CONNOR JOYCE

BRIDGING INTENTION TO IMPACT

Transform Digital Product Development through Evidence-Based Decision-Making

New Riders

VOICES THAT MATTER™

BRIDGING INTENTION TO IMPACT

Transform Digital Product Development Through Evidence-Based Decision-Making

CONNOR JOYCE

Bridging Intention to Impact

Transform Digital Product Development Through Evidence-Based Decision-Making

Connor Joyce

New Riders
www.peachpit.com

New Riders is an imprint of Pearson Education, Inc.
To report errors, please send a note to errata@peachpit.com

Executive Editor: Laura Norman
Development Editor: Robyn G. Thomas
Associate/Sponsoring Editor: Anshul Sharma
Senior Production Editor: Tracey Croom
Technical Editor: Anushkaa Gupta
Copy Editor: Scout Festa
Compositor: Kim Scott, Bumpy Design
Proofreader: Kim Wimpsett
Indexer: James Minkin
Cover Design: Chuti Prasertsith
Cover Illustration: bizvector/Shutterstock and hamylove/Shutterstock
Interior Design: Kim Scott, Bumpy Design
Art credits: Figure 1.1: Grammarly Inc., Figure 4.2: Apple Inc.

ISBN-13: 978-0-13-836046-7
ISBN-10: 0-13-836046-4

$PrintCode

About the Author

My career has been filled with unique experiences, each contributing to the ideas in this book. I found a home at Microsoft, where I am a Senior User Researcher and am happily building the next generation of AI products. I am also the CEO of Desired Outcome Labs, where I consult on the adoption of the philosophy outlined in this book along with approaches for encouraging AI adoption.

I see myself primarily in three roles: as a mixed-methods researcher focused on obtaining the right data to empower product teams to make informed decisions; as a product builder who relishes the opportunity to create new solutions, from paper prototypes through digital products; and as a behavioral scientist, my special sauce, which enabled me to take the novel approach, introduced in this book, of creating products with a focus on the specific behaviors impacted.

I derive great satisfaction from guiding others to new perspectives, which I achieve through contributions to various publications, podcasts, and conferences. This passion has led me to lecture at the University of Pennsylvania, where I help students learn to grow with artificial intelligence advances. It was also the drive that led me to co-founding the Applied Behavioral Science Association to build a growth pipeline for anyone interested in the field.

Outside my professional life, I enjoy spending time over meals and activities with many outstanding people who I am so lucky to have in my life. I live in Seattle and have found the outdoors my refuge, especially when accompanied by Chai, a dynamic and genial Australian Labradoodle. My most peaceful moments are in the mountains, where I can connect with the scale and ephemeral nature of life.

Acknowledgments

To the three people whom I can guarantee I would not be here without, thank you for your love and support: Mom for being a role model of kindess and strength, Dad for your advice when I needed it the most, and Alita for your believing in me to the point that I believed in myself.

To the many mentors who have inspired and guided me throughout my career, thank you. A special thanks to those who guided me through my toughest periods: Matt Wallaert, Chris Gideon, Jason Marshall, and John Davenport.

Writing any book is not easy; writing during significant life changes makes it even more challenging. Countless individuals supported me throughout this endeavor—thank you each and all.

Thank you to my editors, especially Robyn Thomas, Anushkaa Gupta, and Laura Norman, who each played a unique role in getting me to the finish line. I enjoyed this enough that I think I will do it again.

I live by the saying that if I am content in my current situation, I cannot change anything from my past. Publishing this, I am at peace with the idea that I have contributed to a field that means so much to me…and thus I am grateful to every interaction that in some way served as a learning and growth opportunity on the path here.

Table of Contents

Introduction

Technology holds the power to reshape our world, and it is those who wield this power—builders, designers, and strategists—who determine its impact. Recently, the trend has skewed negatively, a concerning shift that many in the industry are hesitant to acknowledge. Over the last decade and a half, public sentiment toward major tech firms has soured, their products increasingly perceived as having a detrimental effect.[1] This is not the future we in the tech industry envisioned. Instead, we find ourselves navigating a landscape shaped by corruptive forces that prioritize growth and usage above all else. The industry did not set out to be here; instead, it is a variety of corrupting forces that have led to the maximization of usage and growth over all else. Advances in AI are catalyzing a transition to a new way to design and build products, providing an ideal chance to transform products. Throughout this book, I emphasize building products that satisfy user outcomes through creating specific behavioral change. I do this by reinforcing three primary points:

1. Usage alone does equate to a product having its intended effect on the end user.

   Many factors have converged to normalize this assumption in product development, which, regrettably, often misleads companies. It's all too common for users to emerge from intensive product interaction—what might be called a *usage trance*—only to discover that their desires, which led them to engage, remain unmet. Although product teams enthusiastically adopt growth-hacking strategies from leading texts—embracing concepts like habit formation, gamification, and behavioral design—they frequently neglect to integrate these with solutions that genuinely address user needs. The result is addictive products that don't satisfy the users' needs.

1 Pew Research, www.pewresearch.org/short-reads/2019/07/29/americans-have-become-much-less-positive-about-tech-companies-impact-on-the-u-s/

2. Building products that create positive outcomes for the user and the business requires focusing on specific behaviors.

   After witnessing the same patterns across various sectors—from nascent startups to multinational enterprises—I identified the missing piece from most product teams' development approaches: measuring and maximizing behavioral change. True technological value derives not merely from usage but from how it alters specific user behaviors and the consequential outcomes for both the user and the business. Until this change in focus occurs, we are bound to continue down the path of addicting products that don't deliver on their promises. In return, product teams will continue to face leaky buckets and high customer acquisition costs.

3. Ensuring that all features create their intended behavioral change requires establishing an evidence-based decision-making culture.

   Embracing this philosophy individually can yield substantial value, but replicating such success organization-wide necessitates a cultural transformation. This shift should inspire every team member to take ownership of the evidence that informs their decisions. It is crucial for product teams to foster a robust demand for researching, creating, and using insights in their product development strategies. Implementing this on a larger scale involves establishing a central repository for insights that is readily accessible and promotes a culture of experimentation. The goal is to cultivate an environment in which teams are reluctant to make decisions without solid supporting evidence.

Painting a narrative that connects these three points, this book builds on established product management strategies, drawing from Marty Cagan's foundational book *Inspired* and Melissa Perri's insights in *Escaping the Build Trap*, the focus on behavior change introduced by Matt Wallaert in *Start at the End and by Joshua Seiden in Outcomes Over Outputs*, and the experimentation mindset of Stefan H. Thomke's *Experimentation Works*. It presents a transformative approach known as the *Impact Mindset*. This philosophy, designed to complement agile development and design thinking, emphasizes validating the links between each feature's influence on behavior and its ultimate impact on user outcomes and business performance. Presented through a combination of frameworks, processes, and philosophical guidance, adopting the Impact Mindset begins with you, the reader, as a catalyst for grassroots change.

How I Created the Impact Mindset

My fascination with technology began in childhood, when unboxing a new gadget meant hours exploring every setting to uncover its capabilities. In school, this passion evolved; I shifted from the technical details to the human side—how people interact with technology and how it transforms their behavior. It was disheartening to hear complaints about technology failing to meet expectations, often fostering negative behaviors instead of creating a genuine positive impact.

Starting my career as a consultant implementing large human capital systems, I saw the mismatch between promised value and reality at a large scale. Brought in to help organizations adopt these new systems, I quickly learned how even significant investment in traditional change management could not fill the void that these technologies created. In search of something better, I found the field of applied behavioral sciences, which I saw as an agile approach compared to the waterfall of large-scale change programs. I decided to pursue a master's degree to explore its potential.

During my studies, I discovered behavioral science's broad applicability—from simple nudges to complex interventions designed to forge new habits. The insights in the field could be used to drive people to act according to their values and long-term desires. Yet one thing seemed irrefutable: technology would be needed for these solutions to scale. I decided to pursue a tech career, expecting a welcoming environment for these principles.

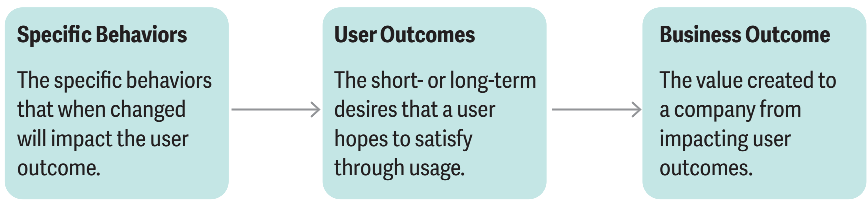
However, the transition revealed a stark reality: little consideration was given to the actual behavioral changes driven by products. If anything, I found that techniques from behavioral sciences were often misused to boost engagement without regard to consequences. Even companies that built their brands around helping people change behaviors did minimal research to ensure their products generated desired outcomes.

I am not alone in noticing this trend, and being vocal about my disappointment led to the opportunity to talk and work with many who were building out solutions in hopes of driving behavioral change. Seeing both the best case and the common shortcomings led me to question what was preventing the team from focusing on what mattered. Teams focused on driving abstract outcomes with no way of measuring them, and thus defaulted to more accessible metrics such as usage and satisfaction. Compounding this was incentive structures that demanded output over outcomes and made it easier not to ask questions.

My research into this issue clarified the core problem: the missing link between usage and impactful outcomes was the behavior changed by the product. If a company wants its users to lose weight, it must encourage less calorie consumption or more exercise. Increased productivity? Less engaging in distractions and more task-tracking. Better data infrastructure? More upfront organization and following processes. It all came back to the original reason I wanted to get into the field: the promise of technology to scale behavioral interventions that companies can build more sustainable solutions on.

This realization led me to develop the User Outcome Connection, a framework for evaluating how specific behaviors altered by a product influence user outcomes and business impacts. My first opportunity to test this concept came through a feature designed with a clear purpose yet unproven effectiveness. I collaborated with engineers and product managers, and we defined new metrics to measure behavioral changes post-interaction. The positive results validated the approach and sparked broader organizational interest in adopting this methodology, which became the primary process introduced by this book, the Feature Impact Analysis (FIA).

USER OUTCOME CONNECTION



As I shared these insights across organizations, I refined the philosophy into a comprehensive approach centered on building products grounded in validated User Outcome Connections: the *Impact Mindset*. I have found that adopting this framework is good for business, as it equips companies to develop products that retain users and promote organic growth, optimizing both customer lifetime value and acquisition costs.

Implementing a cultural shift and embracing a new philosophical approach to product development are monumental tasks. I have not written this book with the illusion that you alone should be responsible for creating the entire change. Instead, inspired by transformative works like Eric Reis's *The Lean Startup*, which advocates for a grassroots movement in organizations, it positions you to be the catalyst of the movement. Using the User Outcome Connection framework to illustrate the importance of rethinking features and sharing these insights, you will form the foundation of this culture change.

Defining the Impact Mindset

The Impact Mindset describes a novel product development philosophy that focuses on measuring and maximizing the behaviors that features cause users to do. My aim in writing this book is to encourage product teams of all sizes and throughout industries to adopt the Impact Mindset, as it yields more effective products that in turn increase business outcomes. The philosophy consists of four components that are explored in greater detail throughout this book.

TABLE A Four components of the Impact Mindset

COMPONENT	DESCRIPTION
User Outcome Connections	Establishing a User Outcome Connection for each core feature helps teams understand the feature's purpose, validate behavioral changes, and ensure these changes positively influence user outcomes and business impacts.
Experimentation	Validating User Outcome Connections through experimentation involves collecting and analyzing data to generate insights, requiring systems that support the technical and administrative aspects of conducting experiments.
Insights Hub	Creating an Insights Hub centralizes all User Outcome Connections, research findings, and experimental results, fostering transparency and a shared understanding among team members to inform evidence-based decisions.
Evidence-based decision-making culture	Adopting an Impact Mindset requires cultivating a culture in product teams that prioritizes evidence-based decision-making, ensuring that every member understands their role in driving meaningful user actions aligned with user needs.

At the heart of the Impact Mindset is the validation of User Outcome Connections for all core features. Teams must develop these frameworks for each feature and find or create evidence that supports or refutes the connection between the behaviors changed by a feature, the satisfaction of user outcomes, and the resulting business impact. When new insights are needed to determine if a link exists between these variables, experimentation is required. Thus, having the infrastructure and team capabilities to conduct this work forms the second component.

As more demand for evidence is created due to the User Outcome Connections that need to be validated, a centralized location for all insights must be created. The third component of the Impact Mindset is the creation of an Insights Hub to store all feature definitions and the associated evidence that supports that they are achieving their intended purpose. A byproduct of having a unified hub for data that is organized in an intuitive way is that teams will have access to it to make decisions. Building a culture of evidence-based decision-making where teams are not just able to but truly empowered to seek, create, and rely on data for decision-making is the final component of the Impact Mindset.

You don’t need to understand the intricacies at this point. Each step we take in this book will bring us toward the ideal end state. Whenever you’re lost, recall the concept of the Impact Mindset and you will be sure to find a connection to one of these four concepts.

This page intentionally left blank

CHAPTER 1

Measuring Usage Is Only the Beginning

Take a deep breath. We are going to start our exploration of measuring the success of a product . . . with the heavy stuff. Imagine you are in a situation where customer churn is growing, and you cannot understand why. Even worse, the customer acquisition costs outweigh the money they bring in over their lifetime with the company. You look to your product analytics dashboards—you are hitting your application usage goals, and your net promoter score (NPS) is in the green, but customers are still leaving to your competitors. What do you do?

If you have been here, you are among the 71 percent of product builders who are unsure of how to understand the behaviors of users; you know the feeling of "flying a plane without all the instruments"—in other words, not having the correct data to resolve your biggest problems. This book reimagines the definition of product success by focusing on the behaviors that a product changes and the subsequent impact the product has on user and business outcomes. By offering a process to measure the impact a feature makes on user behaviors and outcomes, this book aims to put you on the path to positive customer experiences and a proven method to boost long-term business outcomes. You will be empowered to evangelize the measurement of impact that your features create for users, what we will call having an *Impact Mindset*.

That is all to come, but for now this chapter begins by detailing why situations in which product teams feel unequipped to diagnose and rectify product challenges are all too common. Then it covers how to avoid such situations. Starting at the highest level and moving more tactically, this chapter shows how overreliance on usage statistics leads teams astray.

Ambitious Mission Statements, Misaligned Execution

Are you a frequent social media user or a gamer? If you are, ask yourself what desire you are trying to satisfy when engaging. If not, think about someone you know who can't seem to take a break from it. What objectives, conscious or subconscious, might they strive to achieve through their constant usage? What initial allure or circumstance prompted them to begin their interaction?

You might be thinking something along the lines of community building, friendship development and maintenance, or entertainment. Even those who have a nuanced, perhaps ambivalent, relationship with these platforms often underscore their perceived social and personal advantages. This perception isn't by chance; it's meticulously crafted. Leading digital companies have astutely shaped their brand narratives around aspirational ideals, with mission statements that echo these sentiments. Consider, for instance, Facebook's mission:

> To give people the power to build community and bring the world closer together.

And the beginning of Electronic Arts' (EA) purpose statement?

> At EA, we thrive on outrageous thinking. It's the fuel that inspires the best games in the world. We are a community of artists, storytellers, technologists and innovators working in one of the most dynamic industries today. We're building a company that thinks about the player experience at every step . . .

These lofty declarations might elicit skepticism, given the public's perception of these corporations as being profit driven. The dichotomy lies in the evident chasm between their articulated visions and the onground realities. The prevailing trend, not limited to them but pervasive across the entire tech industry, is an unwavering emphasis on crafting products that prioritize user engagement—often at the expense of user-focused outcomes.

Overuse of Usage Metrics as Success Criteria

A pattern is seen time and time again by companies developing digital products of all kinds: their initial, noble aspirations undergo a metamorphosis, gravitating toward a singular focus on maximizing user engagement for immediate revenue benefits. Prioritizing the growth of effortlessly developed surface metrics, they sideline creating transformative experiences that could benefit both the individual user and the broader global community and instead focus on marginal additions. It has led to about half of product teams suggesting daily active users (DAU) and monthly active users (MAU) being the primary measurements for success. Employees recognize this turn but don't fight it as their incentives become aligned to these metrics, and leadership enjoys the ability to point toward growth—regardless of what it means. Usage, a simple metric of whether someone engaged with a product, becomes the primary means of determining success.

Consider the evolution of Facebook. Starting as a digital yearbook, it stayed true to its mission of building community within college campuses. However, as its reach expanded beyond the confines of educational institutions, so did its user base—bridging geographical divides and fostering connections across regions and nations. The introduction of advertising mechanisms marked a pivotal shift; a new imperative to retain users for prolonged durations, primarily to enhance ad visibility, became supreme. This shift replaced a focus of fulfilling user community needs to encourage loyalty with a content strategy often prioritizing emotionally charged narratives, sparking debates and ensuring repeated user engagement. Before long, the Facebook product team abandoned its pursuit of increased social well-being and instead adopted a new strategy of building a platform that would do everything possible to keep users glued to their screens while filling space with ads whenever possible to juice profit.

As 2024 rolled around, Facebook began to communicate a desire to return to its roots and in doing so move closer to pursuing their mission of building a healthy community that creates more positive relationships than divisions. It begs the question, where should they begin? A possible starting point could be a recalibration of their content algorithm, emphasizing narratives that foster positivity. From there, they could develop new features to facilitate authentic community interactions and create deeper connections that might require conversations outside the Facebook ecosystem. It would require developing tools that nudge users toward more prosocial behavior along with determining what users genuinely desire out of a social platform and ensuring their new releases contribute to improving those factors.

This narrative isn't exclusive to Facebook. Most successful social media enterprises set out to establish new ways to allow people to communicate with each other. Yet, influenced by the pursuit of never-ending profit growth, they have shifted their focus to building emotional and gamified experiences to keep users glued to their products. Addiction equates to continuous advertising revenue. Of course, this shift probably didn't happen all at once, after one boardroom decision. Instead, it was likely a slippery slope as these companies incentivized their product teams to focus on the creation of free products that, through people's usage, generate valuable data used for targeting ads. Our modern social media industry continues to grow while it is also known to be increasing the likelihood of adverse mental outcomes for its users.

What they left on the table is the ability to fulfill user needs by creating products that sell themselves and encourage sustained loyalty. The advertising model, though financially successful, has left these companies vulnerable to fluctuations in consumer spending. Pressed to sell their products, early examples of paid versions of these platforms have shown little promise. Users appear reluctant to pay for services that fail to meet their fundamental needs for social connection. Another ramification of this is shown by how TikTok was able to quickly capture a part of this attention economy and build a strong user base. Had Facebook adequately fulfilled the needs for connection and entertainment, TikTok's ascent might have been less meteoric.

Social media companies are the most straightforward case study for what it means to maximize usage above all else; they have been able to survive by building addictive yet not always effective products. Many companies don't have the option of advertisement revenue. When they over-rely on usage, it means building a customer base that is expensive to acquire and is ready to flee as soon as a better alternative is created. It also leads product teams to feel bad about their work, with a 2021 survey by Productboard[1] suggesting that 69 percent of teams say their products and features are not consistently well-received by customers.

The video game industry illustrates this, with its increasing focus on engagement to drive microtransactions. This strategy has sparked a backlash, driving players toward independent developers who prioritize the creation of genuinely enjoyable and engaging games. Such shifts in consumer allegiance are telltale signs of an industry's overemphasis on engagement at the expense of meaningful impact. Overreliance on surface-level engagement metrics brought upon by misaligned business objectives has yielded many missed opportunities to genuinely impact desired user outcomes.

How Grand Ambitions Became Usage Obsessions

The formative years of the internet brought a transformative shift in the accessibility of information. A by-product of this was that content that publishers had traditionally nestled behind paywalls in newspapers and magazines found its way online, freely accessible to the masses. In response, many established entities adopted a hybrid approach, offering a selection of free articles to entice readers, hoping to redirect them to their paid offerings. When this failed to boost sales, executives questioned subscription viability and let free content became the de facto standard in hopes of turning the subsequent traffic into revenue another way. As the populace increasingly turned to the web for news, stalwarts like the *Wall Street Journal* and newcomers like BuzzFeed found themselves vying for attention, with website usage emerging as the primary metric for communicating their success.

Developing a business model around this new digital frontier, media companies began to realize that the ability to monitor user engagement offered a compelling proposition to advertisers, suggesting a direct correlation between eyeballs and advertisement spending.[2] A self-perpetuating cycle emerged: heightened user engagement led to increased advertising budgets, facilitating the creation of

1 Product Excellence Report 2021 by Productboard
2 *Traffic: Genius, Rivalry, and Delusion in the Billion-Dollar Race to Go Viral* by Ben Smith

even more content. Advertisers embraced this model, convinced of its superior return on investment (ROI) compared to traditional avenues. Usage growth became the gold-standard metric communicated within and across boardrooms, intending to garner more advertiser dollars. This trajectory—while initially promising—harbored inherent flaws, which we'll examine soon. However, a deeper dive is essential into the three systemic forces at play: default to the simplest metric to capture, lack of trust, and the ascendency of the advertisement model.

Defaulting to the Most Straightforward

The first factor is the allure of the usage metric, which lies in its simplicity. At its core, it is a binary of whether someone is engaged. At scale, it shares how many people interacted, their engagement duration, and their frequency of usage. Measuring usage comes naturally to any product or service; teams require a clear picture of whether people are engaging to make fundamental business decisions. The digital realm made these metrics even more accessible. As digital products gained prominence, measuring adoption became synonymous with these readily available metrics.

Product analytics tools, from their early iterations to contemporary giants, have enshrined usage as a cornerstone. Again, this is due to the simplicity of the metric, along with these products' goal to get customers to use their tool. Most of these products onboard a user by having them complete a usage-based dashboard. Even as these tools have evolved, offering a variety of data streams, usage remains the default starting point in product discussions. This default makes deeper explorations into the nuances of user engagement feel like a tremendous effort compared to what is already available to explore.

Concurrently, two prevailing business philosophies emerged. The first is encapsulated by the adage coined by John Doerr, "measure what matters." Although this mantra underscores the importance of quantifiable metrics in tracking progress and predicting outcomes, it commonly promotes a path of least resistance in practice. The result? A disproportionate focus on easily attainable metrics, with usage being the prime candidate in the technology space.

In parallel, developing a North Star Metric, or single metric that when increased yields product growth, has become a common step in any product launch.

Teams choose a metric that they hope to see spike as they push out their new features, all with the hope it ties back to positive business outcomes. Yet, they commonly fall victim to the trap of defaulting toward the most straightforward metric even without asking whether the single metric captures something that moves the company closer to fulfilling its mission.

Together these philosophies, *when done right*, are significant progress toward measuring the impact that products create; the problem is they are commonly not executed effectively. Strategic planning sessions, often initiated with ambitious objectives such as improving the effectiveness of a product, tend to narrow their measurement scope when confronted with the limitations of available metrics; the ubiquity of usage metrics in analytics tools further reinforces this trend. Thus, the team scopes its vision around what can be measured rather than valid quantifications of its aspirational goals. In the cases when teams venture beyond usage, they typically gravitate toward usability metrics that are commonly constrained by available tools, often defaulting to rudimentary customer satisfaction (CSAT) measurements or the polarizing NPS.

Measuring what really matters means finding the variables that connect to customer value, help form new habits of usage, inspire the team, and indicate long-term business success. This is even more important when selecting a single North Star Metric for the team to rally around. Airbnb might want people to be on its app searching for more time, but the real value it wants to maximize comes from nights booked. Tinder would like to see the number of swipes increase, but the real value comes from the number of matches or conversations it sees on its platform. These metrics really do matter for its product outcomes.

Unfortunately, when companies focus on the wrong metrics, the leadership still emerges from planning sessions harboring misplaced confidence in the faulty North Start Metrics and subsequent established goals, equating high usage or usability scores with fulfilling customer desires. But what success have they scoped? When leadership sets usage-based goals, it communicates to teams that they should focus on outputs over all else. Employees are mandated to prioritize improvements that enhance engagement, ultimately perpetuating the myth that usage equates to solving a user problem.

Lacking Trust Means Increased Dependence on Leading Indicators

When investors lack trust that a product team they have financed will accomplish their ambitious long-term goals, they tend to overemphasize growth to leading indicators. Due to its straightforwardness, usage stands as a quintessential leading indicator. Alterations to a product swiftly manifest in the initial data points, such as changes in user progression within an engagement funnel and the aggregate user interaction. The pervasiveness of usage metrics is such that they're often tracked daily, with week-over-week growth figures serving as a testament to their prompt availability.

In contrast, lagging indicators emerge over a more extended period. These metrics are discerned only after user interaction, providing insights into the subsequent effects on individuals or their surroundings. For instance, a budgeting app may immediately indicate the number of new budgets created, but it takes time to evaluate whether users are adhering to these budgets or whether specific interventions increase budget maintenance likelihood.

Leading indicators, while expedient for detecting immediate changes, tend to scratch only the surface. Product managers quickly identify they reveal engagement but fall short of indicating whether that engagement has achieved the objective—respecting that level of understanding requires patience. Yet they face a strong force preventing them from prioritizing the maximization of lagging indicators.

Our current economic framework, which favors the rapid ascent of metrics, often neglects the time necessary to determine if a product genuinely impacts a user. Trust in a product's ability to achieve its grand vision is scarce, with investors and markets alike fixating on upward trends. This trust deficit is often addressed by emphasizing the growth of leading indicators while hoping they will eventually influence the more consequential lagging indicators.

Consequently, companies are incentivized to prioritize the enhancement of these leading indicators, sidelining the actual impact on users. Similarly, public market investors focus on superficial data that promises immediate returns, often at the expense of considering the enduring effects on a company's customer base. Trickling down, this lack of trust influences leadership to demand their teams make product changes that grow the leading indicators over all else, further disempowering product managers from pursuing features that will truly transform the customer's life.

Ascendancy of the Advertisement Business Model: Maximize Engagement to Maximize Profit

Business leaders' focus on usage as the end-all metric is reinforced by our third primary factor: the ascendancy of the advertising business model. As was discussed with media companies, the intertwined histories of the internet and the advertising industry have shaped our digital landscape. The early days of the app ecosystem, embodied by the beginning of the iPhone App Store, witnessed a traditional software model. Popular apps such as Day One Journal and Scanner Pro became priced commodities like Microsoft Office or Adobe Creative Suite. Advertisers were an afterthought for those who could find a place for ads in the interface.

However, the meteoric rise of platforms like Facebook, offering expansive services at no cost, revolutionized this approach. These platforms positioned themselves as advertising hubs, leveraging user engagement to drive ad revenue. This approach's success didn't go unnoticed. In a short span, it became the preferred business model for app developers. The proposition was enticing: why convince users of an app's monetary value when gaining their time and attention sufficed? Soon, two of the most popular mobile apps were Evernote and Shazam, offered for free due to the backing of advertisers, who were happy to pay to have their content embedded in these products. Popular apps—emboldened by advertiser support—flourished on the basis that maximizing usage and retention would yield increased investment and profit. Building companies around the pursuit of engagement for ad revenue meant usage metrics were organically prioritized, and this belief spread without much question about the value being delivered to actual users.

Championed by industry titans like Facebook and Google, this trend grew with the advent of targeted advertising campaigns, promising enhanced ROI. The underlying premise was simple: increased user engagement equated to richer data profiles, translating to higher ad revenues. This model—dominant through the late 2010s—began showing cracks amid rising data–privacy concerns and questions about the actual value derived from incessant advertising. Yet its influence was profound, shaping the ethos of a generation of tech executives who assume product success can be evaluated using only usage and retention metrics.

The elevation of usage as the primary success metric is thanks to the confluence of its inherent simplicity and the advertising model's dominance. This focus was further amplified by the tech industry's growth-centric mindset, often fueled by venture capital. The funding structure these investors chose for many startups during the zero-interest-rate-phenomenon era viewed the pursuit of growth as the end-all metric to maximize. It meant choosing a North Start Metric that would showcase a graph going up and to the right without much concern for what was happening to the users within that graph. Users might love the product or hate it; it works for them, or it might decrease the likelihood they accomplish their desired outcome. In this paradigm, usage aligned with the primary metric that investors cared about without caring that it is indicative of engagement but offers little insight into genuine impact.

The Pitfalls of Solely Prioritizing Usage

Measuring usage is not a harmful practice entirely; only when it is the sole metric that companies focus on does it lead them astray. Engagement is paramount to building successful products; many life-changing prototypes are collecting dust on academic and R&D (research and development) lab bookshelves. Usage metrics, such as daily active users, duration, and retention, are valuable leading indicators for building an easy and enjoyable interface. The missed opportunity to build long-term viable solutions emerges when the pursuit of expanding user

Zero-Interest-Rate Phenomena

The "zero-interest-rate phenomenon" describes a period when central banks set short-term interest rates at or near zero, primarily to stimulate economic growth after significant downturns, like the 2008 financial crisis. This policy made borrowing cheaper, prompting businesses and consumers to spend and invest more. As a result, with an influx of capital seeking higher yields, venture capital (VC) firms began emphasizing rapid growth over immediate profitability for startups. This "growth at all costs" approach meant investors often pushed startups to prioritize user acquisition, leading to an industry-wide focus on usage metrics. In this environment, the number of users a startup could attract became a primary indicator of success, sometimes overshadowing other meaningful metrics related to usability, impact, and long-term viability.

numbers overshadows all other objectives, creating an environment in which problems arise without explanation.

The media sector confronted this reality in the early 2020s as audiences began disengaging.[3] While part of this shift is attributed to the allure of newer, more captivating platforms like TikTok, the saturation of low-quality content and *listicles* (for example, "20 pictures you must see before you die") had also peaked. As detailed in the book *Traffic,* by Ben Smith, for years, media giants, notably Buzzfeed, had shifted their content creation toward that which would become viral at as low a cost as possible, yielding engagement for cheap. Although each article might momentarily boost engagement, it rarely conferred lasting value to the reader.

These corporations lost sight of the fundamental reasons people sought content: information, understanding, and entertainment. Instead, these low-cost content pieces were devoid of depth or substance, offering only something to look at and maybe share with one's social media community. As the cycle continued, user after user became uninterested in the piece, no longer choosing to go toward a solution that was not satisfying their desire. The gradual decline accelerated, and by 2023, once-dominant media entities like Vice and Vox faced bankruptcy, while Buzzfeed languished, a mere shadow of its former glory.

The media industry was among the first to see the pitfalls of an unwavering focus on user acquisition. When an organization's focus is trained purely on adding more users, the outcomes that their users face become irrelevant. Growth comes at the cost of usability and use-case fulfillment. On a granular level, this might manifest as users abandoning a platform or hesitating to upgrade. On a broader scale, it distances companies from their visionary mission statements and, in more severe cases, contributes to societal challenges such as mental health issues, as touched on with social media, along with the reduction of privacy and increased social polarization.

These adverse outcomes caused by neglecting user-focused outcome metrics might take time. However, a pattern emerges over time: users are initially enticed, remain for a while, but eventually depart after realizing the platform doesn't meet their needs. In product jargon, this is called a *leaky bucket*. Even products that inherently create switching costs for users, like social media with

3 2023 Digital News Report by Reuters Institute its vast network effect caused by a user's connections being on the same platform, aren't immune. As users discern the misalignment between their needs and the platform's offerings, even these giants face attrition.

The stakes for products in competitive markets are even higher without such built-in retention mechanisms. Without solving problems for users, users can easily switch to another solution as soon as a competitor launches a better solution into the market. Only when products are doing something for the user can a switching cost begin to form where customers will stay because they don't want to risk missing out on something valuable to them. And research shows that a 5 percent improvement in retention leads to an increase of at least 25 percent in profits.

Beyond retention issues, teams can commonly attribute operational challenges to an incomplete picture of product success caused by missing user outcome measurements. Groups operating in the dark about the real-world impact of their features are likely to grapple with product planning ambiguities. They must judge a feature's success based on engagement alone and make improvement and depreciation decisions with benchmarks that share only *what* happened rather than *why*. Decisions become rooted in intuition rather than empirical evidence. Looking at their metrics, such as daily active users and NPS, might highlight a problem. However, without a thorough understanding, correlations remain elusive, and teams are once again left chasing a number that doesn't matter to end users.

For product teams grappling with dwindling retention or significant challenges in planning, the initial inquiry should center on the product's tangible value to users. This approach transcends mere user engagement or usability. It delves into whether a solution transformed a user's behavior or perspectives through interaction. A product's success is genuinely affirmed only when tangible, real-world outcomes shift. Otherwise, it's hardly surprising when users swiftly transition to alternative solutions, lured by promises of faster, more affordable, or more innovative benefits.

Building new metrics requires time and effort, which most product people find scarce; it also requires the functional knowledge of creating new variables. By reading this book you are taking a step closer to expanding your metric portfolio. This chapter makes the case for adopting new metrics to equip you to sell the vision.

Measurements of Success Beyond Usage and Usability

One company, the *New York Times*, has successfully bucked the trend of declining usage faced by the media industry. Their leadership resisted the digital tide for years, appearing as a laggard in the early internet era. However, when they finally embraced the digital frontier, they eschewed the prevailing trend of offering vast amounts of free content. Instead, they leaned into their century-old strength: producing premium content worthy of a paid subscription.

The *Times*'s editorial board remained unwavering in its commitment to delivering articles that resonated with readers, satisfying their needs for information, understanding, and entertainment. As the digital realm became saturated with fleeting, free content, readers gravitated back to the trusted source they had relied on pre-internet. Subscriptions to the *Times* continued to climb as people enjoyed the experience of accessing their expansive library of resources while finding that it fulfilled their desires. By 2023, the *New York Times* boasted the most extensive subscription base of any U.S. media entity, a testament to their dedication to quality over mere engagement.

It is no surprise that the company, coming out of the "growth at all costs" era of media, also stuck to its lofty mission of "We seek the truth and help people understand the world." This ethos compelled them to look beyond superficial metrics, focusing instead on whether they were satisfying their readers' thirst for knowledge and entertainment. Describing their success, the consulting company McKinsey highlighted how the *Times*'s product team works alongside their reporters to find the best display format for each article to maximize the content delivery. This approach has proven beneficial at encouraging app returns, subsequently improving subscription retention.

User and Behavioral Outcomes

Measuring impact based on outcome metrics, in addition to usage and usability, is the core tenet of this book. This lens is called the *Impact Mindset* and focuses on measuring success based on whether a product made an impact on the outcome a user is attempting to create. Throughout the subsequent chapters, we will discuss the five levels of metrics shown in **TABLE 1.1**, each providing a piece of the puzzle to identify whether a feature is successful. With an Impact Mindset, success means an enjoyable experience that is widely used while also accomplishing its desired impact. We've already covered the first level of success

TABLE 1.1 Success Levels

LEVEL	DETAILS	EXAMPLES	BENEFITS	DRAWBACKS
Usage	Whether a user engaged with a feature	• Daily active usage • Usage growth	• Data is easy to capture. • Product teams are familiar with it.	• It offers little evidence toward the outcome the feature is creating. • Its simplicity makes it easy for teams to fall into the trap of overfocusing on it.
Usability	Rating of how well a user interacted with the feature	• Satisfaction score • Ease of use	• Lots of resources and frameworks are available to help capture and understand user interactions. • It can be easy as one question.	• The results are biased by users who respond at the moment and do not necessarily reflect long-term outcomes. • Obtaining nuanced data on user interactions requires thoughtful effort and user input.
Behavioral Outcomes	What actions a user took during and after interacting with a feature	• Frequency of daily journal entry completion • Length of conversations • Number of workouts completed	• These offer an understanding of what the feature is causing a user to do during and after usage. • These begin to explain whether a feature is having an intended effect on users.	• It does not explain the benefit a user experienced. • It is challenging to collect outside of digital environments.
User Outcomes	Impact to a user that occurred due to their usage of a feature	• Change in confidence • Data synced to warehouse • Gain or loss of weight	• The primary metric for determining if a product is impacting users in the desired way. • Powerful for communicating the effects of features.	• It is the hardest to measure. • It may require soliciting user feedback.
Business Outcomes	Impact to the business that occurs when user outcomes are fulfilled	• Revenue • Custom acquisition cost	• The most important metrics for the business's survival.	• Over focus on short-term outcomes can cause long-term value loss.

metrics in detail: **usage**. It is the easiest to measure and is good for understanding how much a product grows, along with whether it is sticky when measuring retention.

Usability, the second level, captures a user's sentiment toward their product experience. At its most straightforward, usability is measured as satisfaction and a single question such as, *On a scale of 1–10, what level of satisfaction did you have with this experience?* Another frequent approach is the net promotor score, commonly asked as *How likely is it that you would recommend this company to a friend or colleague?* Although both questions offer a glimpse into user sentiment, they remain surface-level indicators. For instance, a dip in NPS might signal a problem but doesn't pinpoint the root cause.

Making usability a more valuable measurement requires breaking the overall experience into defined chunks. More granular usability metrics, such as *Rate the level of difficulty that you had finding the Complete Purchase button*, provide more actionable insights. The question targets a specific element of the product interaction. If the difficulty-finding-a-button metric spiked, it is likely due to a bug or a recent design change, and with that information, the team could remediate it more swiftly. Quantifying usability is a newer approach that teams are adopting and has much to offer on building satisfying products. It is a powerful tool for measuring whether people like and will continue using a product, which is essential for growth, but it still doesn't determine if it fully satisfies user desires.

The third metric—the first novel one—in Table 1.1 introduces the **behavioral outcome**. This metric captures a user's tangible actions within the product environment and in their real-world activities post-engagement. Consider a meditation app with a user aiming for stress reduction. Behavioral outcomes might encompass the number of guided mediations in-app that they completed or more emotional check-ins they performed throughout the week—specific actions linked to their overarching goal. Behavioral outcomes focus on what activities a user performs during and after usage.

The fourth metric—another novel one—is **user outcomes**, which assesses whether a product has catalyzed the desired change or impact for the user. If that sentence confuses you, don't worry; the next chapter provides more detail. Following the previous example of a meditation app, the user outcome could be reduced stress, gauged by heart rate variability, or perceived stress levels. A team could measure both outcomes across time and in combination with the user's behaviors to determine if the product is making an impact.

The fifth and final metric is one that is all too familiar to the financial side of the business but is often overlooked by research and even sometimes product teams, the **business outcomes**. These are the variables that are used to track the success of the company at selling products. Used to determine whether a product is a viable source of funding to continue sustaining operations, these metrics are critical to the ultimate impact of a product to the firm. While generally determined by the leadership of the company, impacting these metrics with the release of new features is an essential component to a successful product.

A comprehensive assessment of these five metric levels paints a vivid picture of user engagement, sentiment, and the tangible benefits caused by specific actions prompted by the product. Adopting an Impact Mindset is underpinned by the ability to measure the behavioral and user outcomes, and the next chapter further details the value of collecting both. For now, let's explore two illustrative examples measuring all five success metric levels.

Case Studies: Grammarly and Ninjio

The first example focuses on a business-to-consumer (B2C) company, Grammarly, which offers a writing assistance tool. Consumers purchase the solution to have a significantly enhanced autocorrect that focuses not just on spelling but on the entire sentence structure. Grammarly doesn't stop working after fixing errors; it improves the user's writing by offering scores based on five metrics to measure a writer's success (**FIGURE 1.1**): grammatical correctness, clarity, engagement, and overall delivery. It has taken abstract constructs likely learned in grade school and turned them into beautiful visuals. As the tool learns more about the writer's style, it personalizes recommendations and the goals it attempts to improve through its recommendations. Grammarly's success, as per their marketing, is developing better writers, and their product does so as shown through anecdotal account and academic study alike.[4] **TABLE 1.2** shows how Grammarly could hypothetically measure the five levels of success of its app.

---

4 "Grammarly: An instructional intervention for writing enhancement in management education" hosted on Elsevier

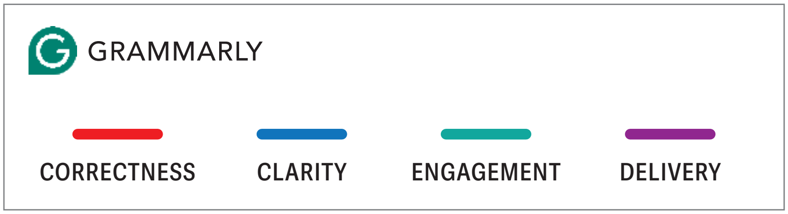


FIGURE 1.1 Grammarly's five metrics to measure the effectiveness of a user's writing

TABLE 1.2 Grammarly Metric Level

LEVEL	EXAMPLE METRICS	DETAILS
Usage	App usage	Number of integrations activated (Gmail, keyboard, etc.)
Usability	App satisfaction score	Ratings of grammar suggestions
Behavioral Outcomes	Number of rewrites based on suggestions	Increased rewriting to maximize four main metrics for the writer
User Outcomes	Reduction of errors	Greater impact of writing
Business Outcome	Customer retention	As Grammarly improves writing, a customer will continue paying for it

Shifting to the business-to-business (B2B) space, Ninjio addresses the pressing issue of cybersecurity awareness. Recognizing that many cyber breaches are caused by human error, their solutions focus on training employees on best practices to reduce human-based cyber risk. They have developed a suite of programs intended to train employees on risk-reducing behaviors. One of their offerings, Ninjio Aware, comprises short, engaging videos that spotlight specific actions that employees can adopt to minimize errors. By creating memorable learning experiences, Ninjio aspires to reduce data breaches, a claim that a customer can test by using fake email phishing campaigns. **TABLE 1.3** shows how Ninjio could hypothetically measure the five levels of success of its training.

TABLE 1.3 Ninjio Metric Level

LEVEL	EXAMPLE METRICS	DETAILS
Usage	Video engagement rates	Completion of modules
Usability	Video ratings	Website NPS
Behavioral Outcomes	Increased reporting of potentially harmful emails	Decreased sharing of company information without protection
User Outcomes	Decreased data breaches	Increased knowledge of best practices
Business Outcomes	Seat expansion	As the business sees increased security awareness, they will continue purchasing more licenses

Comprehensive Approach to Metrics for Your Team

You might be pondering the feasibility of adopting the Impact Mindset and implementing such a comprehensive metric system within your team or organization. Doubts may arise regarding the practicality of crafting metrics across all levels. However, transitioning to this holistic approach is gradual, and the rewards explored throughout this book are profound.

The initial step is to galvanize your team around looking beyond mere usage metrics. Surprisingly, this shift often encounters less resistance than anticipated. Companies often attract talent with their ambitious missions, and employees are inherently driven by the prospect of crafting products that resonate deeply with end-users. Your role is to weave the narrative, highlighting how this multifaceted approach fosters a more intimate bond with customers.

Rest assured, you're not alone if you doubt the measurability of behavioral and outcome metrics. Addressing this very concern is a primary objective of this book. Chapter 2 touches upon, and Chapter 7 goes into extensive detail about, a methodical process for this, which commences with detailed observations of user interactions, distilling these into discernible behaviors and subsequently formulating proxy metrics. The reality is that wherever behavior occurs, a team can measure it, so it is not whether it exists but rather how difficult it is to measure and how to make the process of measuring it simpler.

Admittedly, this approach is more intricate than the straightforward task of gauging usage; otherwise, everyone would be doing it. However, its merits are undeniable and guarantee a competitive edge in satisfying user needs. A product's efficacy is contingent on its usage, but its transformative impact hinges on its effectiveness. Therefore, while usage metrics are indispensable, they should complement other indicators that elucidate the broader impact. The ensuing chapter will delve deeper, illuminating the possibilities that unfold when teams grasp the full spectrum of their product's success.

CHAPTER RECAP

- **The Impact Mindset:** A new lens for determining product success, focused on whether usage achieved the outcomes that a user desires.
- **The usage metric pitfall:** Solely relying on usage metrics can lead to a narrow view of success, potentially sidelining the actual value delivered to users.
- **Historical context:** Our modern emphasis on usage metrics stems from the philosophy of "what is measured, matters," combined with its ease of measuring engagement and the influential ascent of the advertising-driven business model.
- **Staying true to core values:** The *New York Times*' resurgence, driven by its commitment to quality, highlights the long-term benefits of an outcome-centric approach.
- **A holistic measurement framework:** Evaluating product success requires a layered approach, considering not just usage but also usability, behaviors, and ultimate outcomes.
- **Implementing the approach:** Transitioning to a multi-metric approach is a gradual process, but with commitment and a straightforward narrative, teams can better align with their product's true impact on users.

This page intentionally left blank

Index

V

W

Y

Z