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Are You Solving the Right Problem?

Most firms aren't, and that undermines their innovation efforts. ***by Dwayne Spradlin***

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ARE YOU SOLVING THE RIGHT PROBLEM?

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"If I were given one hour to save the planet, I would spend 59 minutes defining the problem and one minute resolving it," Albert Einstein said.

Those were wise words, but from what I have observed, most organizations don't heed them when tackling innovation projects. Indeed, when developing new products, processes, or even businesses, most companies aren't sufficiently rigorous in defining the problems they're attempting to solve and articulating why those issues are important. Without that rigor, organizations miss opportunities, waste resources, and end up pursuing innovation initiatives that aren't aligned with their strategies. How many times have you seen a project go down one path only to realize in hindsight that it should have gone down another? How many times have you seen an innovation program deliver a seemingly breakthrough result only to find that it can't be implemented or it addresses the wrong problem? Many organizations need to become better at asking the right questions so that they tackle the right problems.

ILLUSTRATION: CRISTIANA COUCEIRO

I offer here a process for defining problems that any organization can employ on its own. My firm, InnoCentive, has used it to help more than 100 corporations, government agencies, and foundations improve the quality and efficiency of their innovation efforts and, as a result, their overall performance. Through this process, which we call *challenge-driven innovation,* clients define and articulate their business, technical, social, and policy issues and present them as challenges to a community of more than 250,000 solvers—scientists, engineers, and other experts who hail from 200 countries—on InnoCentive.com, our innovation marketplace. Successful solvers have earned awards of $5,000 to $1 million.

Since our launch, more than 10 years ago, we have managed more than 2,000 problems and solved more than half of them—a much higher proportion than most organizations achieve on their own. Indeed, our success rates have improved dramatically over the years (34% in 2006, 39% in 2009, and 57% in 2011), which is a function of the increasing quality of the questions we pose and of our solver community. Interestingly, even unsolved problems have been tremendously valuable to many clients, allowing them to cancel ill-fated programs much earlier than they otherwise would have and then redeploy their resources.

In our early years, we focused on highly specific technical problems, but we have since expanded, taking on everything from basic R&D and product development to the health and safety of astronauts to banking services in developing countries. We now know that the rigor with which a problem is defined is the most important factor in finding a suitable solution. But we've seen that most organizations are not proficient at articulating their problems clearly and concisely. Many have considerable difficulty even identifying which problems are crucial to their missions and strategies.

In fact, many clients have realized while working with us that they may not be tackling the right issues. Consider a company that engages InnoCentive to find a lubricant for its manufacturing machinery. This exchange ensues:

InnoCentive staffer: *"Why do you need the lubricant?"*

Client's engineer: "*Because we're now expecting our machinery to do things it was not designed*

The Problem-Definition Process

ESTABLISH THE NEED FOR A SOLUTION

WHAT IS THE basic need?

WHAT IS THE desired outcome?

WHO STANDS TO benefit and why?

JUSTIFY THE NEED

IS THE EFFORT aligned with our strategy?

WHAT ARE THE desired benefits for the company, and how will we measure them?

HOW WILL WE ensure that a solution is implemented?

CONTEXTUALIZE THE PROBLEM

WHAT APPROACHES HAVE we tried?

WHAT HAVE OTHERS tried?

WHAT ARE THE internal and external constraints on implementing a solution?

WRITE THE PROBLEM STATEMENT

IS THE PROBLEM actually many problems?

WHAT REQUIREMENTS MUST a solution meet?

WHICH PROBLEM SOLVERS should we engage?

WHAT INFORMATION AND language should the problem statement include?

WHAT DO SOLVERS need to submit?

WHAT INCENTIVES DO solvers need?

HOW WILL SOLUTIONS be evaluated and success measured?

Idea in Brief

Eager to start working on solutions to innovation challenges, companies often don't spend enough time and resources on defining the problems they're trying to crack and establishing their importance to the organization. The results are missed opportunities, wasted resources, and initiatives that are out of sync with the strategy.

InnoCentive, an online innovation marketplace, has created a process that any organization can use to define problems and articulate their strategic importance. It involves four steps:

Clarifying the internal (company) or external (market or customer) need for a solution

Articulating the strategic importance of the solution to the firm

Researching how the firm and other organizations have already tried to solve the problem

Creating a clear and complete description of the problem

to do, and it needs a particular lubricant to operate."

InnoCentive staffer: "*Why don't you replace the machinery?*"

Client's engineer: "*Because no one makes equipment that exactly fits our needs.*"

This raises a deeper question: Does the company need the lubricant, or does it need a new way to make its product? It could be that rethinking the manufacturing process would give the firm a new basis for competitive advantage. (Asking questions until you get to the root cause of a problem draws from the famous Five Whys problem-solving technique developed at Toyota and employed in Six Sigma.)

The example is like many we've seen: Someone in the bowels of the organization is assigned to fix a very specific, near-term problem. But because the firm doesn't employ a rigorous process for understanding the dimensions of the problem, leaders miss an opportunity to address underlying strategic issues. The situation is exacerbated by what Stefan Thomke and Donald Reinertsen have identified as the fallacy of "The sooner the project is started, the sooner it will be finished." (See "Six Myths of Product Development," HBR May 2012.) Organizational teams speed toward a solution, fearing that if they spend too much time defining the problem, their superiors will punish them for taking so long to get to the starting line.

Ironically, that approach is more likely to waste time and money and reduce the odds of success than one that strives at the outset to achieve an in-depth understanding of the problem and its importance to the firm. With this in mind, we developed a four-step process for defining and articulating problems, which we have honed with our clients. It consists of asking a series of questions and using the answers to create a thorough problem statement. This process is important for two reasons. First, it rallies the organization around a shared understanding of the problem, why the firm should tackle it, and the level of resources it should receive. Firms that don't engage in this process often allocate too few resources to solving major problems or too many to solving low-priority or wrongly defined ones. It's useful to assign a value to the solution: An organization will be more willing to devote considerable time and resources to an effort that is shown to represent a $100 million market opportunity than to an initiative whose value is much less or is unclear. Second, the process helps an organization cast the widest possible net for potential solutions, giving internal and external experts in disparate fields the information they need to crack the problem.

To illustrate how the process works, we'll describe an initiative to expand access to clean drinking water undertaken by the nonprofit EnterpriseWorks/VITA, a division of Relief International. EWV's mission is to foster economic growth and raise the standard of living in developing countries by expanding access to technologies and helping entrepreneurs build sustainable businesses.

The organization chose Jon Naugle, its technical director, as the initiative's "problem champion." Individuals in this role should have a deep understanding of the field or domain and be capable program administrators. Because problem champions may also be charged with implementing solutions, a proven leader with the authority, responsibility, and resources to see the project through can be invaluable in this role, particularly for a larger and more strategic undertaking. Naugle, an engineer with more than 25 years of agricultural and rural-development experience in East and West Africa and the Caribbean, fit the bill. He was supported by specialists who understood local market conditions, available materials, and other critical issues related to the delivery of drinking water.

STEP 1

Establish the Need for a Solution

The purpose of this step is to articulate the problem in the simplest terms possible: "We are looking for X in order to achieve Z as measured by W." Such a statement, akin to an elevator pitch, is a call to arms that clarifies the importance of the issue and helps secure resources to address it. This initial framing answers three questions:

What is the basic need? This is the essential problem, stated clearly and concisely. It is important at this stage to focus on the need that's at the heart of the problem instead of jumping to a solution. Defining the scope is also important. Clearly, looking for lubricant for a piece of machinery is different from seeking a radically new manufacturing process.

The basic need EWV identified was access to clean drinking water for the estimated 1.1 billion people in the world who lack it. This is a pressing issue even in areas that have plenty of rainfall, because the water is not effectively captured, stored, and distributed.

What is the desired outcome? Answering this question requires understanding the perspectives of customers and other beneficiaries. (The Five Whys approach can be very helpful.) Again, avoid the temptation to favor a particular solution or approach. This question should be addressed qualitatively and quantitatively whenever possible. A high-level but specific goal, such as "improving fuel efficiency to 100 mpg by 2020," can be helpful at this stage.

In answering this question, Naugle and his team realized that the outcome had to be more than access to water; the access had to be convenient. Women and children in countries such as Uganda often must walk long distances to fetch water from valleys and then carry it uphill to their villages. The desired outcome EWV defined was to provide water for daily family needs without requiring enormous expenditures of time and energy.

Who stands to benefit and why? Answering this question compels an organization to identify all potential customers and beneficiaries. It is at this stage that you understand whether, say, you are solving a lubricant problem for the engineer or for the head of manufacturing—whose definitions of success may vary considerably.

By pondering this question, EWV came to see that the benefits would accrue to individuals and families as well as to regions and countries. Women would spend less time walking to retrieve water, giving them more time for working in the field or in outside employment that would bring their families needed income. Children would be able to attend school. And over the longer term, regions and countries would benefit from the improved education and productivity of the population.

STEP 2

Justify the Need

The purpose of answering the questions in this step is to explain why your organization should attempt to solve the problem.

Is the effort aligned with our strategy? In other words, will satisfying the need serve the organization's strategic goals? It is not unusual for an organization to be working on problems that are no longer in sync with its strategy or mission. In that case, the effort (and perhaps the whole initiative) should be reconsidered.

In the case of EWV, simply improving access to clean drinking water wouldn't be enough; to fit the organization's mission, the solution should generate economic development and opportunities for local businesses. It needed to involve something that people would buy.

In addition, you should consider whether the problem fits with your firm's priorities. Since EWV's other projects included providing access to affordable products such as cookstoves and treadle pumps, the drinking water project was appropriate.

What are the desired benefits for the company, and how will we measure them? In for-profit companies, the desired benefit could be to reach a revenue target, attain a certain market share, or achieve specific cycle-time improvements. EWV hoped to further its goal of being a recognized leader in helping the world's poor by transferring technology through the private sector. That benefit would

If the problem you want to solve is industrywide, it's crucial to understand why the market has failed to address it.

be measured by market impact: How many families are paying for the solution? How is it affecting their lives? Are sales and installation creating jobs? Given the potential benefits, EWV deemed the priority to be high.

How will we ensure that a solution is implemented? Assume that a solution is found. Someone in the organization must be responsible for carrying it out—whether that means installing a new manufacturing technology, launching a new business, or commercializing a product innovation. That person could be the problem champion, but he or she could also be the manager of an existing division, a cross-functional team, or a new department.

At EWV, Jon Naugle was also put in charge of carrying out the solution. In addition to his technical background, Naugle had a track record of successfully implementing similar projects. For instance, he had served as EWV's country director in Niger, where he oversaw a component of a World Bank pilot project to promote small-scale private irrigation. His part of the project involved getting the private sector to manufacture treadle pumps and manually drill wells.

It is important at this stage to initiate a high-level conversation in the organization about the resources a solution might require. This can seem premature—after all, you're still defining the problem, and the field of possible solutions could be very large—but it's actually not too early to begin exploring what resources your organization is willing and able to devote to evaluating solutions and then implementing the best one. Even at the outset, you may have an inkling that implementing a solution will be much more expensive than others in the organization realize. In that case, it's important to communicate a rough estimate of the money and people that will be required and to make sure that the organization is willing to continue down this path. The result of such a discussion might be that some constraints on resourcing must be built into the problem statement. Early on in its drinking water project, EWV set a cap on how much it would devote to initial research and the testing of possible solutions.

Now that you have laid out the need for a solution and its importance to the organization, you must define the problem in detail. This involves applying a rigorous method to ensure that you have captured all the information that someone—including people in fields far removed from your industry—might need to solve the problem.

PHOTOGRAPHY: COURTESY OF ENTERPRISEWORKS

ELEMENTS OF A SUCCESSFUL SOLUTION

EnterpriseWorks/VITA surveyed potential customers in Uganda to develop a list of must-have and nice-to-have elements for a product that would provide access to clean drinking water. The winning solution, shown here in a Ugandan village, met all the criteria.

Must-Have

1. A price, including installation, of no more than $20

2. Storage capacity of at least 125 gallons

3. A weight light enough for one adult to carry a half mile on rough paths

4. Material that would prevent deterioration of water quality

5. An estimate of the cost of operating and maintaining the device over three years and a clear explanation of how to repair and replace components

6. A means, such as a filter, of removing gross organic matter from the incoming rain stream

7. A means, such as a tap or a pump, of extracting water without contaminating the contents of the unit

8. A method for completely draining the water and cleaning the system

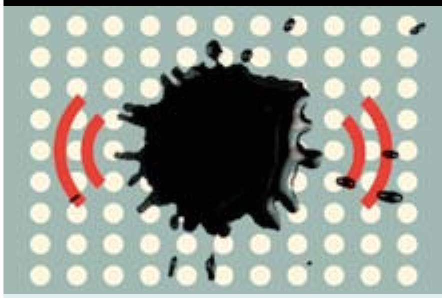
Nice-to-Have

1. An aesthetically pleasing design

2. Additional functionality so that the unit could be used for multiple purposes

3. Features such as a modular design or salvageable parts that would add value to the device after its lifetime

How Well-Defined Problems Lead to Breakthrough Solutions

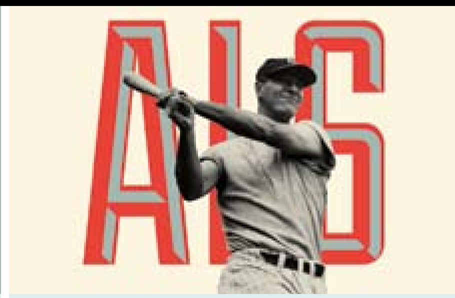


The Subarctic Oil Problem

More than 20 years after the 1989 *Exxon Valdez* oil spill, cleanup teams operating in subarctic waters still struggled because oil became so viscous at low temperatures that it was difficult to pump from barges to onshore collection stations.

HOW THE PROBLEM WAS DEFINED
In its search for a solution, the Oil Spill Recovery Institute framed the problem as one of "materials viscosity" rather than "oil cleanup" and used language that was not specific to the petroleum industry. The goal was to attract novel suggestions from many fields.

THE WINNER A chemist in the cement industry was awarded $20,000 for proposing a modification of commercially available construction equipment that would vibrate the frozen oil, keeping it fluid.

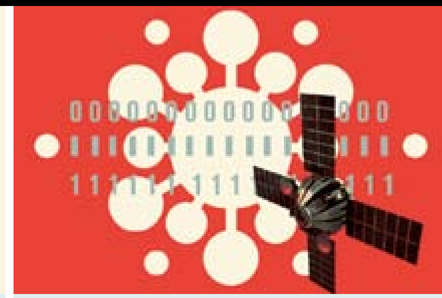


The ALS Research Problem

By the late 2000s, researchers trying to develop a cure or treatment for amyotrophic lateral sclerosis (ALS, or Lou Gehrig's disease) had not made much progress. One major obstacle was the inability to detect and track the progression of the disease accurately and quickly. Because researchers could not know precisely what stage ALS sufferers had reached, they greatly increased the pool of participants in clinical trials and lengthened their studies, which drove up costs so much that few treatments were developed and evaluated.

HOW THE PROBLEM WAS DEFINED
Instead of framing its initiative as a search for a cure, Prize4Life, a nonprofit organization, focused on making ALS research feasible and effective. The solution it sought was a biomarker that would enable faster and more-accurate detection and measurement of the progression of the disease.

THE WINNER In 2011, a researcher from Beth Israel Hospital in Boston was paid $1 million for a noninvasive, painless, and low-cost approach, which detects ALS and assesses its progression by measuring changes in an electrical current traveling through muscle. This biomarker lowers the cost of ALS research by providing accurate and timely data that allow researchers to conduct shorter studies with fewer patients.



The Solar Flare Problem

In 2009 NASA decided it needed a better way to forecast solar flares in order to protect astronauts and satellites in space and power grids on Earth. The model it had been using for the past 30 years predicted whether radiation from a solar flare would reach Earth with only a four-hour lead time and no more than 50% accuracy.

HOW THE PROBLEM WAS DEFINED
NASA did not ask potential solvers simply to find a better way to predict solar flares; instead, it pitched the problem as a data challenge, calling on experts with analytic backgrounds to use one of the agency's greatest assets—30 years of space weather data—to develop a forecasting model. This data-driven approach not only invited solvers from various fields but also enabled NASA to provide instant feedback, using its archived data, on the accuracy of proposed models.

THE WINNER A semiretired radio-frequency engineer living in rural New Hampshire used data analysis and original predictive algorithms to develop a forecasting model that provided an eight-hour lead time and 85% accuracy. He was awarded $30,000 for this solution.

STEP 3

Contextualize the Problem

Examining past efforts to find a solution can save time and resources and generate highly innovative thinking. If the problem is industrywide, it's crucial to understand why the market has failed to address it.

What approaches have we tried? The aim here is to find solutions that might already exist in your organization and identify those that it has disproved. By answering this question, you can avoid reinventing the wheel or going down a dead end.

In previous efforts to expand access to clean water, EWV had offered products and services ranging from manually drilled wells for irrigation to filters for household water treatment. As with all its projects, EWV identified products that low-income consumers could afford and, if possible, that local entrepreneurs could manufacture or service. As Naugle and his team revisited those efforts, they realized that both solutions worked only if a water source, such as surface water or a shallow aquifer, was close to the household. As a result, they decided to focus on rainwater—which falls everywhere in the world to a greater or lesser extent—as a source that could reach many more people. More specifically, the team turned its attention to the concept of rainwater harvesting. "Rainwater is delivered directly to the end user," Naugle says. "It's as close as you can get to a piped water system without having a piped water supply."

What have others tried? EWV's investigation of previous attempts at rainwater harvesting involved reviewing research on the topic, conducting five field studies, and surveying 20 countries to ask what technology was being used, what was and was not working, what prevented or encouraged the use of various solutions, how much the solutions cost, and what role government played.

"One of the key things we learned from the surveys," Naugle says, "was that once you have a hard roof—which many people do—to use as a collection surface, the most expensive thing is storage."

Here was the problem that needed to be solved. EWV found that existing solutions for storing rainwater, such as concrete tanks, were too expensive for low-income families in developing countries, so households were sharing storage tanks. But because no one took ownership of the communal facilities, they often fell into disrepair. Consequently, Naugle and his team homed in on the concept of a low-cost household rainwater-storage device.

Their research into prior solutions surfaced what seemed initially like a promising approach: storing rainwater in a 525-gallon jar that was almost as tall as an adult and three times as wide. In Thailand, they learned, 5 million of those jars had been deployed over five years. After further investigation, however, they found that the jars were made of cement, which was available in Thailand at a low price. More important, the country's good roads made it possible to manufacture the jars in one location and transport them in trucks around the country. That solution wouldn't work in areas that had neither cement nor high-quality roads. Indeed, through interviews with villagers in Uganda, EWV found that even empty polyethylene barrels large enough to hold only 50 gallons of water were difficult to carry along a path. It became clear that a viable storage solution had to be light enough to be carried some distance in areas without roads.

What are the internal and external constraints on implementing a solution? Now that you have a better idea of what you want to accomplish, it's time to revisit the issue of resources and organizational commitment: Do you have the necessary support for soliciting and then evaluating possible solutions? Are you sure that you can obtain the money and the people to implement the most promising one?

Do you have the necessary support for soliciting and evaluating possible solutions? Do you have the money and the people to implement the most promising one?

External constraints are just as important to evaluate: Are there issues concerning patents or intellectual-property rights? Are there laws and regulations to be considered? Answering these questions may require consultation with various stakeholders and experts.

EWV's exploration of possible external constraints included examining government policies regarding rainwater storage. Naugle and his team found that the governments of Kenya, Tanzania, Uganda, and Vietnam supported the idea, but the strongest proponent was Uganda's minister of water and the environment, Maria Mutagamba. Consequently, EWV decided to test the storage solution in Uganda.

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STEP 4

Write the Problem Statement

Now it's time to write a full description of the problem you're seeking to solve and the requirements the solution must meet. The problem statement, which captures all that the organization has learned through answering the questions in the previous steps, helps establish a consensus on what a viable solution would be and what resources would be required to achieve it.

A full, clear description also helps people both inside and outside the organization quickly grasp the issue. This is especially important because solutions to complex problems in an industry or discipline often come from experts in other fields (see "Getting Unusual Suspects to Solve R&D Puzzles," HBR May 2007). For example, the method for moving viscous oil from spills in Arctic and subarctic waters from collection barges to disposal tanks came from a chemist in the cement industry, who responded to the Oil Spill Recovery Institute's description of the problem in terms that were precise but not specific to the petroleum industry. Thus the institute was able to solve in a matter of months a challenge that had stumped petroleum engineers for years. (To read the institute's full problem statement, visit hbr.org/problem-statement1.)

Here are some questions that can help you develop a thorough problem statement:

Is the problem actually many problems? The aim here is to drill down to root causes. Complex, seemingly insoluble issues are much more approachable when broken into discrete elements.

For EWV, this meant making it clear that the solution needed to be a storage product that individual households could afford, that was light enough to be easily transported on poor-quality roads or paths, and that could be easily maintained.

What requirements must a solution meet? EWV conducted extensive on-the-ground surveys with potential customers in Uganda to identify the must-have versus the nice-to-have elements of a solution. (See the sidebar "Elements of a Successful Solution.") It didn't matter to EWV whether the solution was a new device or an adaptation of an existing one. Likewise, the solution didn't need to be one that could be mass-produced. That is, it could be something that local small-scale entrepreneurs could manufacture.

Experts in rainwater harvesting told Naugle and his team that their target price of $20 was unachievable, which meant that subsidies would be required. But a subsidized product was against EWV's strategy and philosophy.

Which problem solvers should we engage? The dead end EWV hit in seeking a $20 solution from those experts led the organization to conclude that it needed to enlist as many experts outside the field as possible. That is when EWV decided to engage InnoCentive and its network of 250,000 solvers.

What information and language should the problem statement include? To engage the largest number of solvers from the widest variety of fields, a problem statement must meet the twin goals of being extremely specific but not unnecessarily technical. It shouldn't contain industry or discipline jargon or presuppose knowledge of a particular field. It may (and probably should) include a summary of previous solution attempts and detailed requirements.

With those criteria in mind, Naugle and his team crafted a problem statement. (The following is the abstract; for the full problem statement, visit hbr.org/problem-statement2.)

"EnterpriseWorks is seeking design ideas for a low-cost rainwater storage system that can be installed in households in developing countries. The solution is expected to facilitate access to clean water at a household level, addressing a problem that affects millions of people worldwide who are living in impoverished communities or rural areas where access to clean water is limited. Domestic rainwater harvesting is a proven technology that can be a valuable option for accessing and storing water year round. However, the high cost of available rainwater storage systems makes them well beyond the reach of low-income families to install in their homes.

A solution to this problem would not only provide convenient and affordable access to scarce water resources but would also allow families, particularly the women and children who are usually tasked with water collection, to spend less time walking distances to collect water and more time on activities that can bring in income and improve the quality of life."

What do solvers need to submit? What information about the proposed solution does your organization need in order to invest in it? For example, would a well-founded hypothetical approach be sufficient, or is a full-blown prototype needed? EWV decided that a solver had to submit a written explanation of the solution and detailed drawings.

What incentives do solvers need? The point of asking this question is to ensure that the right

To engage the largest number of solvers from the widest variety of fields, a problem statement must meet the twin goals of being extremely specific but not unnecessarily technical.

people are motivated to address the problem. For internal solvers, incentives can be written into job descriptions or offered as promotions and bonuses. For external solvers, the incentive might be a cash award. EWV offered to pay $15,000 to the solver who provided the best solution through the InnoCentive network.

How will solutions be evaluated and success measured? Addressing this question forces a company to be explicit about how it will evaluate the solutions it receives. Clarity and transparency are crucial to arriving at viable solutions and to ensuring that the evaluation process is fair and rigorous. In some cases a "we'll know it when we see it" approach is reasonable—for example, when a company is looking for a new branding strategy. Most of the time, however, it is a sign that earlier steps in the process have not been approached with sufficient rigor.

EWV stipulated that it would evaluate solutions on their ability to meet the criteria of low cost, high storage capacity, low weight, and easy maintenance. It added that it would prefer designs that were modular (so that the unit would be easier to transport) and adaptable or salvageable or had multiple functions (so that owners could reuse the materials after the product's lifetime or sell them to others for various applications). The overarching goal was to keep costs low and to help poor families justify the purchase.

The Winner

Ultimately, the solution to EWV's rainwater-storage problem came from someone outside the field: a German inventor whose company specialized in the design of tourist submarines. The solution he proposed required no elaborate machinery; in fact, it had no pumps or moving parts. It was an established industrial technology that had not been applied to water storage: a plastic bag within a plastic bag with a tube at the top. The outer bag (made of less-expensive, woven polypropylene) provided the structure's strength, while the inner bag (made of more-expensive, linear low-density polyethylene) was impermeable and could hold 125 gallons of water. The two-bag approach allowed the inner bag to be thinner, reducing the price of the product, while the outer bag was strong enough to contain a ton and a half of water.

The structure folded into a packet the size of a briefcase and weighed about eight pounds. In short, the solution was affordable, commercially viable, could be easily transported to remote areas, and could be sold and installed by local entrepreneurs. (Retailers make from $4 to $8 per unit, depending on the volume they purchase. Installers of the gutters, downspout, and base earn about $6.)

EWV developed an initial version and tested it in Uganda, where the organization asked end users such questions as What do you think of its weight? Does it meet your needs? Even mundane issues like color came into play: The woven outer bags were white, which women pointed out would immediately look dirty. EWV modified the design on the basis of this input: For example, it changed the color of the device to brown, expanded its size to 350 gallons (while keeping the target price of no more than $20 per 125 gallons of water storage), altered its shape to make it more stable, and replaced the original siphon with an outlet tap.

After 14 months of field testing, EWV rolled out the commercial product in Uganda in March 2011. By the end of May 2012, 50 to 60 shops, village sales agents, and cooperatives were selling the product; more than 80 entrepreneurs had been trained to install it; and 1,418 units had been deployed in eight districts in southwestern Uganda.

EWV deems this a success at this stage in the rollout. It hopes to make the units available in 10 countries—and have tens or hundreds of thousands of units installed—within five years. Ultimately, it believes, millions of units will be in use for a variety of applications, including household drinking water, irrigation, and construction. Interestingly, the main obstacle to getting people to buy the device has been skepticism that something that comes in such a small package (the size of a typical five-gallon jerrican) can hold the equivalent of 70 jerricans. Believing that the remedy is to show villagers the installed product, EWV is currently testing various promotion and marketing programs.

AS THE EWV STORY illustrates, critically analyzing and clearly articulating a problem can yield highly innovative solutions. Organizations that apply these simple concepts and develop the skills and discipline to ask better questions and define their problems with more rigor can create strategic advantage, unlock truly groundbreaking innovation, and drive better business performance. Asking better questions delivers better results.

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