture with some colleagues, the problem was that they didn't know what type of venture to start. So Maples and his team made an unusual agreement: they would not start building anything until they found a problem that was worth solving. Maples and his friends began meeting several times a week to discuss problems they had seen. Then, then during the week they met individually with people in the industry to test their ideas. Although the group generated many interesting insights, Maples and his

team kept pushing, recalling that they were looking for a problem so big that "you needed a tourniquet, or you were going to die."[1]

Eventually, the team focused on the problem of the rapidly expanding help desk, a $70 billion problem bleeding the IT industry dry. Research revealed that as software solutions had become more complex, the help desk required increasingly knowledgeable staff to resolve customers' technical challenges. Help desk functions then consumed 80 percent of Microsoft's head count, and growing. Not surprisingly, several companies had developed solutions, usually knowledge databases of answers to frequently asked questions.

Maples's team members felt that they, too, should develop a knowledge database—but it would need to be a better solution than competitive products. But because they had committed to deeply understanding the problem first, they agreed to devote serious effort to observing the challenges of the help desk.

So the team went into the call centers and observed technicians, timing calls with stopwatches and recording the content. They also sat down with technicians, managers, and executives to discuss and understand the problem. They discovered something shocking: only 25 percent of the time on a call was spent actually resolving the problem. Up to 75 percent was spent gathering customer information, confirming whether customers had a support plan, and diagnosing simple items such as the operating system; knowledge databases were tackling only 25 percent of the problem. If the group could automate the simpler tasks, it could solve a problem consuming more than half the productivity of a $70 billion industry. Using this deep insight into the problem, Maples and his colleagues launched Motive Communications, a company that reached a multibillion-dollar market capitalization by providing a better solution to the real problem.[2]

Maples's experience reinforces the importance of deeply understanding the problem before trying to solve it. Although such an observation may seem obvious, in fact, most managers actually start with the solution first, before ensuring that they've discovered a problem worth solving. As a result, although they develop highly innovative solutions, the product or service fails because they developed a solution that no one wants to buy. Therefore, the most important thing you can do next in the innovation process is to start by deeply understanding the problem you are solving—the job-to-be-done.

Deeply Understand the Job-to-Be-Done

Clayton Christensen argues that customers—people and companies—have "jobs" that arise regularly and need to get done. When customers become aware of a job, they look around for a product or service they can hire to help them get the job done. As well-known marketing professor Theodore Levitt once observed, "People don't want to buy a quarter-inch drill. They want a quarter-inch hole!"[3]

For example, customers may purchase an iron and ironing board to help them remove wrinkles from clothes. But they don't really want an iron and ironing board. They really want wrinkle-free clothing. By understanding what the job is, you can generate various insights about the problem or solution. Instead of thinking about ways to improve the iron or ironing board, you might consider creating a wrinkle-release spray for clothes, or perhaps a product to be used in the dryer, much as a fabric softener sheet is used. Or perhaps you could develop a product to be attached to a washer—or put in a shower—to steam out wrinkles. We've found that stepping back to deeply understand the job-to-be-done is a useful technique, not only for spawning ideas but also for laying the foundation to nail the problem and solution.

Furthermore, it is important to recognize that every job has a functional, a social, and an emotional dimension—and the importance of these elements varies from job to job. For example, "I need to feel like I belong to an elite, exclusive group" is a job for which luxury brand products such as Gucci and Versace are hired. In this case, the functional dimension of the job isn't nearly as important as its social and emotional dimensions. In contrast, if you want to hire a delivery truck you're probably focusing on functional elements, such as the size of the truck or ease of loading. But even when a job looks purely functional, pay attention to hidden emotional or social dimensions. For example, even though a Harley-Davidson is highly functional, many people choose it for social reasons; they want to join the Harley Owners Group and be part of a club that rides motorcycles together. Understanding the functional, social, and emotional dimensions of a job is the most critical element of really nailing the problem you are trying to solve and setting yourself up for a successful innovation. It will lead you to solutions that you may never have considered but that will be much more successful.

Another way of thinking about the job-to-be-done is to ask yourself, What outcomes do my customers want? Anthony Ulwick describes the efforts of

Cordis, a struggling medical device manufacturer, to gain a foothold in the market for products related to angioplasty (a heart procedure in which doctors thread a device through an artery to reach the heart, where they inflate a balloon to place a stent, reducing blockage in a compromised heart artery). In the effort to improve their fortunes, Ulwick helped the Cordis team shift their focus from features to outcomes. Interviewers approached a sample of customers (surgeons and nurses) and asked them to talk through an angioplasty from beginning to end. As the customers talked, the Cordis team asked them what they would like, ideally, without focusing on existing solutions. Then they translated those desires into outcomes.

For example, when surgeons said they wanted a smooth balloon, interviewers asked why; the surgeons wanted to avoid accidentally cutting a blood vessel. So the team translated this description into the outcome (the job-to-be-done). They then compared all the jobs to be done in the procedure and developed a hypothesis of the biggest unmet need (the most important outcomes having the least satisfaction): minimizing recurrence of artery blockage, which was rated 9.5 out of 10 on importance, but 3.2 on satisfaction. They then redesigned the stent to accomplish that job. Within one year, Cordis increased its market share from less than 1 percent to more than 10 percent.[4]

In your search for jobs to be done, it is worth remembering that not all jobs are created equal. The world is full of opportunities; the only real question is which ones are worth solving. So how do you know if it's worth solving? Search for what we call a *monetizable job:* a significant need or problem for a large group of customers who: (1) have money and (2) will readily pay you to solve it. Too many innovators have chased very intriguing jobs but for very few customers or for customers who don't have money or aren't willing to pay! For example, while many elementary schools have a multitude of jobs to solve, they are often so budget constrained that they cannot pay to solve those jobs, unless you can find a way to also solve their budget constraint at the same time.

As you think about different monetizable jobs, also consider that occasionally there can be multiple customers for a single job. For any particular job there may be up to three customers: the economic customer (the person who pays for it), the technical customer (the person who installs the solution), and the end customer (the person who uses the solution). Naturally you want to understand the jobs to be done for each customer type to avoid solving one customer's job while creating a problem for another customer. For example, if you solve a health care problem for a consumer (end customer) but insurers or administrators (economic customer) refuse to pay, you can't actually tackle the job. So

(economic customer) refuse to pay, you can't actually tackle the job. So remember that you may need to find creative ways to solve the job-to-be-done for multiple customers.

Lastly we recommend that you search for a monetizable job to customers' problems that can be described in terms of shark bites—and not mosquito bites. Many of us are bothered by mosquito bites, but we rarely buy the anti-itch cream. We just live with it. But if a shark bites you, then you will pay any amount of money to solve that pain—immediately. Your goal should be to look for shark bites that you can solve—the kinds of problems or needs that keep your customers awake at night, consume their time, engage them deeply, or cause them stress.

When we are talk about shark bites, we're referring more to the degree of customer emotion and engagement than the size of the market. Of course, you want to solve a problem with big markets, but often the markets for new ideas are very small at the beginning. One of the biggest traps managers fall into is shooting down new projects because they're too small to satisfy the growth needs of large corporations. But seeds are small before they become trees—and they take time to mature. For that reason, even though you may be encouraged to start by sizing the market, we encourage you to pay more attention to the emotion of your customers. Strong emotion often leads to attractive markets. For that reason, don't be fooled. Some things that may appear to be a mosquito bite may be a serious customer need worth solving (see "Is Instagram a Shark Bite or a Mosquito Bite?").

Is Instagram a Mosquito Bite or a Shark Bite?

To find a monetizable job, you can focus on what causes your customers stress, what keeps them awake at night, where they spend their time, or what they hate to do: things we might label problems. But what about simple pleasures? Although we use the language of "problems" in the chapter, many important jobs are actually needs or pleasures sought by customers. When you explore customer needs, just think carefully about the difference between *nice* to have and *need* to have.

Many of the things we see as simple pleasures actually solve a deep human need. Psychologist Abraham Maslow identified a hierarchy of human needs, arguing that beyond our basic needs for food and shelter, we have intense desires for belonging, love, friendship, and feeling important. Once these needs are met, we have a need for self-fulfillment

important. Once those needs are met, we have a need for self-fulfillment, including the need to create and experience new things. If you can solve one of these needs, something that looks like a simple pleasure may actually be solving a big unmet need.

Consider Instagram, the photo-sharing application for smart phones. What problem is Instagram solving? Think of this question in terms of nice to have and need to have. Instagram solves a deep human need for self-expression, social connection, and prominence. But that's not all: the kicker is that it solves this need better than prior solutions. For example, internet blogs took off because they, too, solved a deep social need for self-expression and prominence. The problem with blogs is that writing them takes a great deal of time. Twitter solved this problem by reducing posts to 140 characters, allowing people to share their thoughts and achieve social prominence more quickly and with less work. Now consider the saying, "A picture is worth a thousand words." In some ways, Instagram allows users to share a thousand words with only a few clicks and, on top of that, receive social feedback.

As you look for jobs, sometimes providing a simple pleasure may be solving an important customer problem, defined broadly. To find needs, you can also explore what customers love, want, and feel compelled to do. Only customers can reveal what's important. What looks small initially can sometimes be big. Even mosquito bites can be serious problems, especially if they carry malaria.

Three Tools to Find the Monetizable Job

To really discover the job-to-be-done, don't count on traditional marketing studies, analyst reports, news articles, surveys, or even focus groups. That may sound heretical, but in our opening example, if Maples had relied on an analyst report or a news article, he would never have discovered the job-to-be-done. Even if he had run a survey, he wouldn't have asked the right questions. Clearly these familiar tools have value under conditions of certainty, but they fail when you face uncertainty. So much so that Gianfranco Zaccai, the designer behind P&G's billion-dollar Swiffer product, said, "In my 40 years working in design and innovation, alongside some of the most brilliant minds in the business, I have never seen innovation come out of a focus group. Let me put it more strongly: focus groups kill innovation."[5] These tools fail because you can't get deep enough to observe real customer problems. For this reason we introduce a different set of tools to discover the job-to-be-done.

Pain-Storming

In chapter 1 we describe how Intuit started using "pain-storming" to ensure that the team had nailed a customer's biggest pain points before jumping to building solutions. The purpose of pain-storming is to gain clarity on what you think the problem is so that you can test your hypotheses. We've found that effective pain-storming involves five steps.

Step 1: Generate a problem hypothesis identifying the customer and the job-to-be-done.

Step 2: Create a journey-line for the customer and identify pain points and emotions.

Step 3: Select the biggest pain points, and conduct a root-cause analysis.

Step 4: Pick a root cause that you think is most important to customers.

Step 5: Identify assumptions behind the root cause, and then test them with customers.

Let's look at each step. First, you create a problem hypothesis of the customer and the job-to-be-done. This involves identifying what you think is an important problem for a specific type of customer. For example, Motive Communications' problem hypothesis was that it could reduce the time (and costs) of help desks to solve customers' technical problems at large software companies like Microsoft. To identify a customer segment for your project, write down at least three identifying characteristics (for example, large software companies, with large numbers of unsophisticated customers, that have large customer support budgets, who want a reputation for good service). These are descriptors of the types of customers with the same job-to-be-done (see "Develop a Customer Profile to Segment Customers"). It may be helpful to fill in the following template from the perspective of the customer.

I am _____ (customer, with at least three characteristics)

I am trying to _____ (outcome/job trying to solve)

But _____ (problem I am facing)

Because _____ (the deeper root cause for why the problem is happening)

Develop a Customer Profile to Segment Customers

To effectively nail the problem, it helps to build a profile for each customer with a different job-to-be-done. Grouping customers based on shared needs or problems is a familiar marketing tool called *customer segmentation*. But in contrast to more familiar customer segmentation, the purpose of customer profiles is to build a deeply empathetic, intimate portrait of customers and the jobs they struggle to accomplish.

To build customer profiles, you might start by first segmenting customers by the job-to-be-done, rather than more familiar metrics like age or income. The job is the critical unit of analysis, and your customer profile should aim to describe your initial hypothesis about the emotions around the job and how customers currently solve it. Then test your hypothesis by observing customers to understand their motivations (likes, dislikes, aspirations), behaviors (how they spend their time; how they purchase new products or services), demographics (income, industry, age, education, and available budget), and, most important, how they currently think about and solve the job-to-be-done.

After these observations, you will see the world in a new way and will need to recreate a new set of customer profiles based on your observations. Each customer profile should be divided by the job-to-be-done, and describe all the elements above (emotions, current solutions, etc.) for that particular job. This profile will provide you the map of what problem to solve and how to solve it. But it will also provide your team focus and motivation, helping you avoid the trap of trying to solve every job, and in doing so, solving nobody's. To illustrate this danger, in one humorous example, the television show *The Simpsons* featured the main character, Homer Simpson, asking customers what they most wanted in a car. Homer then builds a car that includes every feature for every customer desire, such as "power like a gorilla, yet soft and yielding like a Nerf ball." Not surprisingly the car fails in the market, because, in trying to solve every customer's problem, the car actually solves no one's problems. The humor helps us see the absurdity of trying to serve every customer need, but it is inspired by real events. The failed Ford Edsel and Pontiac Stinger were designed to serve too many customer needs (see figure 4-1).

FIGURE 4-1

The Ford Edsel and Pontiac Stinger

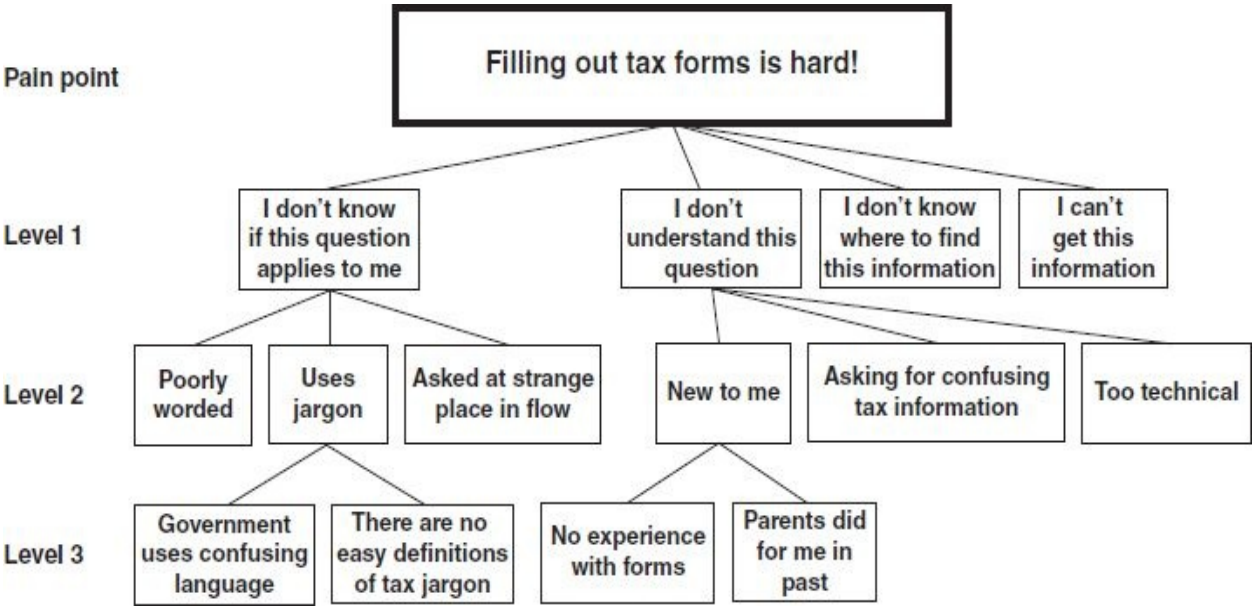
Source: Time.com and Carstyling.ru.

Step 2 is to create a customer journey-line: an in-depth visual portrait in which you identify pain points to understand how your customers do the job today and how they feel while doing it. Visually map out the steps customers take to achieve an outcome. It helps to assign a customer emotion to each step to identify how the customer is feeling. For example, Motive Communications first had to understand the journey taken by desk workers, including the tedious process of identifying a customer's software version. You may choose to develop a more simplified "storyboard" after completing your journey-line to share at a later time with customers for their feedback.

The third step is to select the biggest pain point and do a root-cause analysis (see figure 4-2). It's helpful to apply a "five whys" questioning process (developed by Taiichi Ohno, father of the Toyota production system). In most cases, we've found that asking "Why does this happen?" three times (going down three levels) is sufficient. As the Motive Communications team observed people working at the help desk, they measured the time taken by each step. They then broke out each step as a contributor to the overall time, and cost, required to serve a customer, asking, Why does this happen? They thus found out why the technicians had to gather the customer information, why they had to verify a support plan, why they had to search certain knowledge databases, and so on. You can brainstorm this information as hypotheses to be tested later, but ultimately you will need to gather it through observation (as we describe in the next section).

FIGURE 4-2

Root-cause analysis



The fourth step is to pick a root cause to explore in greater depth because you think it's a critical reason for the customer's problem. As you develop a root-cause tree (the map of root causes uncovered by asking "Why" multiple times) for various problems, you may see that a particular root cause shows up in multiple places. This indicates an important root cause to explore. If you include customers in your pain-storming session, they can also help you identify which root causes are most important—and why.

Step 5 is to create a list of questions about (or assumptions behind) the root cause—questions you need to answer through customer experiments. You can use the question-storming technique to develop the key questions, along with the customer activities or experiments that will answer the questions and validate your assumptions.[6] Motive Communications used help desk observations and stopwatches to answer their key questions.

Intuit excels at pain-storming, and we've seen other companies use variations on the process we've just outlined. For example, Mondelez International (Kraft) has a site dedicated to this process, called the FlyGarage, where participants generate insights into problems and then test these insights with customers. To

generate insights into problems and then test these insights with customers. To find a problem worth solving, you must involve customers.

Ethnography to Explore Assumptions

Sitting in an air-conditioned conference room overlooking the sprawling city of Bogotá, the executives at Banco Davivienda became convinced they'd discovered a big problem worth solving. Although Banco Davivienda dominated the Colombian banking market, almost half the population had no bank account. Executives realized that if there was a way to tap in to this market of nonusers, they could dramatically grow their market share and help the Colombian people at the bottom of the income pyramid.

They formed a cross-disciplinary team to develop an offering that would appeal to nonusers—a streamlined, easy-to-use version of existing bank accounts. After several months of hard work the bank launched the new product, and the optimistic team celebrated. Despite aggressive promotion, however, few customers adopted the new accounts. Even after several months, the team saw little growth, and by year-end they concluded that the project had failed.

As team members analyzed the initial failure, they came to realize that although they had commissioned a market study and talked to a few customers, they hadn't understood the jobs to be done for the "unbanked." Rather, they had let their knowledge of existing customers and solutions distort their understanding of the problem. So the team decided to try a different approach: to go themselves into poor neighborhoods to interact with, and create profiles of, the target customers. They spent weeks living in various neighborhoods as they observed people's daily activities. Said one team member, "We decided to go out and try to understand what people wanted, not by asking directly 'what do you want,' but by trying to understand how people behave in real life without any kind of prejudice."[7]

The team developed customer profiles (as described in the sidebar) of different target customers and the job-to-be-done, along with their motivations, behaviors, and other characteristics. For example, the team developed the following profile for "Martha."

> Martha is one of the 3 million low-income subsidy beneficiaries in Colombia. She wakes up at 2 a.m. to get ready to make the line at the bank at 3 a.m. in order to cash out her subsidy. She waits in line from five to six hours to finally get her turn, and cash the money. Then, she uses the cash to send a domestic remittance, paying a 10 percent fee for the service. In order to pay her utility bills, she will then move to a "district collections center"

where she will wait in line for another two hours to get the payment done. The remaining cash will stay “under the mattress” because she hasn’t had the opportunity to open a savings account due to the distance she lives from the bank and the high costs it will represent to her.[8]

By building these customer profiles, the team at Banco Davivienda quickly identified the root cause of the failure of the mini bank account: it didn’t directly solve any of Martha’s biggest problems. In fact, Martha’s main job-to-be-done was simply receiving money and making payments. Now that the team deeply understood Martha’s problems, they were able to imagine a radically different solution: a mobile wallet that would allow Martha to make and receive payments from merchants directly using an account served by a mobile phone. This account, unburdened with unneeded features like an ATM card, would allow Martha to do everything by phone (including create the account) without ever having to visit a branch. Eventually the “Martha” solution that the team developed was adopted by hundreds of thousands of users. The product was then launched in several other countries targeted to customers like Martha.

The Banco Davivienda team leveraged the number 1 tool for testing and validating the root causes of customers’ problems: ethnography. This technique, which we might more descriptively call “fly on the wall” because that’s how you do it, requires that you get deep into the lives of your customers by watching them in their natural habitat. You aren’t trying to sell your solution or push your agenda. Instead, you’re trying to deeply understand their activities, likes, dislikes, aspirations, challenges, and so on (see “What to Look For as a Fly-on-the-Wall”). Then, using this data, you build synthesized profiles of a prototypical customer—including his or her job-to-be-done and ways she or he currently solves it. You develop profiles for each customer segment and then use them to crystallize the biggest problem you can solve for each profile.

You can take fly-on-the-wall further by actually doing the job your customers are trying to do, rather than just watching, through what we call *role play research*. This requires, as Intuit CEO Brad Smith suggests, that you “be the customer.” Instead of watching, try to do the jobs with the current solutions whether that be riding in delivery trucks or balancing finances using software. We strongly recommend this powerful form of customer research, because you often get the most accurate and surprising insights from living the lives of your customers.

What to Look For as a Fly-on-the-Wall

What to Look For as a Fly on the Wall

What are you looking for when you are trying to find monetizable jobs? Start by looking for obstacles that get in the way of the jobs your customers are trying to do. Look for areas where customers are spending lots of time (time sinks) even if they don't realize it, workarounds they may have developed to solve a problem, or things that ignite their emotions. Cussing, crying, wasted hours, abandoned activities, or figurative "duct tape" where customers just make it work are great signs that customers are struggling to do the job. You might also look beyond the obstacles to the enablers that facilitate something customers want. Look for how people spend their time expressing themselves, connecting to others, or creating shortcuts. People invest time to solve needs and you may find a better way to meet that need. Lastly, don't forget to closely examine nonusers as well as extreme users. Although it can seem counter-intuitive these users can help you understand the problem more clearly than mainstream users. Most of all, look for surprises. It's easy to overlook them, because our minds try to conform what we see to fit our preexisting beliefs. But surprises provide the clues and bread crumbs to the real job-to-be-done.

"Advice" Interviews

A fast technique for developing your initial problem hypothesis is to interview customers using what we call the "advice" interview. Start by identifying a potential sample of customers that you think have a similar job to do. When you ask for interviews (via e-mail or cold call), always ask for advice about a specific customer problem. *Advice* is the magic word. In fact, you may want to mention that you aren't selling anything, just to put potential customers at ease. Then let them know you want to get their feedback on a problem you're trying to solve. Your goal is to listen and learn.

Once you have interviews arranged, we suggest you ask three questions and then listen, listen, listen. These questions are as follows.

1. *Quickly and clearly describe the problem you see.* Describing the problem will make customers confident that you know something and will serve as an anchoring point to the conversation. Don't go to potential customers with a blank sheet and expect something to happen.
2. *Ask, "Do you face this same challenge, too, or a different challenge? Tell me about it."* This gives you a chance to find out whether customers really have the problem you hypothesized. If they don't, you can explore what challenges they really face.
3. *Ask, "Would something like this solve that problem?" and then describe your theoretical prototype (see chapter 5).* At this stage you shouldn't become too solution-focused, but discussing a potential solution will help you get better feedback on the problem. Customers react to the concrete, not the abstract. So you might think about bringing a drawing, storyboard, or PowerPoint slide to help them visualize a solution. This will help them talk about why the solution might, or might not, work to solve their problem.

After five to ten interviews, patterns and trends will begin to emerge, which will allow you to test your hypothesis and change accordingly.

Have You Nailed the Problem? Two Tests

When ZipDx demonstrated its new teleconferencing solution, observers were surprised by the crystal-clear audio coming from the conference-call speaker. The new solution, which ZipDx described as “broadband audio,” worked seamlessly with available Polycom phones and required little setup to achieve similar call quality. Despite the positive reactions, however, ZipDx couldn’t seem to close any deals. Potential customers seemed interested but not enough to place an order.

Like most innovators, the ZipDx team felt confident that it had found a pain point: the poor audio of conference calls. But had it really nailed the customer problem? When our team was called in to help close sales, we asked the ZipDx team members what customer problems they felt they were solving. Most answers involved vague responses about the poor audio quality of conference calls projected in a typical conference room. But when pushed, the team admitted that problem identification had come more from the ZipDx team than from customers. This led us to believe that they had built a solution before creating a customer profile and identifying the job-to-be-done.

Because ZipDx had already developed a solution, it faced more constraints than if it had investigated customer problems first. So our team worked with ZipDx to use its existing customer knowledge to pain-storm a few hypotheses about the types of customers who might have a problem related to the ZipDx solution. They came up with three customer profile groups: (1) Polycom phone resellers (the original hypothesized customer), (2) voice over internet protocol (VOIP) service providers, and (3) companies attempting to capture bridging revenues. The team then identified nineteen customers by name (roughly six in each profile group) and cold-called them, leaving a voice mail about the problem ZipDx believed it was solving. Sometimes they left a second message. Then they waited to see who called back. Only five customers called back. But they had returned the cold call of a no-name company with an unknown product. Who were these people, and why did they call back?

As it turned out, four of the five VOIP service providers they contacted returned the call. When the ZipDx team members described the problem and the solution (using the advice-seeking interview) and then listened, the results stunned them. VOIP service providers actually didn’t care very much about audio quality—what ZipDx thought was the key feature. Instead, they struggled to differentiate themselves with reliable, easy-to-use conference-call software

features. As it turns out, the ZipDx software that accompanied the “broadband audio” had other attractive features that allowed users to schedule, join, and manage conference calls far better than most solutions on the market. These features solved the VOIP providers’ most important job-to-be-done.

Using this deeper understanding of the specific problems of a specific target customer, the team quickly refined its solution and the messaging to that target customer. The CEO then targeted key large customers with that profile. Within three days he closed the largest deal in company history. ZipDx was on its way to nailing a customer problem.[9]

How do you know when you have nailed a problem worth solving? We recommend two tests: the cold-call test and the smoke test. In both tests, the measure of whether you have found a job-to-be-done is if customers give you their time.

The Cold-Call Test

One of the best tests of whether you've discovered a monetizable job is whether potential customers receiving a cold call (or e-mail) will give you their time. You start by identifying your hypothesized customer segments and their job-to-be-done. Then you reach out to each customer group via phone or e-mail (it's OK at this stage to use your contacts), briefly describe the problem, and ask for their advice on your theoretical prototype.

Then observe who calls back, why they call back, and what they say. Initial call-back rates tend to be low (less than 10 percent), but we've seen some companies achieve call-back rates as high as 50 percent when they've hit on a monetizable job. Your final goal is to achieve a significant leap in the call-back rate. When people do not return your call or e-mail, it may be that you haven't clearly described the problem or haven't described a problem they care about. It's also possible you contacted the wrong customer profile or target group, or you contacted them at an inopportune time.

As you work your way toward a 50 percent call-back rate, you need to ask yourself, Who returned the call (versus those who did not), and why? (If you're doing business-to-consumer e-mails, you'll achieve lower rates, so compare to the benchmark response rates for that channel.) For ZipDx most of the hypothesized customer groups did not call back. For these groups, the company needs to work through friends to get contacts with these customers and see where they went wrong. However, for one customer group, the VOIP sellers, nearly 75 percent called back—an extraordinarily high rate. The information from these customers helped the company understand the real problem it was solving.

Naturally you may have to adjust the threshold depending on your context. For example, B2C e-mail return rates tend to be much lower (we all get a lot of e-mail). But ask yourself whether you're clearly and concisely describing the problem. What are the characteristics of the people who are responding? Remember, the real test that you are discovering a problem worth solving is whether people are giving you their time. The percentage of people giving you time should increase when you have discovered a monetizable job.

The Smoke Test

Smoke tests were first used in the 1800s by plumbers, who pushed smoke through a system to discover leaks. The idea of a smoke test proved so useful that the idea spread to engineering, instruments, and information technology, among others, as a way to test for critical flaws. We've borrowed the concept as a way to test for whether you've discovered a problem worth solving. Rather than use smoke bombs, we use a bit more smoke and mirrors to test whether customers care.

To perform a smoke test, create a website, advertisement, phone number, or other channel that describes the problem, theoretical solution, and provides an option to "learn more," "buy now," "reserve now," or some other call to action. Find a way to get your smoke test in front of customers, perhaps by using Google AdWords, a print advertisement, a poster at a trade show, or another venue where you suspect customers will see the call to action.

When customers activate (click, call, etc.) the call to action, they don't actually get to buy a product, but they effectively identify themselves as having an interest in the problem you are investigating. You can then follow-up to learn more about them and why they took the action. The test itself looks at the response rate (the conversion rate on the call to action), with anything higher than 5 percent suggesting that you've identified a real problem worth solving (although your early efforts won't achieve nearly this rate). But people's willingness to spend time with you and their general excitement about a potential solution will be the key indicators.

You can easily use the smoke test for software or online products, but you can also use it for other services and products. For example, one of our students wanted to start a food truck, the latest rage in mobile cuisine. After learning about the regulations, including needing an inspected commissary, he wondered whether there might be a business opportunity to help would-be entrepreneurs jump this legal hurdle. Rather than write a business plan or rent a commissary, we encouraged him to conduct a smoke test. So he placed an ad in the local newspaper: "Want to start a food truck? We can help. E-mail or call . . ." That was it. Within one day our student received three calls, and by the end of the week had received more than a dozen e-mails. Perhaps more surprising, in conversations with these customers, he learned that people wanting to start food trucks didn't need his help finding a commissary or jumping through the legal hurdles. Instead, he found that the critical obstacle was affordable, lease-based access to the truck itself. His smoke test was key to discovering the problem and

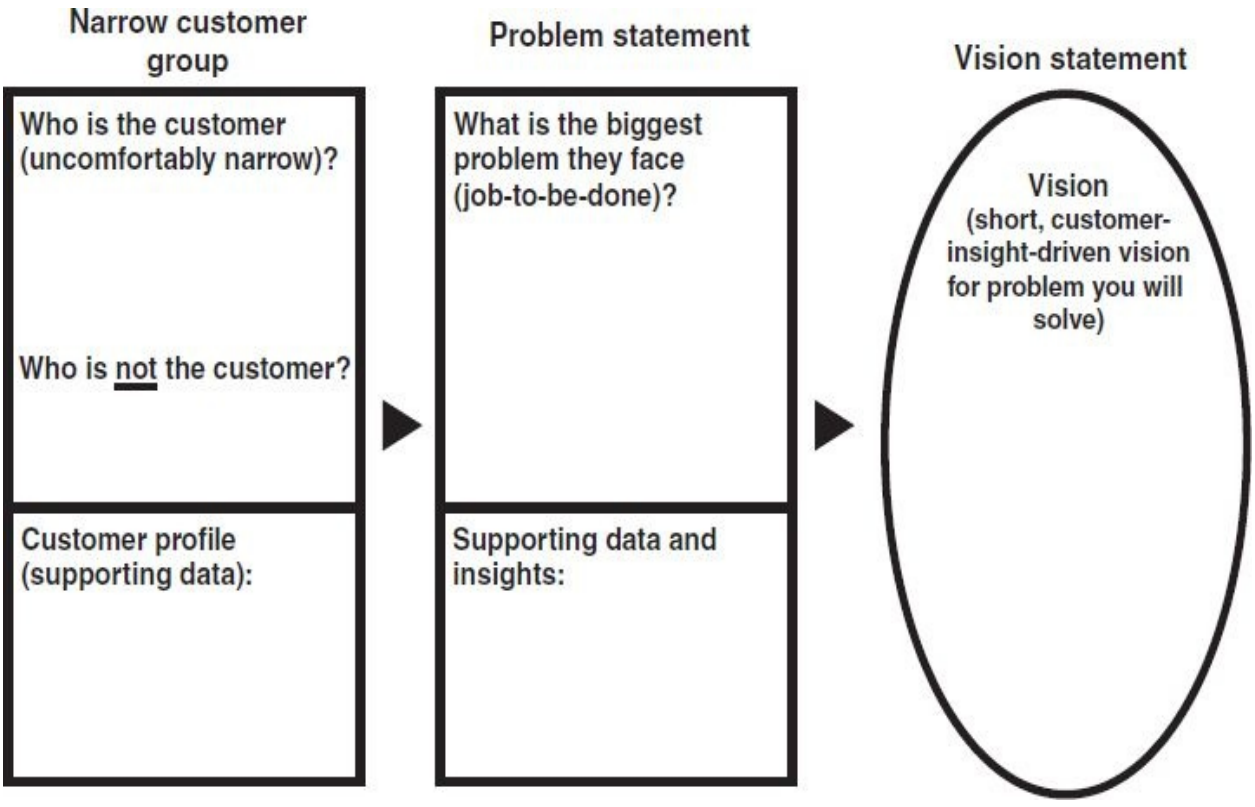
access to the truck itself. His smoke test was key to discovering the problem and the opportunity.

Develop a Vision of the Customer Problem You Will Solve

Lastly, writing a clear statement of your *vision* of the customer problem can serve as a guide and an anchor as you begin to search for the right solution. It can also help unify your team and your organization around the big problem you're solving. A *vision template* helps you develop the articulation of your vision. To use it (see figure 4-3), assemble the data you've gathered, using the tools described in this chapter, to fill out the template from left to right.

FIGURE 4-3

Vision template



First, identify who the customer is—and who the customer is not. Use your customer profiles to define a narrow customer segment for which you will solve

a big problem. Second, describe this big problem—the most critical job-to-be-done—that you hope to address, with supporting data and insights about that problem. Third, create a short, focused vision statement for the job you will do, with supporting data.

Consider the development of Amazon Lending. As described in chapter 2, Jeff Bezos has set himself up as Amazon's chief experimenter and has vocalized the grand challenge. As a result, everyone in the company recognizes the importance of searching for and generating insights. For example, every spring, the company sets aside time when any employee can propose new ideas for customer problems to solve. One new business, described in the *Wall Street Journal*, is Amazon Lending.[10] The original idea came from the front line: customer service representatives assisting small merchants noticed a common theme: small merchants complained about their capital constraints leading to early stockouts. The discussion of this potential problem made it all the way to Bezos, who asked a small team to explore the problem.

The team started by examining the customer feedback and then talking with customers. While as a general rule, "we always put ourselves in the shoes of customers," another observer noted that "The team's goal was to understand the biggest customer need that was not being met. Once they confirmed their belief regarding what customers wanted, then they thought about how they could implement a solution to solve their challenge that will work for Amazon." To explore the need, the team conducted advice interviews and also employed ethnography: "They would call up small merchants and ask, 'Hey, would you be willing to spend an hour with us so we could get your advice?' Since some of them are here in Seattle, they would go visit them and see what they were doing and talk to them."[11]

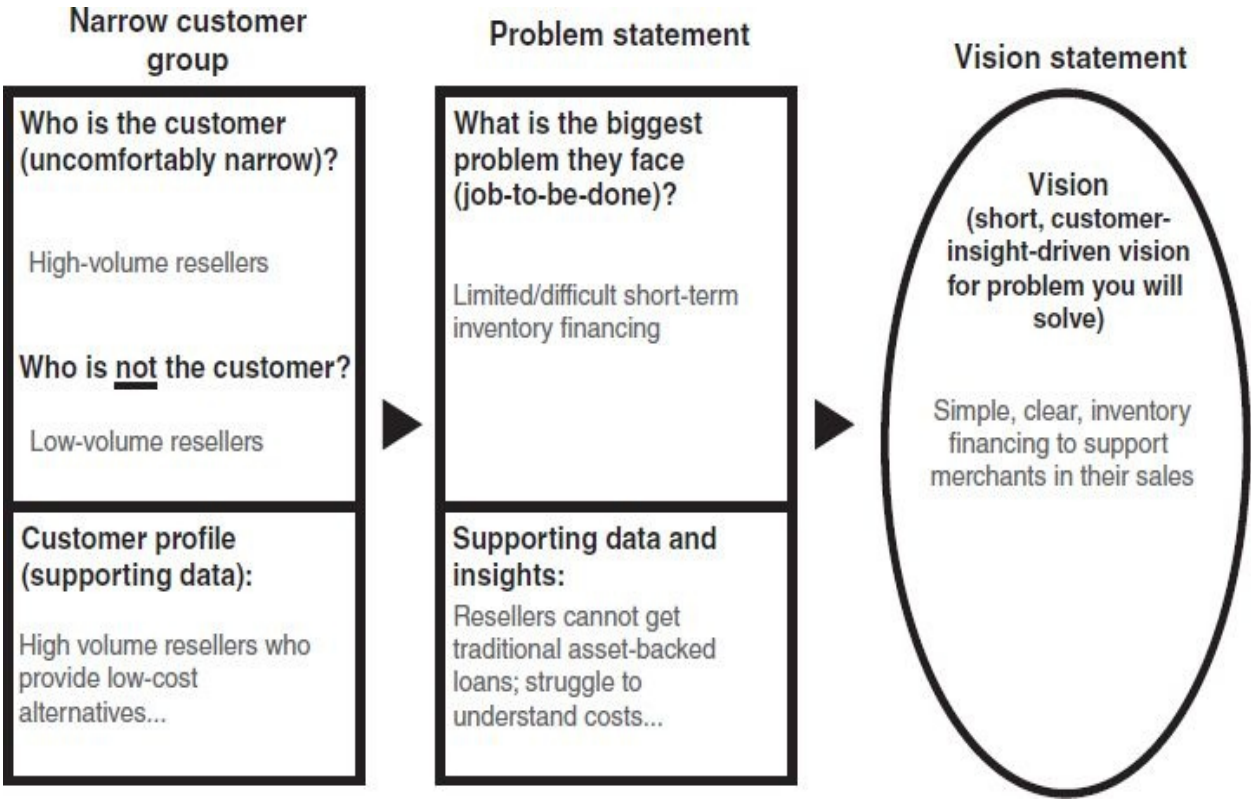
Using the data from interviews and observations, the team then developed customer profiles and made a list of problems faced by them. Team members noticed that many small merchants faced stockouts because they lacked capital. Brick-and-mortar merchants often can borrow capital for inventory using their store buildings as collateral, but online merchants don't have these kinds of assets and so cannot easily access traditional bank lines of credit. Other credit options are typically complex, and the paperwork can be overwhelming. Some of these merchants, which the Amazon team labeled "curators," carried unique items that broadened the Amazon.com product catalog. By contrast, other merchants, labeled "resellers" by the team, focused on identifying a low-cost source of common items and then providing these lower-cost options for

Amazon.com buyers. These different merchant groups had some needs that were similar, and others that were different.

Recognizing that Amazon could not solve every customer problem, the team wanted to focus on a specific customer group. Based on the size of the problem, the team decided the target customer was not low-volume merchants (including curators) and low-volume resellers. Rather, it was high-volume resellers that repeatedly stocked out. Their biggest problem was limited (or hard to access) capital for short-term inventory financing, as the team learned from customer interviews and observations and by examining data on how often these customers lost sales because of stockouts. Having created a clear problem statement, the team then moved to creating a vision of the job-to-be-done: quick, easy-to-access inventory financing (see figure 4-4).

FIGURE 4-4

Amazon Lending vision template



With the clarity and energy of this vision statement, the team moved to the next stage: prototyping the solution. It started by brainstorming a wide variety of potential solutions, including lines of credit, loans, private label cards, and so on. Then, after exploring the challenges, and legal limitations, of each solution, the team went back to customers with a series of prototypes. The team started with theoretical prototypes to quickly get initial customer reactions, then virtual prototypes mocked up in Amazon's web lab, and finally minimum viable prototypes tested with actual customers (we discuss these tools in chapter 5). With each test, the team discovered many surprises about the features customers wanted most (for example, customers wanted financing only for four to six months and not a few years; furthermore, most customers struggled initially to understand the program and the true cost of lending).

Ultimately the team iterated, tested, and validated an invitation-based loan program in which Amazon uses existing data to preapprove loans and eliminate the tedious paperwork of a typical loan. After receiving the invitation, a merchant can quickly accept the loan and have funds transferred to its account with only a few clicks. Although we cannot reveal specific performance figures, the new business has provided a significant lift in sales to resellers (and transaction fees to Amazon), and the team has discovered a solution and business model (discussed in chapter 6) that has allowed it to operate as a profitable, independent business unit within Amazon.

Having nailed the problem and solution for the original customer group, the team is now working to nail the biggest problem for a different customer segment, beginning with the vision statement. "Right now the team is exploring another group of customers," said another observer. "But I can tell you they haven't touched the solution yet, not until they get more feedback from customers to make sure they are going down the right road first."[12] This Amazon Lending team understands the importance of deeply understanding the biggest problem for a specific customer segment before spending time developing a solution.

Watch Out: Incremental, Urgent Problems Create Limited Growth

Large companies fall into traps when it comes to finding jobs to be done. Their existing customers often come to them with incremental problems related to their core activities. They want fewer defects, a new feature,

faster service, lower price, and so on. There's always something more that customers want—and it's always urgent. So large companies—in an attempt to be responsive—try to listen to customers and end up solving their incremental problems. This creates a dilemma: Should you focus on solving the urgent problems of your existing customers? Or should you try to solve a problem for noncustomers that could create growth in the future? We all tend to choose the urgent over the important.

This is a big watch out. It's not that the urgent problems of existing customers aren't important, but solving these concerns usually gives you less bang for the buck than bringing a new solution to new customers (or even a new solution to existing customers). It's a matter of diminishing returns: after you've solved the most important problem that affects the greatest number of existing customers, you then work on solving a problem for a smaller set of customers. So you must carefully consider the criteria you use in selecting problems. Disruptive innovation projects must be in the innovation project portfolio—and that means trying to solve the problems of noncustomers. Unfortunately, it's hard for prospective customers to tell you that their problem is urgent, too.

First Things First

Although it may feel “slower” to start with the customer problem rather than the solution, you save time by deeply understanding the customer’s job-to-be-done. You avoid wasting resources in pursuit of a solution that doesn’t solve a monetizable job. Your first task as a manager is to deeply understand customers and the problems you’re trying to solve for them. You cannot ask customers what innovations they want, or rely on their feature requests. Instead you have to observe their jobs to be done, propose a solution, and then watch their reaction. As we like to say, innovators innovate, customers validate, and not the other way around.