SUMMARY START AT THE END

MATT WALLAERT



Summary of "Start At The End" by Matt Wallaert

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Learn how to Build Products that Create Change

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Introduction

When companies make products, they often make a bit of money and may even be successful in making our lives a bit more convenient. Some products, however, have the power to change the way we live our lives and even change the world. Don't believe me? Take a look at the iPhone, which has been held up as the "pinnacle of vision, inspiration, and creativity." So what made the iPhone work? Apple revolutionized the way we communicate with one another by imagining a world that didn't yet exist but could with their product. They imagined a world in which people used their phones every day, everywhere and all the time. They challenged the status quo by asking themselves two questions: "Why would people want to do that in the first place?" and "Why aren't they doing it already?" Those two questions are the heart of this book. The first allows us to identify the motivations behind certain behaviors, called *promoting pressures*. The second helps us understand the factors that make the behavior less likely, called *inhibiting pressures*. "Identifying and consciously influencing the strength of those pressures is the basis of designing for behavior change." Author Matt Wallaert calls this the Intervention Design Process (IDP) interventions being the product companies make that change the way we behave. So how can you design products with these pressures in mind?

Throughout *Start At The End,* Wallaert will take you through the IDP and teach you the ins and outs of Behavior Change. Next, he will tell you everything he's learned from being a senior behavioral scientist for the past fifteen years, including sharing some important case studies. Lastly, Wallaert states, "When you want to change the world, and you've read this book, you will design explicitly toward a behavioral goal and apply a systematic method to implementing interventions that achieve it. And in doing so, you will not only be more effective at changing behaviors but also accelerate our collective advancement toward a better world, so that is how I'll measure the book's success as an intervention. A better world and nothing less."

Validate Your Potential Insight

If you want to change behavior, you must start with *potential insight*. Potential insight is "an observation about the distance between our current world and the counterfactual one in which we want to live." In other words, you're identifying a gap in the world you currently live in with the world you *want* to live in. Once you've recognized a change that needs to happen in the world, you can apply the Intervention Design Process (IDP), which you'll be learning all about in the following chapters. For now, let's just focus on identifying that potential insight.

To further explain, Wallaert tells the story of when he first came to work at Microsoft in 2012 as its first behavioral scientist. One of the products he worked on was the search engine Bing. The potential insight floating around at the time was this: "Kids don't search in school nearly as much as you'd think they would. After all, school is supposed to encourage curiosity, so shouldn't search engines be pretty much the default tool for scratching that itch?" Of course, their hope was that Bing would turn into the search engine students would use.

The first step with potential insight is to see if what you're imagining can turn into something. You see, it's called *potential* because, in science, you must first assume something until you can prove it can be true or rational. Therefore, it is healthy to have a natural skepticism about your initial assumptions. So Wallaert conducted some research. He collected the IP addresses and total student populations of a few school districts and pulled query logs. He then computed a daily QPS (queries per student). Through this, he simply found that each student only entered one query per day - a relatively small number.

Of course, data alone is not always enough to validate your potential insight. Instead, it's important to seek out *quantitative* and *qualitative validation*. So while he already had quantitative validation, he needed to seek out something qualitative. He went out into the field and visited schools to observe how kids were naturally searching for answers in their current environment. As it turns out, his findings showed that students were conducting less than one search per day. In other words, the observations and the data seemed to work together, something scientists call *convergent validity*.

Microsoft successfully identified a gap between the world they were currently living in and their ideal world. They envisioned a world in which students would have easier access to search for information and answer their questions, and Bing was going to do just that. So once you can prove the same about your potential insight, you can then move on to the next step of the IDP.

Writing a Behavioral Statement

Now that Wallaert had successfully validated that there was an opportunity for change, it was time to move on to the next step of the IDP: writing a behavioral statement. A behavioral statement should describe what you wish to achieve, your endpoint. For Wallaert, his statement was something like, "When students have a curiosity question, and they are in school and near a computer with internet connectivity, they'll use Bing to answer it (as measured by QPS)." But how did he get to this statement?

When it's time to write your statement, you'll need to first break down your statement into five different components. First, you'll want to think about the *behavior* that you are trying to promote. To do this, you'll need to identify why people will purchase your product or service. For example, the behavior that Uber tried to promote when launching its ride-sharing service in 2009 was simply to use Uber versus calling a cab or taking public transportation. The second component is identifying the *population* whose behavior you wish to change. If you're like Uber, then your population will be incredibly broad; however, most target populations can be boiled down to a more specific demographic, such as a particular age group.

Next comes the *motivation* behind the behavior you are trying to promote. Uber, for example, was promoting the motivation or desire to get from one place to another. From your home to the airport, to work, or the bar down the street. In Uber's ideal world, each time a person wanted to go somewhere, they would take an Uber. Of course, thinking about your ideal world will come with some *limitations*. You can't simply envision a world that isn't plausible. Therefore, you must think about the limits that might hinder your target population from using your product or service. This becomes the fourth component of writing your behavioral statement, identifying those limitations or preconditions. For instance, in 2009 when Uber launched its service, people needed three things: a smartphone, a mobile internet connection, and an electronic form of payment. Additionally, their initial rollout was only limited to the city of San Francisco, so you would've needed to live in the high-tech city limits as well.

Finally, you have the fifth component of the behavioral statement which is defining the *data* by which you will measure the pros and cons of promoting your ideal behavior. For Uber, their data came from simply identifying the number of rides people took with their service. Once you have all five components, you can begin to write your behavioral statement. Wallaert's example was given above, but here is Uber's statement for further clarification: "When people want to get from Point A to Point B, and they have a smartphone with connectivity and an electronic form of payment and live in San Francisco, they will take an Uber (as measured by rides)."

Pressure Mapping and Its Complexities

Now that you have a behavioral statement that describes exactly how you're going to create an ideal world, it's time to turn that vision into a reality. This is where you must identify two types of behaviors of your target population: their *inhibiting pressures* and their *promoting pressures*. Inhibiting pressures are those that hold people back from engaging in a particular behavior that they may want to engage in. On the other hand, promoting pressures are those that encourage people who do engage in the behavior.

To identify these behaviors, you'll need to begin a process called *pressure mapping*. To help illustrate the process, Wallaert discusses the company, Mars. As a company that creates sweet treats for people to enjoy, its goal was to encourage the public to buy and eat chocolate candy. So the first step in pressure mapping is identifying the promoting pressures for this kind of behavior. Why might people want to engage in eating M&Ms? Well, not only are they tasty chocolatey snacks but they also come in a variety of vivid colors that are visually appealing.

These colors are an example of *irrational* promoting pressures. Think about it. Do the colors affect the taste or the nutritional content of the candy? No, they don't. In other words, the colors are completely superficial, they don't make a difference. However, these irrational pressures can be incredibly powerful. You see, Mars carefully constructed the colors of the candy with bright shades of red, green, yellow, and orange. Imagine if they simply chose a different shade of green that reminded people of vomit, or a shade of yellow that resembled urine! If this were the case, they certainly wouldn't be selling much candy.

So what are the inhibiting pressures that Mars has to identify? First, let's think about it this way. If you're sitting on the couch and have a bowl of M&Ms right next to you, how likely are you to eat a few? You'd likely be pretty tempted to eat a few handfuls or even the whole bowl! Don't worry, I

won't judge you. However, if those M&Ms are sitting in their bag on the top shelf of the cabinet, your desire to eat them becomes a little less. Your desire becomes even less when that bag of M&Ms is down the road sitting on the shelves of your local convenience or grocery store. In other words, the harder it is for you to get those M&ms, the less likely you are to eat them.

Another pressure that Mars had to identify was the behavior in which people avoid consuming calories and sugary treats. So if you're typically a healthy person, you have a pretty significant inhibiting pressure preventing you from buying and consuming M&Ms. However, if you're feeling hungry, then you might experience a promoting pressure enticing you to grab a few. This is an example of *counter-rational* pressure. This is a pressure that can go one of two ways and completely relies on the context of the situation. To deal with this pressure, M&Ms created playful anthropomorphic candy characters that promote buying and consuming the candy in the context of a party, like a child's birthday or a get-together.

Of course, there are other pressures that are context-dependent as well, like the price of a product. When a product is too expensive, you experience an inhibiting pressure that deters you from purchasing it. In the case of M&Ms, you typically spend a few dollars for a pack, so it's relatively cheap. However, that pack of M&Ms is no longer so cheap when you think about a child having to save up their allowance to purchase one, or when a majority of the people of the world live on less than \$2.50 a day. In other words, inhibiting and promoting pressures aren't as black-and-white as one might think. They change with context. Therefore, pressure mapping should be based on empirical research like collecting data, conducting interviews, etc. Luckily, the research you collected in the first phase of the IDP should provide you with enough evidence to help you in the pressure-mapping stage.

How Pressure Maps Can Reveal the *Why* of Your Target's Behavior

Now that you've finished the pressure-mapping stage and identified your target population's inhibiting and promoting pressures, it's time to weigh the differences. To create a visual, draw a picture of the behavior in the middle, then draw arrows downwards for each inhibiting pressure and upward arrows for each promoting pressure. At a glance, you'll be able to see the balance between the two behaviors. If you have more upward arrows than downward arrows, then you'll see the promoting pressures outweigh the inhibiting ones, meaning your target population will be more likely to engage in the behavior. Of course, the other is true. More downward arrows suggest people will be less likely to engage in this behavior.

Take the example of when Wallaert was working with the Clover Health insurance company. He and his team at the time discovered that people in the black community were less likely to get the flu shot compared to the rest of the population. So they went through the first steps of the IDP and validated their discovery. They created a behavioral statement and began mapping out the various inhibiting and promoting pressures. Of course, the main promoting pressure is that getting the flu shot is simply good for your health. However, this argument was met with skepticism among the black community. Many responded with, "Why do I need a shot? I'm already healthy."

There are many inhibiting pressures in the black community as well. For instance, many black people expressed their concern with the formula of the flu shot changing each year. Changing the formula each year, however, keeps the flu shot more effective as the strains constantly change year after year. For black people, however, they felt this change was the result of medical experimentation. This thinking is likely the result of a painful history that the black community experienced during the years between 1932 and 1972. The Tuskegee Syphilis Study, conducted by the US government, involved denying antibiotics to its black subjects. As a result, many of them died in the process.

Today, we see the effects of that study in the distrust the black community feels toward the flu shot. This inhibiting pressure is so powerful it overpowers the promoting pressure of improving health and results in a low number of black people receiving flu shots. Of course, Wallaert and his team would have never understood these pressures if they didn't map them out and do their research. Now, the team can think about how to change these pressures to promote the behavior of their ideal world.

Tip the Scales of Balance in Your Favor

Now that you've mapped out the inhibiting and promoting pressures of your target population's behavior, you can begin to see the balance between each. When you tip the balance in your favor, you can begin to create the ideal world you envisioned and promote the intended behavior. Of course, you can't simply force people to act the way you want them to; therefore, you need to learn how to indirectly influence them to go in the right direction.

Wallaert has laid out two ways of doing this: decreasing the inhibiting pressures or increasing the promoting pressures. Either action will allow you to accomplish your objectives by intervening in the reality that your target currently lives in. Now, it's time to figure out exactly how you're going to intervene in a way that benefits you and creates your ideal world. To further illustrate how to do this, let's take a look again at Wallaert's time with Clover Health. As you may remember, members of the black community were skeptical about the health benefits of the flu shot, which became a weak promoting pressure. Meanwhile, they were also concerned about medical experimentation because of a painful past, which became a strong inhibiting pressure.

Wallaert and his team came up with 20 possible interventions. However, 20 interventions are far too many to test, so the goal is to narrow them down to a manageable number - somewhere around five interventions is ideal. There are many ways in which you can do this, one is to combine as many interventions as you can. To illustrate this further, we can look to Wallaert and his team who determined that the skepticism from the black community regarding the flu shot came from a feeling of distrust in the medical community. So if the team wanted to change their perspective, they would need to look to the leaders of the black community: their pastors.

The leaders of their churches are highly regarded and respected. The team knew if they could get them to speak to their congregations about the

benefits of the flu shot, then they could begin intervening in more ways than one. In other words, this intervention was a win-win situation which is the kind of solution you should aim to find in your own endeavors.

Conducting Ethical Checks

Once you find the interventions you think will work best in promoting your target behavior, it's natural to want to jump in headfirst and put your ideas into action. However, there are still some steps in the IDP you must complete before moving forward. Next, it's time to complete an ethical check to ensure the behavior you are promoting doesn't go beyond any ethical boundaries. Just take a look at the many ads back in the day that glorified smoking and promoted the behavior! So how can you ensure that you're staying ethical?

The first step is to ask yourself the following questions: What is the behavior that you're trying to promote? Does it match the goals and motivations of the population you are promoting? If the answer is no, then it would be too unethical to implement your interventions. For instance, tobacco companies who used advertising to convince people to smoke went against the most important goal of a person's life: the goal of staying healthy and alive. Of course, many people might argue that a tobacco company's goal was to look cool, not stay healthy. In that regard, the companies simply gave the people what they wanted.

The second question you need to ask yourself is: Do the benefits of this behavior outweigh the costs? Sure, looking *cool* might be a benefit for some people, but does it outweigh the cost of lung cancer or the many diseases that come along with smoking? No, it doesn't. In the end, promoting the behavior of smoking remains unethical. The last question you must ask yourself in your ethical check is: Are you being transparent about your motivations and research methods? If you are trying to hide something or be sneaky to make it seem as if the benefits outweigh the costs, then you're being unethical.

After answering these questions and confirming that you are ethically changing behavior, you may think it's time to move forward with your interventions. Well, your ethical check isn't quite over yet! Not only do you need to check your behavior, but you need to check the interventions too. Even if the behavior you're trying to promote is totally ethical, the interventions you put in place may not be. For instance, when trying to get people to get a flu shot, simply sending them letters stating, "You will die unless you get this shot," is pretty unethical.

To do an ethical check of your interventions, you'll need to ask yourself the same questions as before. Would a dishonest scare tactic like sending letters line up with people's goals and motivations? Would the benefits outweigh the costs? No, because people don't want to be lied to or scared. In fact, the anxiety caused by such letters would overpower the benefit of convincing people to get the flu shot.

Conduct Pilot Studies and Formal Tests

Once you've completed all the necessary ethical checks, it's finally time to move forward! Of course, you don't want to hit the ground running too fast. You might be able to immediately roll out an intervention on a national or even international scale, but if it doesn't work, then you might be left with nothing. All that time, energy, and money wasted. Additionally, you likely have a few more interventions that you could've tried. Additionally, you likely can't roll everything out all at once on a global scale; instead, you'll need to test each one in a small study to see which works best.

These small studies are what Wallaert calls pilot studies, or *pilots* for short. For each pilot, your aim is to test out your intervention on a small sample of your target population. Additionally, each study must be done in an *operationally dirty* manner, meaning that you aren't simply implementing the intervention in the most efficient way possible. Instead, you'll be testing the intervention with as little disruption to your organization as possible. For instance, in a full version of your intervention, it might be most efficient to use an automated computer system for a particular task. However, developing such a computer system might be time-consuming and expensive. Furthermore, you don't even know if the intervention will work yet! It's best to work manually at this stage, you can always develop computer systems later on if the intervention becomes successful.

Throughout your pilot, the aim is simply to see if the intervention will work. To do this, you just look at the data. However, collecting data might not be as simple as it seems. When it comes to your pilot studies, looking at the data can let you and your team see whether or not the intervention can be successful. While you started with a small sample, you should be able to clearly say something along the lines of, "our intervention has increased the engagement in our target behavior by 20 percent." This type of statement in the science world is called your data's *p*-value. The lower the value, the higher the certainty. So if your p-value is 0.05, then there's a 5 percent chance that your data are wrong and a 95 percent chance that they're right!

If a p-value is less than 0.05, then scientists are more likely to trust their data. Of course, you're creating a product or a service so you can be a little looser in your data. Anything less than 0.20 should work well for your use. This means that you have an 80 percent chance of your data being correct, which is still pretty good odds! Once you've experienced promising results and successfully received a p-value of less than 0.20, then it's time to conduct a formal test for each. This is when you begin to try out your intervention in a larger sample size to ensure the pilot wasn't just random luck.

Here, you're going to begin implementing the things that make your intervention operate smoother than your pilot. For example, this is where you would implement that automated computer system. You see, not only do you want to test your intervention at a larger scale, but you also want to test the overall production to ensure everything will run smoothly. It's best to find out now what will work and what won't. Figuring out how to scale up and fully implement your intervention is the final step of the IDP! This is also where you'll be analyzing costs and benefits, looking at the positive results of your interventions, and discovering which ones aren't worth the cost. The ones that have the best cost-benefit relationship are the ones you'll begin implementing. Now that you've accomplished each step, it's time to see the fruits of your labor. Enjoy!

Final Summary

The Intervention Design Process is a step-by-step process created by Matt Wallaert to test the behavior changes that you wish to make and create your ideal world. The first step is having potential insight and seeing the gap between reality and the way you wish to live. Next, you should write a behavioral statement to describe your ideal world and how you plan to test it. Then it's time to map out the promoting and inhibiting pressures that your target audience will encounter and think about the potential interventions you can put in place to help modify and alleviate those pressures. Then you'll need to put your behavioral change and your interventions through the ethical check. If they pass, you'll be able to begin your pilot testing. During your pilot testing, you'll discover which interventions yield the best results so you can scale them up and implement them to change the world for the better.



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