mobilized

an insider's guide to the business and
future of connected technology

SC Moatti

Foreword by Nir Eyal, bestselling author of
Hooked: How To Build Habit-Forming Products

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Foreword

by Nir Eyal

I remember the first time I saw a URL. It was 1995, I was a teenager, and I was flipping through my hometown newspaper when I spotted a movie ad. At the bottom were the words "Check us out online at www . . ."

I had no idea what "www" meant, but being the nerd I was (and still am), I rushed to my computer. Eagerly, I waited 5 minutes for the spinning disks to boot up and weathered another 10 minutes of crashes and reboots.

Finally, I was able to type the URL into my Internet service provider's search bar, and Prodigy promptly took me nowhere. Instead of a web page, I got an error message.

Not that it would have mattered much.

Let me remind you that 1995 web pages were truly terrible. A look back at websites of yesteryear reveals hard-to-navigate, text-laden walls of words that no one would want to interact with today.

No wonder relatively few offline businesses shifted their resources into building an online presence. It would take years, if not a decade, after the first web browser was born for businesses to realize the importance of that lowly "www."

Today, having a website is a requirement—it's the modern-day equivalent of hanging a shingle, announcing you are open for business.

The lesson here is that—at first—sweeping industry changes can easily be dismissed. They're often seen as something companies can get to later on, when time allows and budgets free up. But, of course, later on often comes too late and, while laggards are still deciding what to do, their competitors are cashing in.

As of this writing in late 2015, we're just seven years into the mobile revolution as marked by the opening of the Apple App Store in 2008—and yet what an incredibly rapid revolution it has been.

Consider this: whereas most companies just a decade ago lacked even a basic mobile presence, today entire multibillion-dollar enterprises operate only in the mobile space. In fact, many of the biggest players and service providers globally—such as Uber—only exist in mobile.

Like so many did when websites first arrived, small and medium-sized businesses today have ignored or neglected their mobile strategy. However, giving

customers a way to do business with you through their mobile devices is fast becoming a necessity, as important as having a presence on the World Wide Web. Just as eagerly as I wanted to get online as a teenager to check out that particular movie's website, your customers want to interact with you through their mobile devices. CNN reported last year that over half of Internet usage comes from mobile devices in the US—a percentage that is significantly higher in other parts of the world where mobile is the only way to access the web.[1]

In this book, my friend Sophie-Charlotte (SC) Moatti gets you ready for what's to come.

I first met SC three years ago. She was working at Facebook and invited me to speak to her team. I was impressed. "I'm going mobile only," she told me. "Trying to get my work done without a computer. I'm almost there . . ." When everyone else was still carrying around a laptop, SC was pioneering the effective use of mobile technology in ways the rest of us had yet to see.

SC recognizes the vital role mobile applications will play in our future. From her years of practice in mobile, she honed her craft and learned how to build mobile services and apps that get users engaged and keep them coming back.

In this book, she lays out the ground rules for what works and what doesn't in mobile. She shares insights she

gleaned working at Facebook, Nokia, and other companies to give us her unique perspective on how to, in her words, "build products that count."

Enjoy getting mobilized!

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Experiencing the Mobile Revolution Firsthand

Mobile has eaten the world.[2,3]

It's a technology that has greater power than most of the technologies that came before it. What's more, its power is only going to grow stronger, its reach into our lives deeper.

In this book, I am going to explain how mobile came to be, what makes the best mobile products, and how these factors influence the present and future of the industry.

To begin, let's talk about where mobile gets its power and how I became interested in it.

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Most of us have a fairly simple way to keep technology at bay when we want to distance ourselves from it: we walk away. We leave the office or factory at the end of the work-day, we turn off the computer, we switch off the TV. . . .

But what of mobile products? Do we walk away from them the way we disconnect from most technology?

We hope we can simply turn off our smartphones, but very few of us do. In fact, statistics show that two people out of three place their mobile devices on the nightstand next to their bed.[4] It's the last thing we put down before we go to sleep and the first thing we check when we wake up.

We're not being forced to sleep with our mobile devices within arm's reach. We want to do it. We don't want to be separated from it. It's become what's called a *sticky* technology, where we've formed such a strong attachment to our mobile devices that our use of them is an ongoing, almost unconscious habit.

What if instead of a smartphone, our favorite mobile device was a watch? An earpiece? A pair of contact lenses? A smart patch? A smart pill? A digital nerve ending? As mobile devices shrink, they get more and more integrated into everyday objects around us and more and more deeply embedded within us.

The mobile revolution isn't simply a technological invention from which we can disconnect at any time. We can't disengage from the air we breathe or from the feet that carry us. Similarly, in today's world we can't disconnect from our mobile products.

Our mobile products are new extensions of ourselves.[5] What we should expect from them is what we wish for

ourselves: an attractive body, a meaningful life, and becoming smarter about the things that count. This is the foundation behind successful mobile products.

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To begin, let me tell you how I got involved in mobile and how my views about it were shaped.

For most of my professional life, I've helped companies become mobile. I've launched and monetized mobile products that are used by billions of people.

In 2007, I was part of a team of Stanford graduates who joined the incubation labs of Nokia. When it came to mobile, Nokia was the undisputed market leader. Our mission was to build a service that helped users discover information about an object or a location simply by pointing their phone at it. Within less than two years, our team grew from 3 to more than 70 people. Millions of customers downloaded our app. The press gave us some really nice reviews.

Soon, it reached the top 1 percent of the app store and received coveted industry awards, including an International Digital Emmy nomination and *WSJ* Innovator runner-up.[6] In fact, it was so successful that Nokia decided to preinstall it on every one of its smartphones. It was a big deal for our small team.

At the time, two out of every five smartphones were sold by Nokia. The company was so successful at it, in fact,

that several of its competitors, mobile manufacturers like Samsung and Motorola, were headed toward bankruptcy. Meanwhile, recognizing the implications of Nokia's success, a few Silicon Valley staples were radically changing their strategy to become mobile.

This was really exciting, but at first I didn't get it. Why would blue chips like Apple and Google put their entire business at risk to enter a market that was so quickly consolidating?

I wanted to find the answer, so I embarked on a journey to understand how companies and people would become successful in this new mobile age. How would mobile start-ups make their mark in a world ruled by giant phone manufacturers and operators that strictly controlled access to their online content and services? What would happen when incumbents placed their bets and consolidated? And more importantly, what did that mean for me, you, and all our friends and colleagues? How would the mobile revolution affect our careers and our lives?

I looked for a formula that would help me navigate the mobile revolution. To my disappointment, I found none. Successful mobile insiders guarded their successes and secrets, and although I uncovered books, white papers, and blog posts, they at best only scratched the surface.[7] There was no guide for making sense of the burgeoning mobile industry.

In 2010, I left Nokia and started my own mobile company. I worked days and nights with an awesome team of pioneers in our tiny office in SoMa, the start-up neighborhood of San Francisco. We set out to build a product that would capture mobile's essence, one that would connect people and be super-contextual and personalized.

We came up with a few ideas that fit these criteria and, after some trial and error, decided on one: dating. We then refined the idea, figuring that the best way to meet someone is to be set up by friends. So we developed the product to match friends of friends who were nearby one another and whom we thought could be a romantic match.

Soon after we launched, we found a passionate group of loyal users. On our mobile app, they could browse through thousands (eventually hundreds of thousands) of profiles and ask their friends for an opinion. It was simple and fun. It was hyper-personal and safe at the same time. We kept tweaking the experience based on what people liked.

We raised money from some of the smartest Silicon Valley insiders and piqued the interest of Facebook, the social networking giant. They liked the way we thought of mobile and offered to bring us in to help them figure out what they could make of the mobile revolution. We sold the company. I joined Facebook.

At Facebook, I worked with very bright and ambitious people to try and keep up with the company's exponential

growth. They brought me in because of my experience building a mobile start-up, but the nature of the work at Facebook was completely different from what we did at a start-up. At my previous job, we were trying to discover what people would actually do with mobile. At Facebook, we knew what users wanted; our job was just to keep up with the incredible rise of the social network as it branched into mobile.

I loved the work we were doing at Facebook, but I decided to leave when Trulia, the real estate marketplace, offered me the opportunity to head up its rentals division. I found myself surprised again at how different this experience was from my previous ones, even though we were yet again driving the mobile revolution. Trulia's founder asked me to join precisely because of my work at both a mobile start-up and a hyper-growth company. But instead of developing our mobile product, my team and I focused most of our time and effort increasing mobile revenue and consolidating our projects to reduce cost.

In 2015, I was invited to serve on the board of directors of Opera Software, the global mobile browser and advertising network. I remembered the company as a market leader providing high-performing mobile browsers to Nokia and other phone manufacturers. When smartphones became mainstream, Opera completely reinvented itself. In only a few years, it became a market leader

providing mobile video advertising across more than one billion mobile phones globally.

Despite my experience in several tech companies, I still could not wrap my head around the mobile revolution. Organizations big and small were rushing into it without thinking much about the consequences. Silicon Valley entrepreneurs were excited about using mobile to create new business models without much consideration for the impact it might have on society. Corporate America was in a hurry to launch apps at any cost without thinking about how mobile could be a source of additional revenue. Governments eagerly anticipated access to massive amounts of data that could help prevent terrorism without considering how it would limit citizens' freedoms.

It all felt random, and no one seemed to be defining the formula for mobile success. What was the nature of mobile and the essence of its impact on our lives? Beyond features and functions, business models and money, what was our vision for the mobile revolution?

I looked for insights from friends and colleagues, trying to uncover the rules behind great mobile products. I sought to identify the commonalities between the most successful ones and understand what the others were doing differently. In addition to managers and coworkers I had worked with at Facebook, Nokia, Opera, and Trulia, I spoke with executives at mobile pioneers, including Apple,

Amazon, Airbnb, Google, Instagram, GreenOwl, Lyft, MyFitnessPal, Pandora, Slack, Tinder, Uber, Viber, Yelp, Andreessen Horowitz, Autodesk, and others.

In 2013, I began blogging about what I learned at www.ProductsThatCount.com, and my essays were syndicated to such other sites as the Harvard Business Review and the Huffington Post. Soon, readers began sending me their own case studies, perspectives, and questions.

These years of experience and research finally resulted in the creation of the Mobile Formula, a set of three all-encompassing rules behind exceptional mobile products. The Mobile Formula is the backbone of this book.

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Mobilized is for anyone who wants to participate in the mobile revolution, from recent college graduates to working professionals, serial entrepreneurs, and corporate leaders. Whether you have your own mobile start-up, work at a hyper-growth company, have a job at an established corporation, or are between projects, you will learn how to apply the Mobile Formula to your own circumstances. In the process, you will help build a more connected world by being a better-informed participant in the mobile revolution.

This book is also for anyone interested in cutting-edge technology, innovative marketing, artificial intelligence (AI), and how these and related fields intersect with human psychology, economics, and social movements. Mobile is

an entrenched part of your life already (if not, it soon will be); this book will provide an insider's perspective into how that occurred.

I realize *mobilized* might seem like a book on technology, but really it's a book about us humans. Of course, we're going to look at technology and what makes for great mobile products. But if you only study the technology, you'll end up with an incomplete picture.

Why? Because the best mobile products are based on *human-first* principles. Great mobile products don't look inward, focusing soley on churning 1s and 0s; rather, they look out at the world and the people in it. Mobile doesn't rob us of our humanity; it amplifies it.

The Mobile Formula is about us, humans, and what matters to us. So in addition to the Facebooks and Ubers of the world, we're also going to look at such forward-thinking individuals as mathematician Pythagoras, author Leo Tolstoy, philosopher Martin Heidegger, and states-man Nelson Mandela to see how they went about finding answers to life's big questions.

Here is what lies ahead:

- Chapter 1 talks about how the mobile revolution is transforming the business world on all levels—technologically, economically, strategically, even culturally.

- Chapters 2, 3, and 4 describe the three components of the Mobile Formula. They look in detail at

what the most successful companies are doing with mobile, and how mobile replicates human behavior and amplifies human experience.

◆ Chapter 5 examines how the Mobile Formula applies to past and current mobile products, and how we can use it to predict what future mobile products will do.

Throughout the book, I apply the Mobile Formula to case studies of companies that joined the mobile revolution—how they did it and how you can, too.

As you're reading, you'll find many references to Facebook. That's not just because much of what Facebook is doing in mobile is laudable, or because the mobile revolution is mostly about software, less about hardware. It's also because, since I worked there, I know how we made our choices. I'm not trying to push Facebook or their choices on you, though. In fact, I write about the intriguing choices made by several other Silicon Valley companies, including Airbnb and Pandora. All these familiar players are a big part of the evolving mobile story.

The Mobile Formula works in organizations of any size and ambition. But the specifics vary a lot, and this book provides ways to understand them and tailor them to your own situation. As you read, make notes about the specific aspects of your situation that require particular attention, and how the Mobile Formula could be applied to them.

At the beginning of each chapter, I provide a brief summary of the content to follow. I half-kiddingly title the boxes by the old Internet acronym TL;DR (Too Long; Didn't Read), but they are meant to set the stage for what you are about to read rather than give you an excuse not to read it!

At the end of each chapter, you'll find some key take-aways to focus on. Review them alone, discuss them with your team, and share them with your network. If you have questions, I'm here to help.

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Chapter 1

The New Gold Rush

> **TL;DR** **Too Long; Didn't Read**
>
> - People spend more time on their mobile products than on their computers, so businesses are adjusting their strategy to focus more on mobile.
> - In addition, entrepreneurs are creating new types of businesses: the sharing economy.
> - This shift is much bigger than technology or marketing; it's about company culture.
> - What guides the success of all mobile products—past, present, and future—is the Mobile Formula. It has three rules: the Body Rule, the Spirit Rule, and the Mind Rule.

Imagine for a moment that your phone bill is as high as your rent or mortgage. Would you be able to afford it? Would you cancel your smartphone plan? Would you move to a smaller and cheaper home so you could continue to pay for your phone?

In 2015, the Boston Consulting Group (BCG) published the results of a global survey showing that an average person puts an implied value of up to $6,000 on their smartphone, or more accurately on the apps that run on smartphones.[8] In developing countries like China and India, this represents 40 percent of average income.

That's the price some people are willing to pay for mobile apps. People care as much about their mobile products as they do where they live. It's that significant.

Today, mobile contributes about 5 percent of gross domestic product (GDP) in the countries surveyed by BCG (and as high as 11 percent in one country: South Korea) and represents almost 8 percent of all venture capital investment. Cumulatively, it's more than the GDP of every country in the world except for the United States and China.

Yet unlike other infrastructure investments of similar magnitude, such as energy and transportation networks, most of this investment is privately funded.

Mobile is about private wealth, not government programs.

So the mobile revolution has created a new gold rush, a Wild West environment where people are ambitious and opportunities are everywhere. I'm surprised every day to discover the extent to which it is creating unprecedented prosperity. Every business wants to and should get a meaningful piece of it.

Given this potential for profit, almost every company I speak with wants to become *mobile-first*. But what does that mean?

Where People Go, Business Follows

Since 2014, there have been more mobile devices in the world than desktop computers, and people spend more time browsing the Internet on their smartphones than on their desktops. So companies simply cannot ignore mobile as a channel to reach their consumers. But to be effective, mobile marketing requires dedicated mobile products such as smartphone apps. Let me explain.

Marketers who work at companies that do not have a mobile product have limited options to reach consumers on mobile. They can advertise on mobile, of course. In 2015, every other dollar spent on digital advertising was spent on mobile. They can also reach their consumers through mobile social networks like Facebook, Instagram, and Twitter, and mobile messengers like WhatsApp, Line, and WeChat. But without a mobile product, that's about all a mobile marketer can do. Their options are limited.

On the other hand, marketers who work at companies that have a mobile product such as a mobile-friendly web-site (also called a *responsive website*) have many more ways to reach their consumers. They can improve their ranking

in search results on Google, which recently started to favor mobile-friendly websites in its search algorithm. They can create contextual offers, which are personalized to a user's time and place.

But that's still very limited, because when 9 out of 10 people spend their time in smartphone apps instead of in a mobile browser, a mobile website has significantly less reach than a smartphone app. On top of that, people who use a company's mobile app are generally better, more loyal customers than people who use its website.

Having a smartphone app allows marketers to take full advantage of what makes mobile unique and powerful as a way to reach people. They can, for instance, use free mobile distribution and promotion channels like app stores. They can send push notifications—messages sent ("pushed") to users without being specifically requested by users. They can negotiate with carriers to have their smartphone app preloaded so it will be widely distributed and promoted. They can use so-called multi-touch attribution tools that precisely measure the effectiveness of their campaigns across multiple channels.

"With mobile, we're moving from *Mad Men* to Math Men," says Sigal Bareket, founder and CEO of mobile performance advertising leader Taptica. "Everything is measurable and as a result, almost everything is predictable."

In the *Mad Men* era, it was almost impossible to track the effectiveness of advertising campaigns. Marketers

were deemed "creative," which was a way to say that campaigns were sometimes successful, sometimes not, and that nobody really understood why.

Mobile marketers no longer rely on the hope that creative geniuses will whisper the right thing in the ears of people who look like they could become customers. Instead, they buy ROI (return on investment). They spend marketing dollars only if and when they get customers.

This emerging mobile performance advertising industry is helping mobile companies reach consumers in unprecedented ways. And because mobile products know a lot about their users, marketers are able to learn a lot about their customers and how to reach them. For instance, they can find out which ad in which app was the most popular among men aged 35–44 in New York City. That's a pretty valuable piece of information if this group represents your target customers, don't you think?

To illustrate what I'm saying, let's look at a hypothetical T-shirt company called TC. We'll see that while TC has limited options to reach its customers on mobile without a mobile product, having a mobile product gives TC a competitive advantage.

If TC doesn't have a mobile product, its alternatives on mobile are few: it can advertise, or get its customers to, say, share selfies on Instagram when they're wearing their T-shirts. But that's about it.

If it has a mobile website, TC no longer misses a sale because a shopper wanted to compare prices back home on the computer before buying. It also ranks higher on search results of people who look for T-shirts. It can show special offers to people who are in or near a mall where their T-shirts are sold. That's better, but still limited.

If it has a smartphone app, TC can get visibility for its brand and promotions through mobile app stores. It can send its customers push notifications to let them know about new arrivals or special offers. It can track all the steps a shopper goes through when buying: Did they look up a retail store once they knew which T-shirt they liked, or did they come to the store first? Did they compare prices? All of that, TC couldn't do before. But it gets even better: all of that, TC can do for free. It doesn't cost the company any advertising dollars.

As we see, having a mobile product provides lots of benefits for TC, including better targeting, more personalized promotions, stronger loyalty, and increased sales. It's a marketer's dream come true.

But having a smartphone app means that mobile is no longer only a marketing channel—it's also a product. That comes with sizeable cost implications. Let's examine this.

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Launching a product on mobile isn't launching just one mobile product: it's launching an app for iPhone, an app for Android, and often a responsive website, an app for

tablets, and an app for other mobile products like a smartwatch. According to mobile analytics firm Flurry, smartphone apps represent a $100 billion industry that's supported by $2 trillion in infrastructure investment.[9]

Because of that, many companies feel that mobile is a burden. A big cost with no return. Another one of those expensive IT projects. They hate the idea that they might need to hire mobile engineers. Mobile engineers are highly skilled and very rare, so they demand high salaries. These businesses don't think building a smartphone app is cool, let alone valuable. They know they must build one; they're just not sure why. On their profit and loss statements, they put smartphone apps in the loss section.

Meanwhile, they set out to cram their complex website to fit a small screen. Often, it's a painful exercise and the results aren't effective: poor user experience, crowded app stores, limited customer or business value.

During the dot-com era, many companies felt just the same about the Internet: it was a burden. Back then, many of them hurried to build websites that mirrored their paper catalogs.

If you're old enough, you probably remember some of these rigid websites. They had bare-bones site maps that looked like a table of contents. Clicking on a link would open a static web page with a lengthy product description, and sometimes a couple of pictures. And that was it. Visitors to the website couldn't read reviews, or go from one

product to another to see what others had purchased, or compare prices, let alone buy online. So few of them came back to the site. It became a self-fulfilling prophecy that websites cost more than they yielded and that all they did was add new line items to already too fat IT budgets.

I'll let you in on a secret: if you use the same approach, you'll get the same results. It took over a decade for businesses to figure out the value of the Internet, from e-commerce services to search directories. If companies tackle mobile the same way they tackled the Internet, by building apps that look like websites, it's also going to take them years to find value in mobile. And they'll be left wondering: Do the benefits really outweigh the cost?

Let's go back to our earlier example, the T-shirt company TC. What would happen if it refused to build a mobile product and decided to ignore the mobile revolution? People obviously wouldn't stop buying clothes the way they stopped buying print photos or VCRs. So for a while, things would continue as they were.

Meanwhile, a lot of small companies would use mobile to try and meet the needs of consumers in ways TC wasn't. They might innovate in interesting ways. For instance, many smartphone apps today let people overlay T-shirts on a picture of themselves rather than having to try them on physically at a store. These apps made headlines recently because it's so much more efficient to shop for

clothes this way. Other apps let people design their own T-shirt by drawing on the touch screen, using a variety of templates. People love to personalize clothes because they find it fun and unique. Soon enough, these custom T-shirts could be produced at people's home, using a 3-D printer.

This trend is known as *smart apparel*, and as these companies grow, they will find more and more ways for people to try on, design, and make their own T-shirts on the go. And it's all because they are utilizing mobile products that improve constantly and quickly to meet these new consumer expectations. If TC still ignores the mobile revolution by then, its business could be in jeopardy.

When we refuse to adapt, we become isolated, strategic thinking stagnates, and businesses go bankrupt.

Take Yahoo, the former search giant. The company was born in the early days of the Internet and quickly established itself as a leader in the emerging online advertising industry. Its search technology was a game changer. Its portals were extremely popular destinations. Its mobile offering, Yahoo Go, was by far the best one out there.

At the time, advertising was still in the *Mad Men* era. Advertisers paid ad agencies extraordinary amounts of money to come up with cool banners.

"We make our money from people being shown ads," said Yahoo founder Jerry Yang.[10]

Instead of disrupting that ecosystem with its search technology, something Google would do soon after, Yahoo embraced it and set out to become one of these old-school media companies. Inexplicably, the board was convinced that people would never get tired of ad banners. They thought search was a fad that would go away by itself and as a result, the company turned its back on the very thing that had made it successful in the first place.

As early as the 2007, people already felt that Yahoo wasn't keeping up. The company had four CEOs in one year. It reacted years later, by partnering with Internet giants like Google and Alibaba and by bringing on Google's heralded executive, Marissa Mayer, as CEO.

By then, the battle for search had been long lost to Google. The new battle was mobile. Mayer acted quickly, aggressively bringing in mobile talent through over 30 acquisitions. Unfortunately, it was also too late. Yahoo had lost its edge.

As I'm writing this in late 2015, Yahoo has put itself up for sale. The company refused to adapt. It wasn't able to recognize that behaviors had changed.

Denial is someone else's opportunity. In fact, the mobile revolution has created completely new types of businesses—darlings like ridesharing service Uber and local delivery service Postmates, which are part of the dynamic new *sharing economy*. These businesses could not

exist without mobile, and they are worth exploring in some depth.

The New Entrepreneurs of the Sharing Economy

"The sharing economy is a peer-based movement that empowers individuals to get what they need from each other," says sharing economy expert Jeremiah Owyang.[11] "[It] stretches across many aspects of our lives and businesses." It's usually thought of as a way for some people to make extra cash by renting out an asset they already own, such as their home or car.

Sharing companies have exploded with the mobile revolution. Today, two out of three people participate in the sharing economy, either by sharing/renting out their own assets, or by renting the assets of others.[12]

Consider Postmates. It connects people with local couriers who purchase and deliver goods from any restaurant or store in a city. Postmates could not exist without mobile. Its couriers are constantly on the go and their itinerary is calculated, optimized, and delivered in real time. For instance, its system can predict how long it takes a restaurant to get a to-go meal ready. It takes this information into account when sending a courier so that they don't need to wait around to pick it up.

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