"Use the tools in this book to solve the seemingly impossible challenges your business faces today, and your customers will thank you with their loyalty and wallets."

—JAMES THOMSON, partner at Buy Box Experts and former head of Amazon Services

think like amazon

50½ WAYS TO BECOME A DIGITAL LEADER

John Rossman

Former Director, Merchant Integration, Amazon.com
and author of *The Amazon Way on IoT*

idea 44

A NARRATIVE ABOUT NARRATIVES

Ditch the PowerPoint and Gain Clarity

The single biggest problem in communication is the illusion that it has taken place.
—George Bernard Shaw

Amazon Web Services (AWS) is the largest cloud computing technology company in the world. In 2017, it produced an annual revenue run rate of $20.4 billion. To put this into perspective, AWS accounted for all of Amazon's operating income that year. AWS's business growth is on a more than $18 billion annual run rate, growing 42 percent a year.[1] According to Gartner, AWS is bigger than the next 14 cloud providers combined.[2]

While its size and growth are impressive, the number of new products and major feature developments—the pace of innovation—is what really stands out. Year after year, AWS has launched more than 1,100 major new services and features in its global cloud platform, according to CEO Andy Jassy. That has kept AWS the undisputed leader in cloud computing in terms of cloud services, features, and functionality. It far outpaces other technology companies.

How does Amazon manage that degree and intensity of innovation? How do Amazon's leaders decide what to do and what not to do? How do they develop ideas and rationalize them? Much the same way they hire the best people. They use the narrative process to answer these questions and to capture and explain their ideas. While "writing it" seems like a counterintuitive process for creating twenty-first-century innovation, Bezos has proven that sometimes the oldest ideas are the best.

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idea 44: Writing ideas and proposals in complete narratives results in better ideas, more clarity on the ideas, and better conversation on the ideas. You will make better decisions about what to do and how to do it. The initiatives will be smaller and less risky. Writing narratives is hard, takes a long time, and is an acquired skill for the organization. High standards and an appreciation for building this capability over time are required.

WHAT IS INNOVATION?

I had an advisor at the Gates Foundation who was a former senior Microsoft technology leader, and he always emphasized that "the only features that matter are the ones that ship." While this statement is a little anachronistic today (obviously no one is shipping software anywhere these days), he was 100 percent correct. Innovations are not ideas; neither are they attempts or prototypes. Innovations consist of new capabilities that are "shipped." In other words, they are capabilities that affect customers and generate new revenue, improve quality, or decrease costs.

Leaders and companies frequently mistake innovation with being creative. While being creative plays a role in innovation, deciding what ideas to pursue is the first, under-the-waterline step toward creating capabilities that affect customers and generate new revenue. Let's call this process "innovation portfolio rationalization," or strategy setting.

The second under-the-waterline step is executing or delivering that capability as quickly, as affordably, as nimbly, but most of all, as predictably as possible.

THE KILLER FEATURE: CLARITY

Michael Porter, Harvard professor of strategy, has stated that “strategy is about making choices, trade-offs; it’s about deliberately choosing to be different.”[3] By developing clarity and simplicity in what you are doing and not doing, you are improving the ideas, making deliberate decisions, and gaining shared understanding in the organization. The fundamental mistake leaders make in developing digital strategies is not seeking clarity, especially regarding the customer experience. What will delight the customer? What operational model supports this experience? What data and technology support the operational model? How will we measure?

Achieving clarity can be uncomfortable. It can disrupt. People tend to want to avoid conflict, be collaborative, and basically accept all the ideas and all the wording. This tactic does not demand the best thinking and avoids the sensitive topics in the spirit of “getting along.” A well-written narrative, on the other hand, demands rigor on exactly the right wording, compels getting to the heart of risks and sensitive topics that have to be addressed to achieve the goal, and requires straight and simple language to ensure that everyone understands the key points. A well-written narrative and the process of writing it will force teams to get beyond being polite and get to insights.

Amazon Leadership Principle 3 is “Invent and Simplify.” Driving toward clarity of thought through a written narrative is a key operational approach to get both invention and simplification. “Almost every meeting which involves making a business decision is driven by a document,” says Llew Mason, an Amazon vice president. “One of the great things about a written document is that it drives a lot of clarity in the process.”[4] Ah, clarity in thinking. Clarity on what you decide to do. Clarity on how the idea will affect users and the business. A longtime business partner of mine who worked with me both before and after Amazon has told me many times that what he sees me doing with my clients, which he has seen to be tremendously helpful, is that I’m always trying to simplify and clarify the communication. I learned this at Amazon.

WHAT IS A NARRATIVE?

At Amazon, leaders write narratives for all plans, proposals, services, and investments. PowerPoint is not used (insert applause). Much has been written about how PowerPoint dumbs down an organization. In his 2017 letter to shareholders, Bezos wrote, “We don’t do PowerPoint (or any other slide-oriented) presentations at Amazon. We write narratively structured six-page memos,” Bezos continues. “We silently read one at the beginning of each meeting in a kind of ‘study hall.’ Not surprisingly, the quality of these memos varies widely. Some have the clarity of angels singing. They are brilliant and thoughtful and set up the meeting for high-quality discussion. Sometimes they come in at the other end of the spectrum.”[5]

Narratives at Amazon are two- or six-page documents written in complete sentences. A narrative must be expressly tailored to the situation based on the topic, the timing in the initiative, and the audience. It must flow in a way that makes sense relative to the topic and audience. It is verboten to dump excessive bullet points or slides into the narrative. Data, charts, and diagrams can be included, but they must be explained in the narrative. Appendix material is also allowed. I believe that the discipline of writing out ideas is at the heart of Amazon’s innovation process and can be replicated to the same effect. As explained by Greg Satell:

> At the heart of how Amazon innovates is its six-page memo, which kicks off everything the company does. Executives must write a press release, complete with hypothetical customer reactions to the product launch. That is followed by a series of FAQs, anticipating questions customers, as well as internal stakeholders, might have.
>
> Executives at the company have stressed to me how the process forces you to think things through. You can’t gloss over problems or hide behind complexity. You actually have to work things out. All of this happens before the first meeting. It’s a level of rigor that few other organizations even attempt, much less are able to achieve.[6]

THE PROCESS OF A NARRATIVE

Why do programs and projects take too long, go over budget, become bloated, and fail to deliver according to expectations? Execution and project management technique can be reasons, but the biggest root cause is failing to accurately define the end state at the beginning. Teams want to launch quickly and start designing, building, and testing. Taking the time to write a narrative will dramatically improve the definition of what needs to be done, plus make it as small and concise as possible, so it can be done faster, cheaper, and with more agility. But writing narratives takes time, so they are done when they are done. It is difficult to predict how long it will take and how much effort will be required. It is completely reasonable to create a deadline. “You have one week to write a narrative” might be appropriate.

Narratives can be written by one person, but it is often a group effort because multiple people and teams contribute to the idea. Forcing people to own the narrative jointly has huge benefits in both getting the best ideas on paper and building shared understandings and relationships through authorship. Part of Amazon’s practice on narratives is not to include the author’s name or names on the narratives. This sends the signal that the narrative is a community activity.

When the narrative is done, think through the review meetings and decision-making process. Who needs to deeply understand and agree with the narrative before a decision is made? Who are the key decision makers? At Amazon, review meetings tend to be 60 minutes long. They start with 10 to 15 minutes of silence to deeply read or "grok" the proposal and vision. This is followed by a discussion debating the merits, options, appropriate next steps, and decisions.

The process of authoring, reviewing, and deciding must be carefully considered. It must be rigorous. It must take time and effort. It is done when it's done. What do narrative writers do wrong? They don't spend enough time on their writing. As Bezos wrote: "They mistakenly believe a high-standards, six-page memo can be written in one or two days or even a few hours, when really it might take a week or more! . . . The great memos are written and re-written, shared with colleagues who are asked to improve the work, set aside for a couple of days, and then edited again with a fresh mind. . . . The key point here is that you can improve results through the simple act of teaching scope—that a great memo probably should take a week or more."[7]

THE STRUCTURE OF A NARRATIVE

A narrative must be constructed of complete thoughts, complete paragraphs, complete sentences. You may include charts, numbers, and diagrams, but those items must be explained in the narrative. Other than that, there are no rules on structure, and the structure the authors choose will depend on the topic, the timing in the discussion cycle, and the audience.

The first sections of the narrative are typically customer focused. "Who are the customers? What benefits are we bringing them? What problems are we solving for them? Why would this idea delight them?" Sections after that might include what the customer experience would be, dependencies or requirements, metrics to measure success, business case, and key risks.

A SAMPLE NARRATIVE

If you're looking for an example, look no further than this chapter. You've been reading one. Now you, the target audience, hopefully understand the importance of writing ideas out completely and clearly. For your projects, investments, strategies, and executive topics, ditch the PowerPoint presentations, and force teams to put their ideas and plans in writing. Meetings start with 10 to 15 minutes of silence to read the narrative. Phones and computers are left outside. Then debate the merits of the narrative. Don't be afraid either to ask that the narrative be improved or to write a follow-up related narrative.

Make no mistake. Creating narratives takes skill, experience, commitment, and patience. You can't rush great narratives because you can't rush great thinking and communications.

It takes practice. Writing is less an artistic exercise and more a practiced skill. It's less of a spontaneous combustion and more of a methodical construction—like building and rebuilding the perfect birdhouse. Do you have the discipline and commitment to write in plain English your most important ideas and proposals? Other executives and big companies are recognizing how writing as a forcing function to create clarity is key to innovation. JPMorgan Chase, whom I have had a chance to talk to about many of these ideas, is using narratives as one of the ways to try to be literary, more like Amazon. "Mr. Bezos notoriously banned slide presentations to keep Amazon in startup mode as it grew, instead asking employees to craft six-page documents complete with a press release and FAQs. Over roughly the past 18 months, JPMorgan has started a similar practice in its consumer businesses under Gordon Smith, the bank's co-president and co-chief operating officer."[8] Are you able and willing to commit to hard habits like writing narratives to change culture, speed, tempo, and innovation?

Now that we've covered narratives, the next three ideas build on the heart and soul of Amazon's innovation process—continuing to get it down on paper with clarity and simplicity and having rigorous debate as the key core attributes.

QUESTIONS TO CONSIDER

1. Do ideas and plans suffer from incomplete thought?
2. Do projects get bloated with size and unnecessary complexity?
3. Do executives understand and influence the details of a proposal sufficiently to make a well-informed decision?

THE FUTURE PRESS RELEASE

Define the Future and Get Teams on Board

The future ain't what it used to be.
—Yogi Berra

When it comes to innovation, there is rarely a straight line from *A* to *B*. Why is that? In general, we usually create only a vague sketch of the goal we're trying to achieve. As a result, we tend to revise the goal as we go, a process that costs time, money, and, sometimes, the project's very success. Or we all have various definitions of the goal.

But what if you could see into the future and accurately visualize your end product before launching a project? Sound good? Well, there's really nothing stopping you. At Amazon, they do it every day. It's an exercise in clarity they call the *future press release*. Not only can it define the future but it can also keep your organizational structure from transforming into a bureaucratic rat's nest (see Idea 13) and empower a leader to drive the initiative across multiple teams.

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idea 45: Start important projects or changes with an announcement. Be clear about what the "killer feature" is for the future state capability. Give it to one leader to make this vision happen across the organization. Everyone works for this person to transform this vision into reality.

IMAGINE THE FUTURE

Most innovation and change initiatives take work and true ownership from multiple teams and leaders. While long-form narratives (see Idea 44) are great for developing a deep understanding, sometimes a brief, more impactful approach is necessary to excite and engage a wider range of parties.

Jeff Bezos is famous for requiring teams to create the future press release before launching a new product, undergoing any kind of transformation, or entering a new market. The process of creating a simple, but specific product announcement clarifies the original vision. It acts as a forcing function to thoroughly examine key features, adoption, and your project's likely path to success. Committing to a press release, speculative though it may be, also helps leadership clearly express to important stakeholders the road map to success.

THE RULES FOR THE FUTURE PRESS RELEASE

The future press release is a great approach to defining clear and lofty goals, requirements, and objectives and to building broad understanding from the start of a program or enterprise change. There are, however, rules to make this approach effective:

Rule 1. The goal must be stated at a future point in time at which success has been achieved and realized. Press releases at launch are good, but a better one is sometime after launch, where true success can be discussed.

Rule 2. Start with the customer. Use the press release to explain why the product is important to customers (or other key stakeholders). How did the customers' experience improve? Why do the customers care? What *delights* customers about this new service? Then discuss other reasons it was important and key goals.

Rule 3. Set an audacious and clear goal. Articulate clear, measurable results you've achieved, including financial, operating, and market share results.

Rule 4. Outline the principles used that led to success. This is the trickiest and most important aspect of the future press release. Identify the hard things accomplished, the important decisions, and the design principles that resulted in success. Discuss the issues that needed to be addressed to achieve success. Getting the "tricky" issues on the table early on helps everyone understand the real nature of the change needed. Don't worry about how to solve these issues yet. You've still got time to figure that out.

THE FORCING FUNCTION

Once you've created a future press release, the project leader needs to be empowered to make these changes happen. Focus on creating a future press release–oriented communication plan that helps that project leader find success across the organization.

Remember, the future press release is a type of forcing function. Once the press release is reviewed and approved, teams should have a very difficult time backing out of the commitments they have made. A leader can refer to parts of the press release and use it to remind and hold teams accountable. It paints a clear vision to galvanize understanding and commitment. It is a contract.

Figure 45.1 is an example of a future press release, dated December 1, 2022. Notice how the lead paragraph clearly states the objective. In this case, "*Consumer Reports* gave Acme Co. its 'Most Admired Home Appliance Brand' award." Once the aspirational goal and time limit are set, the future press release goes on to clarify why the award was presented and illustrates how Acme Co. started by asking a different set of questions and being willing to build and collaborate within an ecosystem of partners, including traditional competitors. It concludes with a series of specific milestones that can be used by the organization as a road map from here to there.

With the long-form narrative (Idea 44), we explored a deeper understanding of an internal project. With the future press release, we've created a definition for success to drive engagement, clarity, and enthusiasm for the project. In 2002, I wrote the future press release for the Amazon Marketplace business. There was one sentence in it that was critical: "A seller, in the middle of the night, can register, list an item, receive an order, and delight a customer as though Amazon the retailer had done it." Pretty simple sentence, but it imposed tremendous requirements on both Amazon and our sellers. For example, just to do self-service registration, over 20 different systems had to be integrated. I used this press release as a forcing function to compel all of these teams, none of which reported directly to me, to get this hard work done. We avoided bureaucracy and launched quickly because we were able to act nimbly and avoid our organization structure to focus on an initiative. The future press release, given to one leader in the organization, is one of the methods Amazon uses to get its results.

December 1, 2022

Breaking News: *Consumer Reports* gave Acme Co. its "Most Admired Home Appliance Brand" award.

Palo Alto, December 1, 2022: *Consumer Reports* named Acme Co. the "Most Admired Home Appliance Brand." *Consumer Reports* noted the industry-leading reliability, safety, and connected customer experience as the hallmarks for recognition.

"Acme's appliances go beyond the expected and traditional customer experience. The ability to personalize every aspect of performance, to have predictive maintenance managed for customers, and to optimize the energy and operating costs for the customer all distinguish Acme home appliances," noted Hal Greenberg, CEO of *Consumer Reports*.

In discussing Acme's acceptance of the award, Acme's CEO noted that "in 2018 we started on a journey to reinvent the buying, ownership, and operating experience of appliances. We embraced a different set of questions to drive our strategy and willingness to innovate. These questions opened up opportunities for Acme and for others."

By asking a different set of questions and being willing to build a collaborative ecosystem of partners that includes traditional competitors, everyone ended up winning. Key examples of Acme's improvements include the following:

- Predictive maintenance programs delivered as warranty service that saved 10 percent of the energy used
- Hazardous environment and usage monitoring that saves homeowners on insurance, and most importantly has prevented an estimated 10 home fires this year alone
- Complete voice control and updates both directly to the appliance or through the customer's preferred voice speaker such as Amazon Echo or Google Home
- Appliance sharing programs allowing for an Airbnb type of business opportunity for apartment owners to use their appliance
- Energy Grid optimization intelligence allowing homeowners to save an estimated 20 percent annually through dynamic load management

The biggest innovation is the in-depth data Acme combines with other in-home environment and appliance data to optimize its customers' experience.

"We had to break a lot of traditions both here at Acme as well as in the industry to create this type of innovation."

Creating the home appliance data standards platform was advancement. Acme is now the U.S. market leader in both customer satisfaction and market share.

Acme stock closed the day at record $198, up 25 percent from a year ago.

Figure 45.1 Example of a Future Press Release

But what about our users? How do we develop empathy and insights for our customers? Amazon, of course, has thought of that too. I give you, the FAQs.

QUESTIONS TO CONSIDER

1. Do your initiatives start with a definition or vision that can be shared across the organization?
2. Does organizational structure get in the way of achieving cross-functional delivery and success for change initiatives?
3. Are leaders who are accountable for delivering change initiatives given license to nimbly work across the organization?

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idea 46

FAQS

Answer Others' Questions for Your Benefit

Judge a man by his questions rather than his answers.
—Voltaire

Early in my career, while at a consulting company, I worked on a project for Boeing at a missile factory in Tennessee.

We were implementing a shop floor control program in the production area. My colleague was training some of the staff on the new technology we had labored so hard on for months. We were confident the system was perfect. The client team had affectionately nicknamed my colleague "Oatmeal" for his wholesome demeanor. Like me, he was a newly minted industrial engineer, and this project was one of our first. As the operator worked to input work order information in the system, he shouted across the room, "Oatmeal! Which is the 'any' key?" The system instructions had instructed the operator, "Hit any key to continue."

I had written that instruction and user interface. This was not the operator's problem. This was my problem. I had not been curious or empathetic enough about the user's perspective to recognize how confusing this instruction potentially was. I had written the document solely from my context and from my orientation, not from my target user's point of view. If I had written a set of frequently asked questions (FAQs), I might have predicted this user confusion.

idea 46: Develop insights and empathy for your user and other involved parties by writing FAQs. Make these available for anyone in the organization or involved in the initiative to both read and contribute to. Do this before you start developing and keep it up to date. Make it thorough. The only dumb question is the unasked one.

WRITING FAQS AS A WAY TO ANTICIPATE KEY QUESTIONS ABOUT YOUR PRODUCT

Once you've written the narrative and press release, you can forecast some of the questions you're likely to get about your product or business in a list of frequently asked questions (FAQs) document. The purpose of the FAQs is to add more details to the press release and answer other business and execution questions necessary to launch. This can be either a separate document or appended to the end of your future press release.

By proactively writing an FAQs document, you're forcing yourself to think through the key questions about your product and helping to pre-answer the big questions your stakeholders are likely to have.

A good set of FAQs allows for the press release document to stay short and focused on what the customer gets. The FAQs document should include resolutions to issues and answers to questions that come up when you are writing the press release. It should also address questions that arise through the process of socializing the press release. A good FAQs document includes questions that define what the product is good for, how it will be leveraged by the customer, and why it will delight the customer.

Building the FAQs document forces you to put yourself in the role of the customers using the product and consider all the challenges or confusion they might have. It also provides inspiration for designing a fully self-service, confusion-free product.

A SAMPLE SET OF FAQS

One of the companies I've been fortunate to be involved in as an advisor is a startup company called Modjoul (www.modjoul.com). Modjoul makes a sensor-based rugged belt used by workers to help prevent and manage workplace injuries and unsafe behavior. It has eight sensors and collects over 56 metrics.

I encouraged the team at Modjoul to write the following set of FAQs, which they found helped them scale and train their growing team. They have kept FAQs on an intranet, and they continue to add and update them. We started with a question (Q), an answer (A), and a discussion (D). The following questions and answers are a subset of the Modjoul FAQs broken into sections for the worker, the direct supervisor, and the risk manager and the IT, legal, and finance departments. Be prepared.

This is a lengthy set of questions and answers, as it should be. The exercise captures all the different types of questions that might arise so that the team can avoid them or be prepared to answer them. The length of this sample set demonstrates the exhaustive length appropriate for FAQs. We wrote this FAQ document with the purpose of being able to train new sales staff at Modjoul. We improved it by adding a discussion (denoted by D) to many of the questions and answers.

For tthe Worker

Q1: *How do I wear the belt? (Everything from what side is up, to does the belt go through the belt loops or over them?)*

A1: The Modjoul SmartBelt is worn like a regular belt—through the belt loops of your pants. The side with the on/off switch, charging port, and SOS/alert button is the bottom, and it should not be visible to the user when worn correctly.

D1: The questions around the proper wearing of the belt led to our creating quick user guides on the subject. Modjoul had quick user guides on setting up dashboards and connecting to Wi-Fi, but sometimes when designing a product, you get so accustomed to the little things that you forget you have to start with the basics—the simple task of putting the belt on correctly.

Q2: *How do I use the belt?*

A2: The belt is worn like any other belt. It is designed to fit through the belt loops, and it is designed to hold your pants up. The biggest difference is the on/off switch. When wearing the belt, make sure the belt is turned on so it is able to collect data.

D2: That is the simple answer. There have been a lot of lessons learned around this question in attempts to make the user experience as simple as possible.

Q3: *How do I charge the belt?*

A3: Charging the belt is simple. Plug the micro USB cable into a USB wall adapter, then plug the adapter into the wall. The LED next to the charging port will turn blue when the belt is charging.

D3: One item of note for this was the decision to go with industry standard connections. Everyone knows what a micro USB is. It was a simple design choice to stick with the concept of use, to work with what people know and what people are familiar with.

Q4: *What do the different LED colors indicate?*

A4:

Top LED:

Red: Belt is powered on **but** not connected to Wi-Fi.
Green: Belt is powered on **and** connected to Wi-Fi.
Blue: Belt is powered on **and** connected to Wi-Fi **and** connected to GPS.

Bottom LED (applies only while belt is on the charger):

Blue: Belt is charging.
None: Belt is done charging.

D4: Indicators can help clue users into the status of the device, they can help with troubleshooting devices, and they can lead to a lot of questions. I believe that indicators need to be kept simple and serve as a quick check of the device status.

Q5: *What if I wear the belt home?*

A5: No need to worry about it. Turn the belt off, plug it in using any micro USB charger, and remember to bring it into your place of employment the next day.

D5: Honestly, we were happy to hear this question. It reassured us that the belt was something that people could forget about while wearing. One of the goals for any safety device, really any wearable device, is to not be intrusive. In order to help with adoption, form, fit, and function, it should align with what people are used to. This question was an indicator that the belt felt like any other belt, and employees might really forget that they had a workplace wearable on.

Q6: *What types of activities does the belt monitor?*

A6: Human location, movement, and ambient environment. There are eight sensors and a GPS in the belt. These sensor values are processed and placed into one of seven activities, then further broken down into 1 of nearly 50 associated metrics.

D6: In my opinion, the real important takeaway of this question is how many times it gets asked directly or indirectly. People want to know what the belt does and what types of data it gathers. This information is a huge driver of our data models and our new features that are rolled out.

Q7: *What is the end goal?*

A7: The end safety goal is to make the workplace a safer place. People should leave work the same way they came into work. Whether it is using the aggregated data of a group to learn of a process that needs to be improved, using the data to validate the purchase of a new, safer piece of equipment, or using the data from like groups of individuals to identify who is more likely to get injured, the belt is a tool to access data that has never been easily obtainable before.

D7: Transparency and trust also play a role in the answer to this question. It is a common question that we get from the employees. It might be phrased slightly differently, but they are curious about the point of wearing the belt. Sometimes they see and understand the short-term-fix answers (improving bend counts week over week for, example), but sometimes they ask with a larger end goal in mind. For instance, would the company buy vacuum lifts or some other assisted-lifting device to help with bins that need to be packed or unpacked?

Q8: *How long do I need to wear the belt?*

A8: The answer varies by use case, but the general answer is the longer, the better. Wearing the belt as long as possible will provide a solid data set to use as a goal threshold or an improvement number, and employee trend lines can track progress across all the metrics.

D8: We have two types of customers: (1) the organization that wants to use the belt for a few months as a training tool or for process improvement and/or validation and (2) the organization that is in it for the long haul and wants to continuously monitor the safety of its employees.

Q9: *Why does the belt buzz (or vibrate)?*

A9: The belt vibration is a configurable parameter to provide the user with instant feedback of a movement that might be considered risky by his or her organization.

D9: We have had lots of really good feedback about this. We started vibrating the belt only once every five minutes for a bend of over 60 degrees because we didn't want to be "too intrusive." However, the point was raised a few different times, that if we were using it to provide real-time feedback to the employee of an event that should be given attention, the belt should buzz every time. Eventually, the employee will become aware of it and will try to eliminate those movements out of his or her workday.

Q10: *Can we put tools on the belt?*

A10: Yes. The whole right-hand side of the belt is simply just a nylon strap. Anything can be clipped on it or attached to it.

Q11: *How do I know the belt is mine?*

A11: There is a name tag slot on the back of the belt. The employee can also be creative with it if the uniform code allows. We have seen some employees put a piece of colored tape on the buckle as a quick identifier.

D11: This is a point that we are continuously exploring how to improve. We have thought of industry standard sizing color strips sewn into the nylon to help identify which is yours.

Q12: *Do I need to wear the same belt every day?*

A12: Yes. One belt for one person.

D12: Belts can be reassigned to new users, but it is not encouraged on a day-to-day basis. If anything, questions around this have led to better flexibility with managing users and shift schedules. Ultimately, Modjoul believes that if something is tedious or time-consuming to change, the user will get tired of using it. The user experience (belt and its setup and/or configuration) needs to be easy and painless for users.

For tthe Diirect Supervisor

Q16: *How can I view the data?*

A16: As a supervisor, you have access to the supervisor level dashboard where you can view all your employees and their associated metrics on an aggregate level view.

D16: There are three different personas through which to view data within an organization. The first is the employee view (an individual view of the data). The second is the supervisor level view (an aggregate level view of the data for a given team). The third is the risk manager level view (an aggregate level view of different supervisors, locations, and roles). Taking this question one step further, I believe there is an element of simplicity that lies within this question as well. Everybody is doing a full-time job. The ability to view the data easily is important.

Q17: *What types of data are collected?*

A17: See Q6.

Q18: *Can I view the data of my team holistically?*

A18: Yes. See A16.

D18: Modjoul thinks one of the greatest benefits of the belts comes when groups of employees are observed at the same time. When we look at groups of employees, we can quickly see the outliers within specific job roles. If the outlier is high compared to the group (bend counts over 60 degrees as an example), they are considered a *pre-loss indicator*. The concept of a pre-loss indicator is that this employee hasn't been injured yet, but if these methods are sustained, this person is more likely to get injured than the rest of the group.

Q19: Can I export the data out of the dashboard?

A19: Yes. Data can be exported to a .csv file from the dashboards, or it is accessible via an API.

D19: For the technical and programming folk, an API makes sense, but average supervisors aren't going to know what an API even is. Modjoul puts a lot of time and design work into the dashboard user interface (UI) to make sure that it satisfies as many users as we can. Unfortunately, we know that some people will come up with new, one-off requests, so our goal is to make the data available for even the supervisor with very little technical expertise. There is an export button built into the dashboard so that any one of the metrics can be exported to a spreadsheet.

Q20: *Can I print the dashboards that are created online?*

A20: Yes, all the charts and reports in the dashboard can be printed.

D20: This was a great idea that was actually brought to us by a supervisor in one of our customers. The customer already had a safety board in the office where the the company had posted all of its relevant safety information. The ability to print out the reports for the team not only helped with familiarity of the SmartBelt for the users but also led to broader exposure of the device to the larger organization.

Q21: *Any ideas on how to handle employee resistance?*

A21: Ultimately, the answer varies from organization to organization.

D21: My personal opinion is that inclusiveness with the belts within a team can really help build a culture around the product. If everyone is wearing the belt, everyone is on a level playing field. We learned this in one of the ongoing pilot projects with a major airline company. The project started with 2 belts, went to 10, and now has close to 70 across two teams. When everyone on the team is wearing the belt, they all keep an eye on each other and hold each other accountable, but if only a few are wearing the belt, they always ask, "Why are those people not wearing the belt while I have to wear one?" Another way to handle employee resistance is by incorporating the belt into a businesswide safety program and gamifying the data to create a bit of a competition. Modjoul has learned a lot with this, and we have worked these learnings into our "keys to successful pilot" talks.

Q22: *Is the belt the only product that is available?*

A22: Yes, at this time.

For the Risk Manager (VP of Safety)

Q28: *How can this data be turned into actionable insights?*

A28: A few items play into this answer. The first is customizable dashboards and alerts based on the activities that your business is really interested in looking at. The second is active engagement between supervisor and employee to really understand the data and what that person is doing. The third is that the belt will give the user real-time haptic feedback on a configurable metric.

D28: This is a relatively uncommon question to get directly right now, but we believe it is very important. I think we will encounter it more as we move from the 10-25 belt pilot, or proof of concept, into the larger orders. The belt needs to drive change and be used as a tool to drive safety improvements. With all the different metrics to look at, a company needs to start small, and honestly, it just needs to start somewhere, when looking at the data. Too much data can be overwhelming. Using actively engaged supervisors, safety professionals, ergonomists, and haptic feedback on the belt itself allows the users to be alerted of an at-risk movement and allows the supervisors to get involved with the business to better understand their risk and make changes. This question is always something that we try to keep in the back of our minds while creating dashboards and building out the UI. It is easy to spot issues, but we can take that data one step further and try to pinpoint issues, or we can use it as a starting point for eventually getting us to be able to take corrective actions.

Q29: *Can the information be used for pre-loss and post-loss use cases?*

A29: Yes, it can be used for both. A *pre-loss use case* would be similar to the example used in D18. A *post-loss use case* would be a return-to-work situation when the employee wears the belt to validate or prove that he or she is following the doctor's orders.

For tthe IT Group

Q32: *How does the device work?*

A32: Coming from an IT person, this question is more about how the device sends data. The short and simple answer is that it communicates via Wi-Fi. The longer answer involves storing data on the storage device (SD) card when the device is out of Wi-Fi range and uploading bulk data after shift times are complete.

D32: On 10-20 belt rollouts, this has not been a big issue yet. However, these discussions with IT groups have already been really valuable with helping design the next generation to make sure our product can work with a large variety of Wi-Fi standards and networks. The lesson for Modjoul on this has been that we "squeaked by" with the Wi-Fi capabilities that we have now, but our feedback from our customers around this topic has pushed us to really focus on connectivity next time around.

Q33: *How is the data sent to the cloud?*

A33: Through the industry standard encrypted MQTT port (8883).

D33: The part of the answer that the IT guys really want to hear is that the data is encrypted while in transit, and at rest. It helps using industry standard protocols because it builds trust when it's a reputable protocol.

Q34: *Is the data encrypted in transit and at rest?*

A34: Yes.

D34: There isn't a ton to discuss about data encryption. Our customers just want to make sure that when it is being sent and stored, it is encrypted.

Q35: *What kind of encryption is used?*

A35: A variety of encryption methods are used throughout the various stages the data passes through.

Q36: *Where is the data stored?*

A36: In the Virginia AWS facility.

D36: The interesting lesson Modjoul learned here was that some of our customers have rules against storing data internationally.

Q37: *How are the devices onboarded to connect to the network?*

A37: There are a few ways the device can be onboarded. For initial setup, the two methods are either through the web dashboard setup process or through coding in the firmware. After the initial setup is done, Wi-Fi credentials can be sent directly to the belt from the dashboard.

D37: This is a continuous learning and improvement process for us. With one belt, we can afford to take a few minutes to get it configured. Working with over a thousand belts, however, we can't afford to take that long. Speed of configuration and ease of use on configuration are two areas we always are trying to improve.

Q38: *Can passwords be changed on a specified schedule?*

A38: Passwords can be changed when desired.

Q39: *What are the security functions surrounding user credentials?*

A39: Users get locked out after five attempts of logging in.

D39: Security is the name of the game nowadays for these IT guys, and concerns range from how we encrypt data to how we make sure users are who they say they are. As a company, we just need to understand that and try our best to protect our customers' data.

For Legall

Q41: *Who owns the data?*

A41: The data is co-owned between the customer and Modjoul.

D41: Data ownership is a hot topic in any business. Everyone wants to own the data. As a company, we use the data to help with our data models. More data will lead to better models.

For Fiinance

Q42: *What kind of data is collected?*

A42: See A6.

Q43: *How much does the belt cost?*

A43: $500 (*subject to change).

Q44: *Do you have a pay-as-you-go model?*

A44: Yes, $20 per belt per month.

D44: We have been making good progress with this model. Most of our companies want to just get their toes wet a bit before jumping into a full commitment. The subscription model lets us get some cash flowing in, without requesting too much of a financial commitment from the customer to us.

Q45: *What is included in the price?*

A45: The belt hardware, IoT infrastructure, data models, and all dashboards.

Phew. As you can see in the example, predicting questions posed by various users and stakeholders can be a long, arduous, and surprisingly expansive exercise. When we did this, we found many ideas to improve the product or clarify its operation. However, by committing to a thorough examination of the end user's entire point of view, you can prevent your own version of the "any key." And, as you will discover in the next chapter, there is another exercise that allows you to drill even deeper: writing the user manual.

QUESTIONS TO CONSIDER

1. Do you have a project or situation that FAQs document might clarify and inform?
2. Have you had projects where different perspectives were not considered that created issues?
3. Where do projects or initiatives typically go wrong for you? How could writing FAQs help?

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WRITE THE USER MANUAL

Start with the Customer and Work Backward

Simplicity is the ultimate sophistication.
—Leonardo da Vinci

If you build product, the ultimate power play is not having to include user instructions. The capability or product is so obvious and well designed to the needs of the user that instructions are superfluous. I think about the unboxing experience of an Apple product. The ultimate in sophistication. Elon Musk has said, "Any product that needs a manual to work is broken." The product should be so intuitive it doesn't need a user manual. That is power.

We should all strive to deliver products and services so obvious, ergonomic, and intuitive that no user manual is needed. Ironically, a great way to achieve this is to write the user manual at the outset of the product's design and understand the user journey before you begin development.

idea 47: If you can't explain how your product or service or capability will be used, you aren't ready to build it. By developing personas, user journeys, and user manuals before building, you will gain insights to make your product better for its users. You will make smarter trade-offs and judgments throughout its development.

PERSONAS AND JOURNEY MAPS

User-focused design is a mentality and approach that puts the user smack dab at the center of requirements and product development. "Well, how else would you do it?" you might ask. The common approach is making the concept or specific technology the driving force and then attaching a market and user definition later. I'm not an expert on any of these, and the goal is not to argue for one over the other, but if "easy" is a goal, starting with the user is likely the best path to get there.

Part of the user-focused design tool kit is the development of personas and journey maps. A *persona* is a deep articulation, as rich and as broad as possible, of the target customer of your potential product or service or business. You want to know this person inside and out when you are done. The *journey map* uses the persona to develop insights into the events, questions, and activities going on in the person's life before, during, and after the involvement of your service.

Developing customer personas and mapping those customers' current journeys are terrific ways to document specific unmet needs and identify key friction points your future customers are experiencing right now. Following the path from start to your desired outcome can help you identify details and priorities that might otherwise be dealt with at too high a level or skipped over entirely.

It's hard work to craft strong customer personas and journeys. It's likely you'll need a few iterations before you really nail them. (I often need to start over more than once before I gain any real insights.) The biggest mistake you can make on these is to build them for show rather than for function. Don't worry about the beauty of these deliverables at this point. Do worry about getting insights, talking to customers, and validating your findings with others who can bring ideas and challenges to your work.

USER MANUALS

Developing a preliminary user manual for your service can be a powerful tool early on in a project. We used this at Amazon when developing products or APIs.

Your user manual should address at least two key customer segments: the *end user* of the device or service, and if you are developing a technical product or service, the *programmer developing on your platform*:

- **The end user of the device or service:** Who is the customer who will be installing, using, adjusting, and getting feedback from your product? Outline what the unpacking directions will be, what the installation process will be, how updates will happen, what the data privacy terms will be, how to use and read the device, and how to connect it. Think through all the major steps the users of the product will need to take, and include them in a close-to-real-life user manual. Forcing you or your team to keep these steps simple will lead to great product ideas, user experiences, and technology designs.
- **The programmer developing on your platform:** If you are developing a technical product or service that developers will be using, perhaps an IoT product, it includes an API allowing developers to access, deploy, integrate, and extend your product. You will also want to build a user manual for the developer. Write the interface for the API, what events will be supported, and the data to be sent and received. Give sample code snippets, and outline key operational topics such as how testing occurs and how operational status and updates are facilitated. You'll also want to use this exercise to outline key business and use terms. Are there charges involved?

Obviously, this can be extended to other key roles—for example, the salesperson or agent who represents your company or the service person who conducts maintenance and repair.

ALL HAT, NO CATTLE

It's easy to announce, "We are focused on the customer" or even, "We want to be the most customer-centric company of all time!" That's all well and good, but unless you're willing to put in the hard work, spend crazy amounts of what may feel like "unproductive time" writing narratives, future press releases, FAQs, and user manuals for products that don't exist, you're just another cowboy moseying around the digital prairie who's all hat, no cattle. It's becoming increasingly apparent that people can say anything they want, regardless of the truth, in America these days. However, eventually, you have to produce.

John Wooden, the legendary UCLA basketball coach, is credited with saying, "The true test of a man's character is what he does when no one is watching." You need to ask yourself these questions: "Am I truly willing to start with the customer and work backward? Am I willing to be customer obsessed? Am I willing to do the hard work when no one else is watching?" The only person who can answer these questions is you. However, the answer will be crystal clear to everyone, especially your customers, down the road. Don't forget that.

QUESTIONS TO CONSIDER

1. Do personas and journey maps play an important part in building customer insights and obsession?
2. Is your product or service so simple that no user manual is needed?
3. Are there any aspects of your leadership practices in which