

An Unorthodox Guide
to Making Things Worth Making

TONY FADELL



HARPER
BUSINESS

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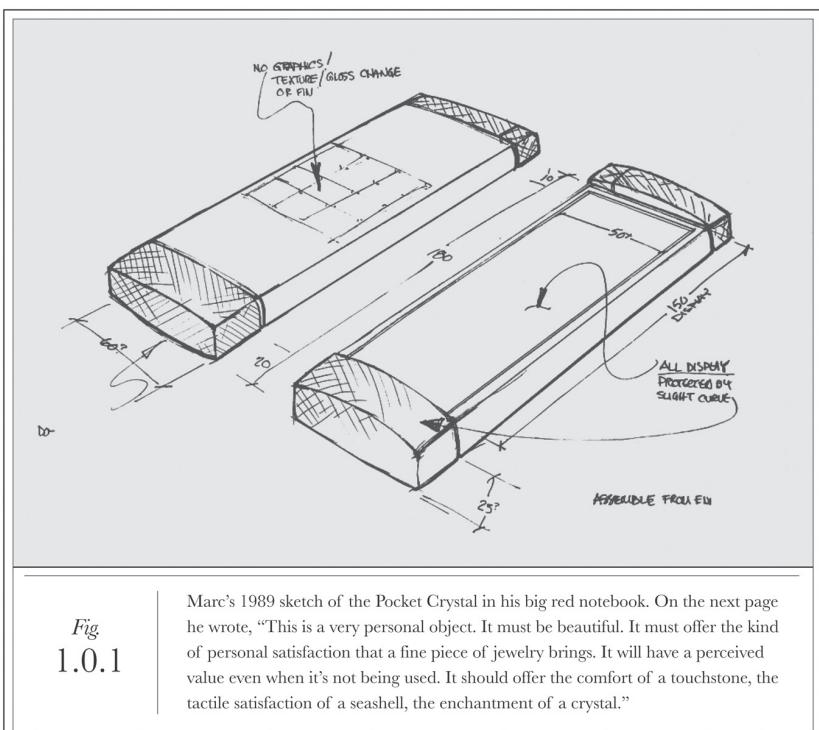
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Part

1

BUILD YOURSELF



Chapter

1.1

ADULTHOOD



Fig
1.1.1

The Magic Link retailed for \$800, weighed almost 1.5 pounds, and was a hefty 7.7 x 5.6 inches. It had a phone, a touchscreen, email, downloadable apps, games, a way to buy plane tickets, animated emojis, and revolutionary technology woven throughout. Kind of like the iPhone.

Chapter

1.4

DON'T (ONLY) LOOK DOWN

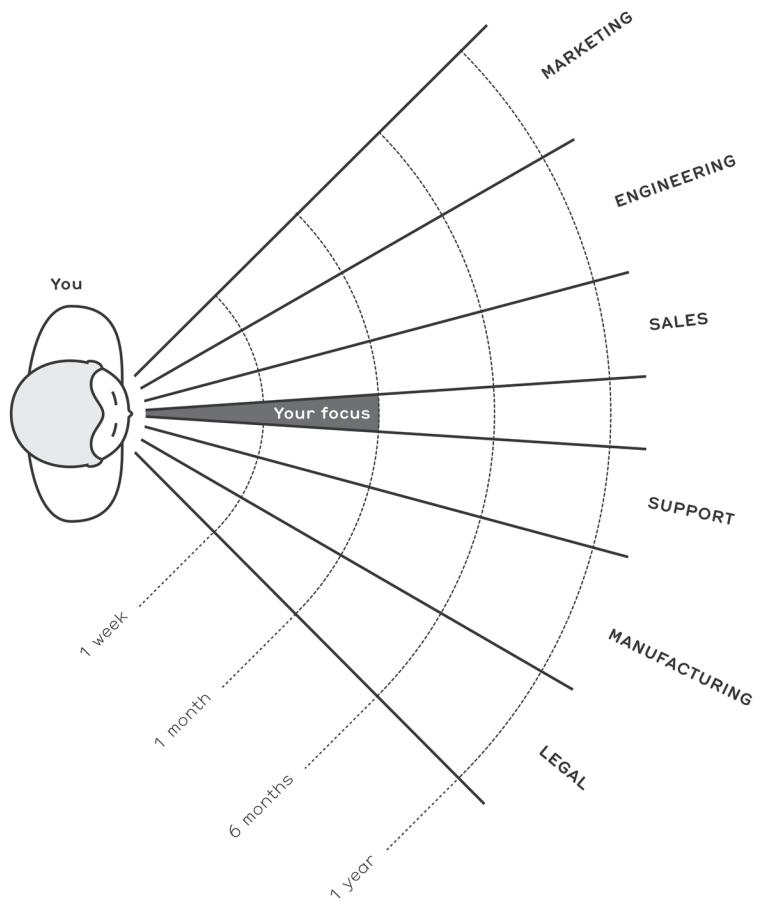


Fig
1.4.1

The details of the project right in front of you are crystal clear, but the farther you look out, the fuzzier everything becomes. And different teammates are gazing at different points on that timeline.

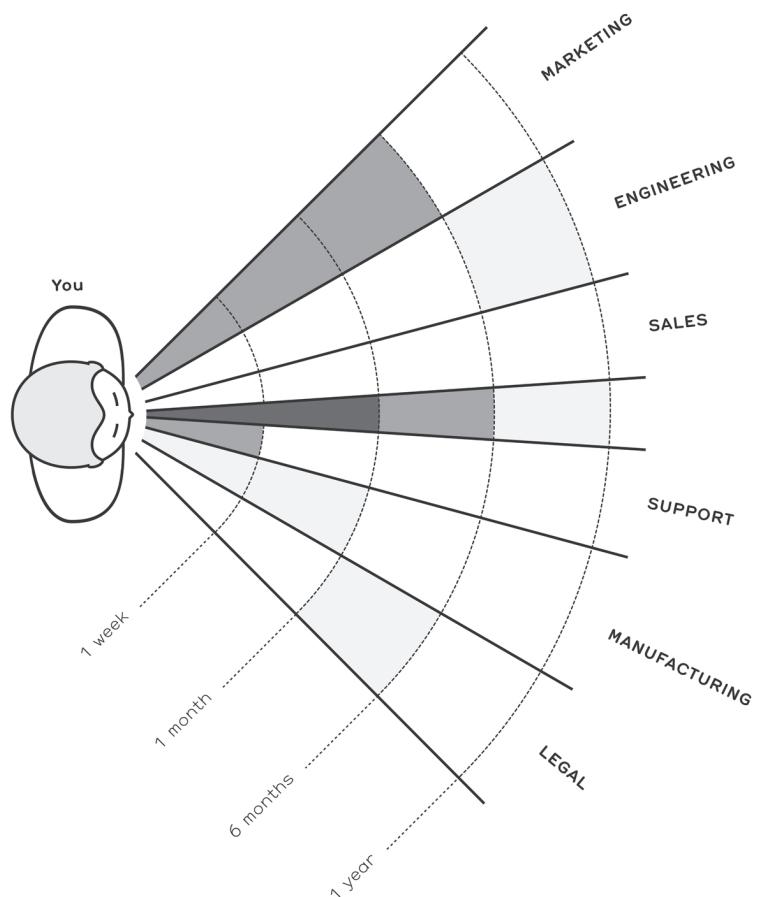


Fig
1.4.2

When you look up and around, you can see if your medium- and long-term goals still make sense, and understand the needs and concerns of the teams around you. Talk to your internal customers, whoever you're a customer of, and the people who are closest to the actual customer—marketing and support. That's how you'll know if you're on track or if things are going seriously sideways.

Part

II

BUILD YOUR CAREER

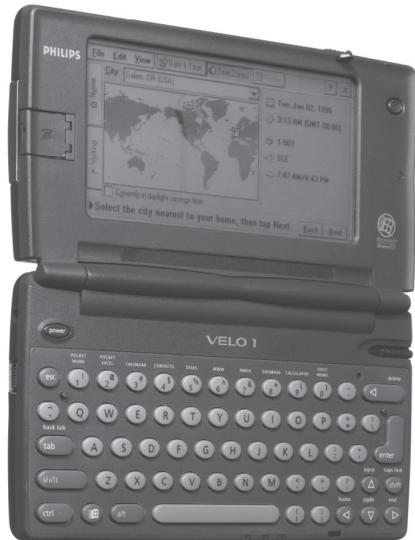


Fig
2.0.1

Released in August 1997, the Philips Velo was 6.7 x 3.7 inches, weighed 374 grams, and cost \$599.99. It allowed mobile professionals to email, work on spreadsheets and docs, and update their calendar. Velo's software was built on Windows CE, but its hardware guts were from General Magic.



Fig
2.0.2

The Nino launched in 1998. It measured 5.5 x 3.3 inches, weighed 220 grams, and cost \$300. Nino had a Windows CE operating system and rudimentary voice control software, and was one of the first devices to adopt downloadable audiobooks from Audible.

Part

III

BUILD YOUR PRODUCT

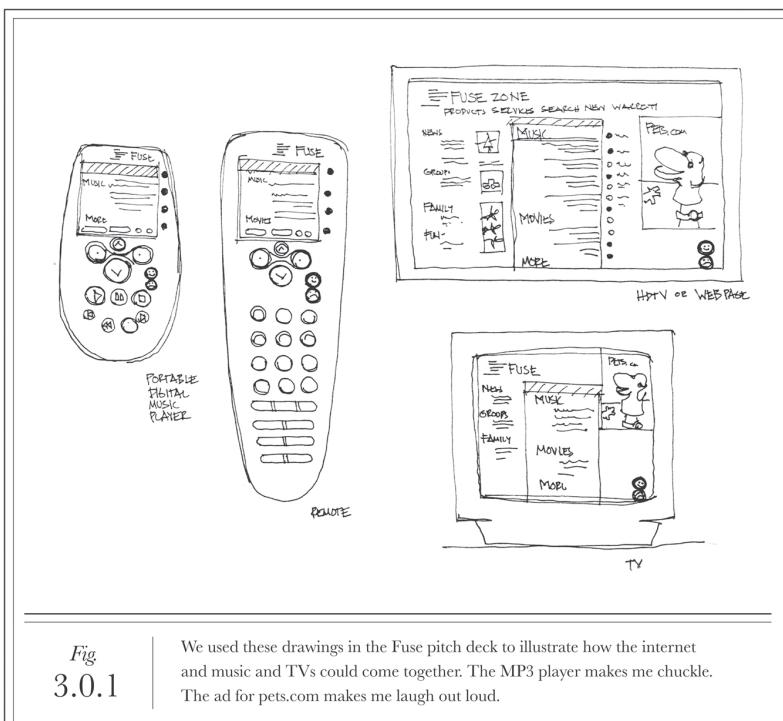


Fig.
3.0.1

We used these drawings in the Fuse pitch deck to illustrate how the internet and music and TVs could come together. The MP3 player makes me chuckle. The ad for pets.com makes me laugh out loud.



Fig.
3.0.2

This is the Styrofoam model I made in March 2001 to convince Steve to green-light the iPod project.



Fig.
3.0.3

This was the first iPod, released in October 2001 with the famous tagline “A thousand songs in your pocket.” It was 4.02 x 2.43 inches, had a \$399 price tag, and was pretty damn close to the original vision model I’d cut seven months before.

Chapter

3.1

MAKE THE INTANGIBLE TANGIBLE

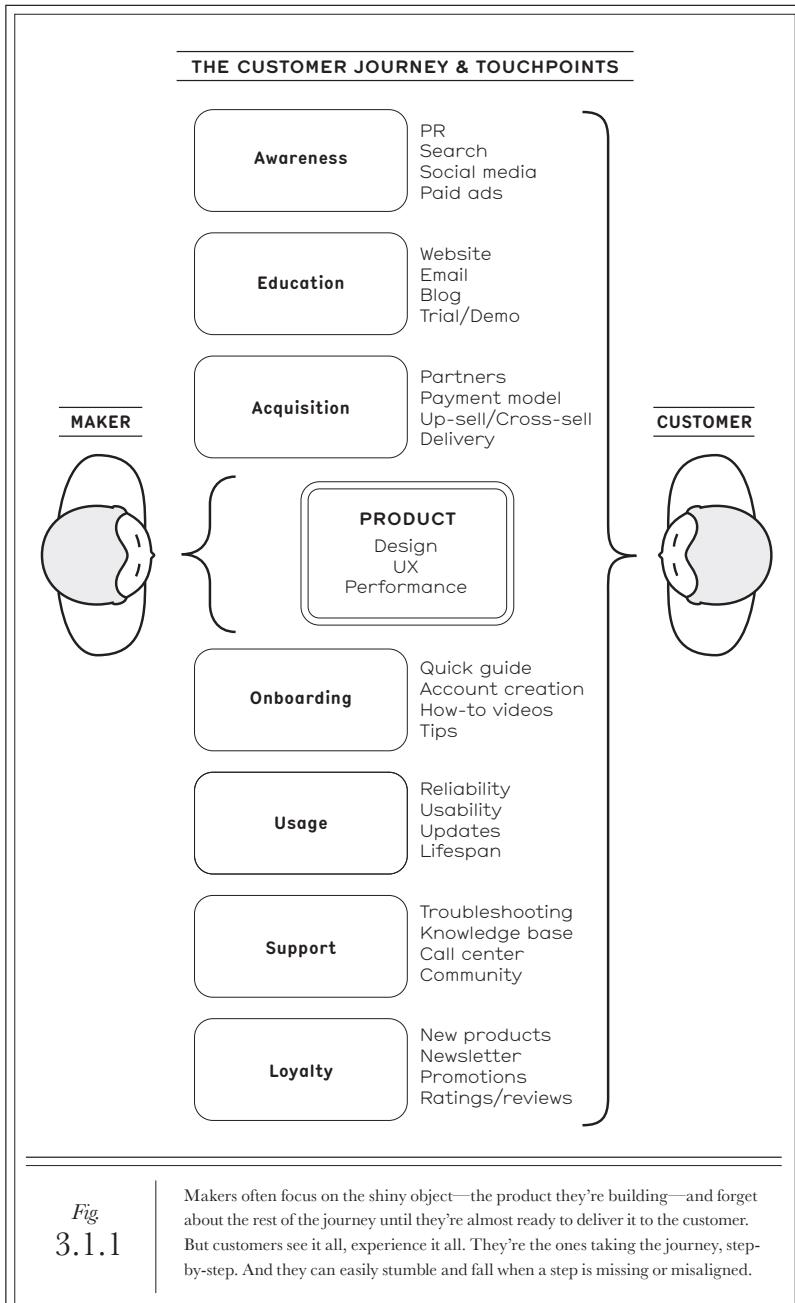




Fig
3.1.2

Almost a year before we launched the Nest Learning Thermostat—before we were even sure of its name—we already had this early packaging prototype that we used to refine our marketing messaging.

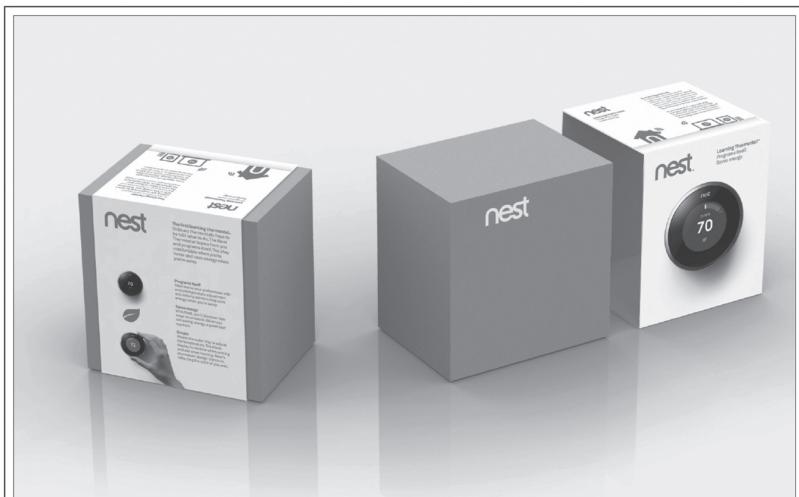


Fig
3.1.3

This is what we actually launched with in October 2011. The words focused on learning and energy savings; the design made it feel simple and premium.



Fig
3.1.4

The original Nest screwdriver cost around \$1.50 to make, so including it in every box was hugely controversial on a team that was focused on being lean and profitable. But the screwdriver's friendly shape made installing the thermostat yourself seem less daunting and it was so handy that it functioned as a marketing tool long after sale.

Chapter

3.4

YOUR FIRST
ADVENTURE—
AND YOUR SECOND

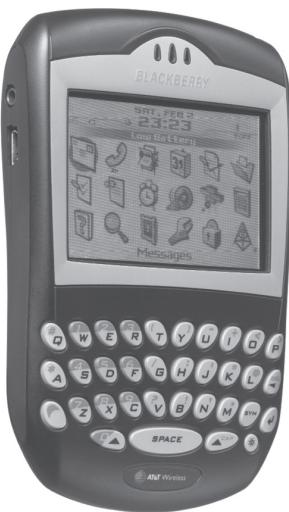


Fig
3.4.1

Behold, the BlackBerry—lovingly known as the Crackberry to its disciples. This is the BlackBerry 7290, released in 2004. It had web browsing and email, a backlit QWERTY keyboard, and a black-and-white display that could show a whopping fifteen lines of text.



Fig
3.4.2

The original iPhone launched in 2007 was tiny—smaller than any iPhone you can get today. It was 4.53 x 2.40 inches, weighed 135 grams, and had a 3.5-inch screen. By comparison, the iPhone 13 mini measures 5.8 x 2.53 inches, weighs 141 grams, and boasts a 5.4-inch screen.



Fig
3.4.3

It's easy to see Steve's point when you compare the BlackBerry Curve 8310 (released in August 2007) to the original iPhone (released in June 2007). The BlackBerry's screen was only 2.5 inches. Its keyboard was so robust that almost no screen remained.

Chapter

3.5

HEARTBEATS AND HANDCUFFS

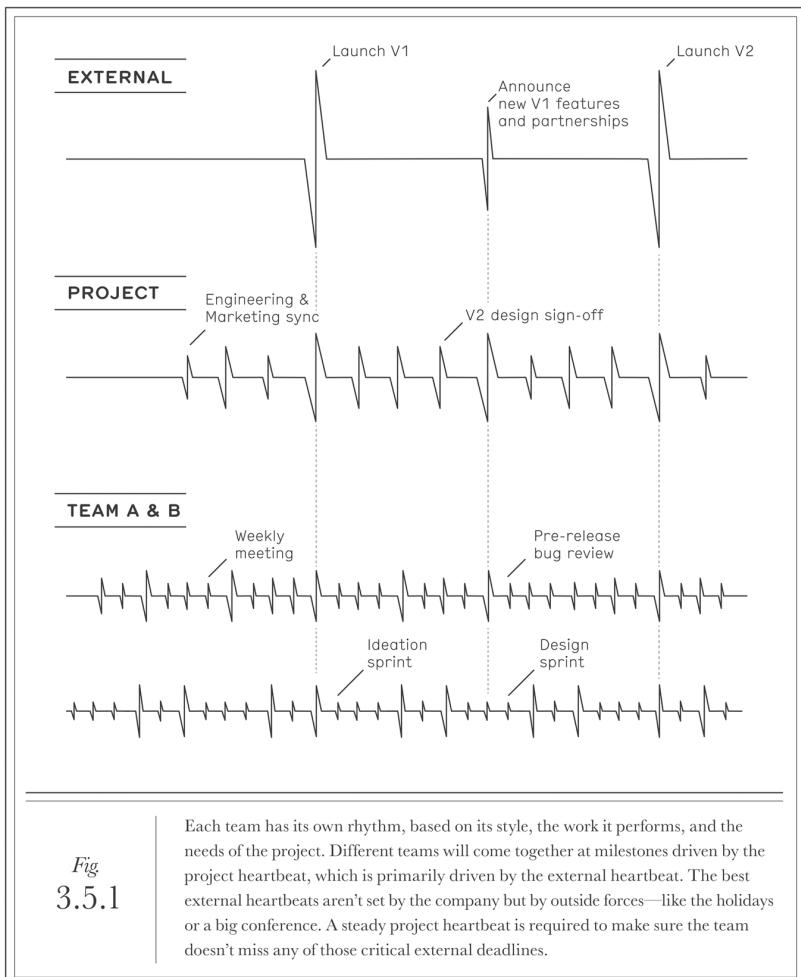


Fig
3.5.1

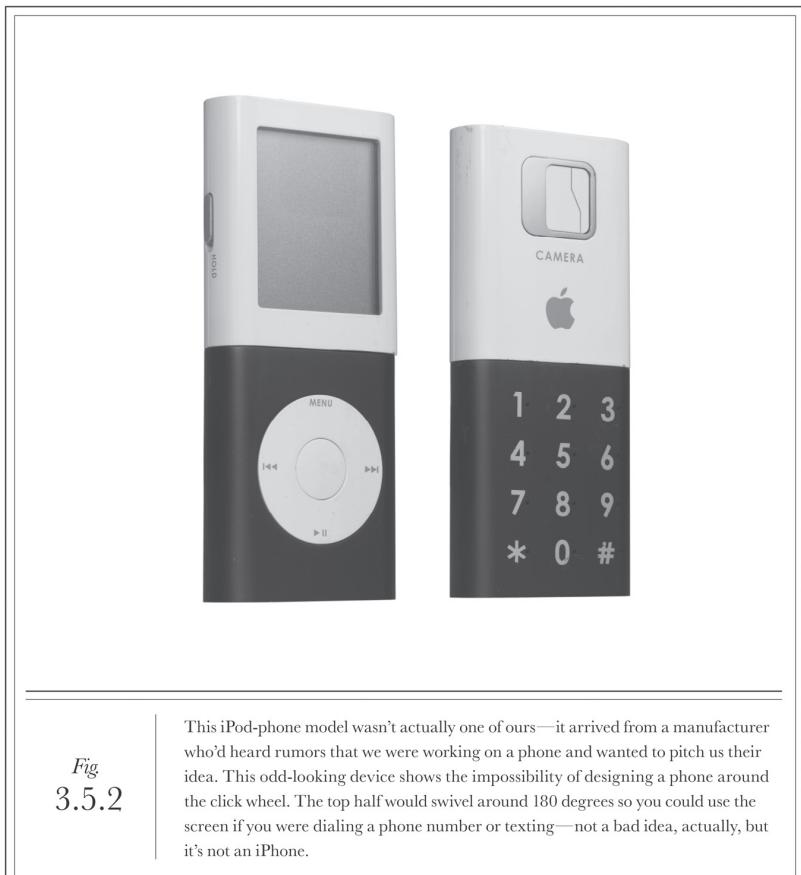


Fig
3.5.2

This iPod-phone model wasn't actually one of ours—it arrived from a manufacturer who'd heard rumors that we were working on a phone and wanted to pitch us their idea. This odd-looking device shows the impossibility of designing a phone around the click wheel. The top half would swivel around 180 degrees so you could use the screen if you were dialing a phone number or texting—not a bad idea, actually, but it's not an iPhone.



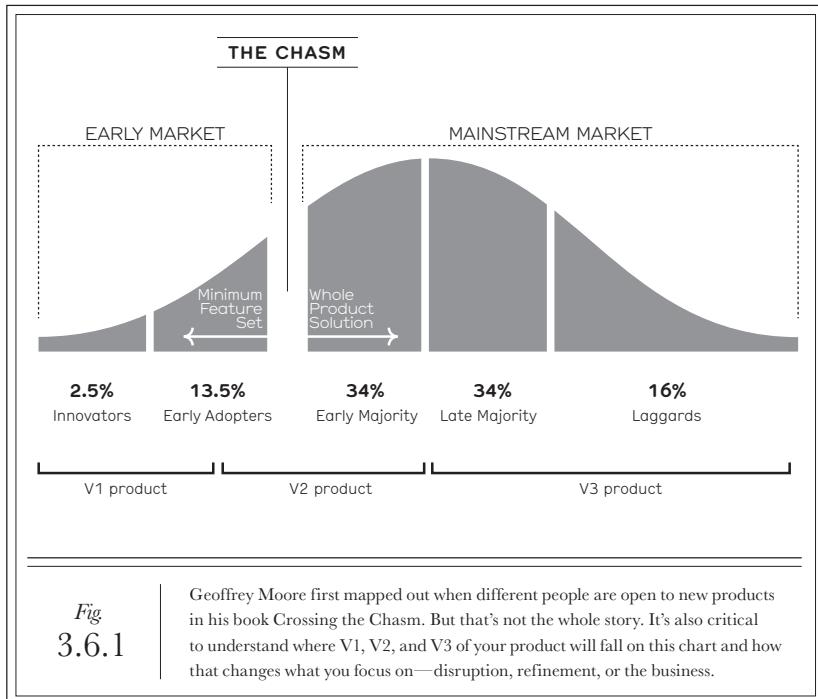
Fig
3.5.3

We spent a lot of time playing with various concepts, and these crazy plastic slabs were from some early form factor trials. They let us see how our ideas would feel in our hands, pockets, and purses as we tried to figure out what made sense and what didn't.

Chapter

3.6

THREE GENERATIONS



Who's it for

V1

Innovators and early adopters.

These are the people who deeply love whatever it is you do—they might be gear heads or obsessed with technology or just really into your space. They'll have an emotional reaction to anything new and cool and will buy it fully aware that it will probably be buggy.

V2

Early majority.

These are the trendsetters. They watch the early adopters and will read some reviews before committing. They expect product bugs to be ironed out, decent customer support, and an easy way to learn about and purchase the product.

V3

Late majority and laggards.

This is everyone else—the mass customers who expect perfection. They'll only buy the clear winner in the marketplace and won't put up with any hassles.

Product

V1**You're essentially shipping your prototype.**

Customer acquisition costs will be sky-high; some features you really wanted will be missing; your marketing, sales, and customer support will all be a little wonky; you won't have the partnerships you'll need; and you'll still be discovering everything you got wrong.

V2**You're fixing the stuff you screwed up with V1.**

At this stage you'll know what your problems are and how to fix them—both the unexpected issues that inevitably crop up after you launch and the stuff you cut corners on the first time. V2 usually comes swiftly after V1 because you've learned so much so fast and you're dying to get it all into the next generation.

V3**You're refining an already great product.**

Your focus should be less on the product and more on the business and polishing every touchpoint of the customer lifecycle.

Outsourcing vs. building in-house

V1**Figuring things out and outsourcing.**

You have a small team so you have to outsource a ton of functions—marketing, PR, HR, legal. This will enable you to move fast and get a lot done, but it's expensive and won't scale.

V2**Start bringing more things in-house.**

You take everything you've learned from the third-party teams you worked with for V1 and start building that muscle in-house. [See also: Chapter 5.3: Design for Everyone: But you shouldn't outsource a problem.] Your teams and level of expertise grow.

V3**Lock in internal expertise and selectively outsource smaller projects.**

Certain key internal teams will be focused on the most important differentiators of your business. That may mean doing branding in-house or legal or whatever is most important to your company. As these teams grow and do more, they begin outsourcing again, but only for specific, smaller tasks that are closely supervised by the internal team.

Product	V1	V2	V3
Product market fit.	Profitable product.	Profitable business.	
This really just means getting the product right enough to prove there's a market for it so you can cross the chasm. If you can't prove that at least early adopters will buy your V1, then you have to go back to the drawing board and start over.	At this point you'll widen the market, start nailing more parts of the customer journey, and might even be making a little money per product—but probably not enough to cover costs.	Assuming you reached gross margins with V2, you may want to aim for net margins with V3. This is when you begin negotiating with partners for better deals, optimizing your customer support and sales channel, and buying new kinds of media for marketing. Hopefully you'll finally get enough volume that you can start to reduce your prices and actually make real money. With V3 you have a chance to get it all right—the product, the company, and your business model.	

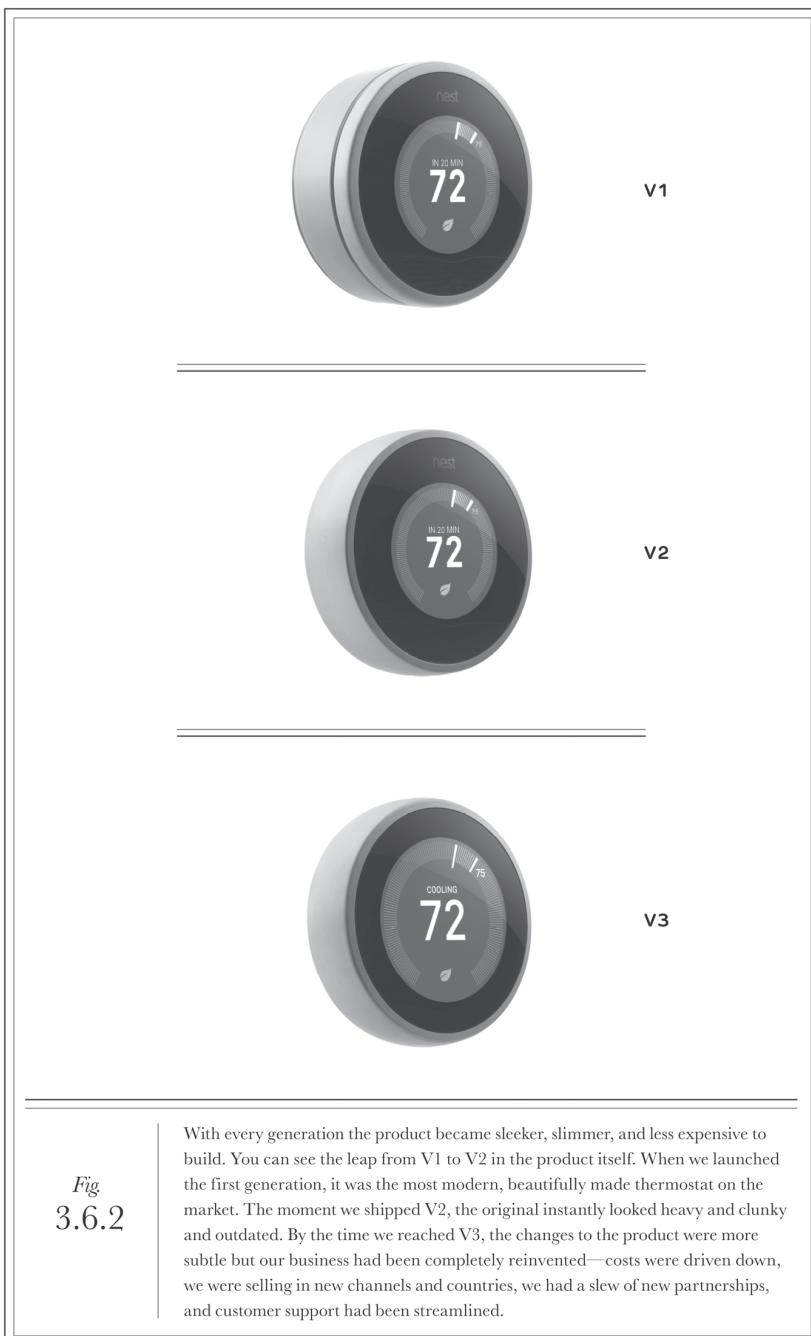


Fig
3.6.2

With every generation the product became sleeker, slimmer, and less expensive to build. You can see the leap from V1 to V2 in the product itself. When we launched the first generation, it was the most modern, beautifully made thermostat on the market. The moment we shipped V2, the original instantly looked heavy and chunky and outdated. By the time we reached V3, the changes to the product were more subtle but our business had been completely reinvented—costs were driven down, we were selling in new channels and countries, we had a slew of new partnerships, and customer support had been streamlined.

Part

IV

BUILD YOUR BUSINESS



Fig
4.0.1

The Nest Learning Thermostat launched in October 2011 for \$249. It had a unique round 2.75-inch screen and measured 3.2 x 3.2 x 1.6 inches. It came with its own mobile app and had a built-in AI that learned your schedule and turned itself down when you were away.



Fig
4.0.2

The Nest Protect retailed for \$119, was 5.28 x 5.28 inches, and offered protection from carbon monoxide and smoke. False alarms could be hushed from the app and you'd get an alert on your phone if there was danger.

Part

V

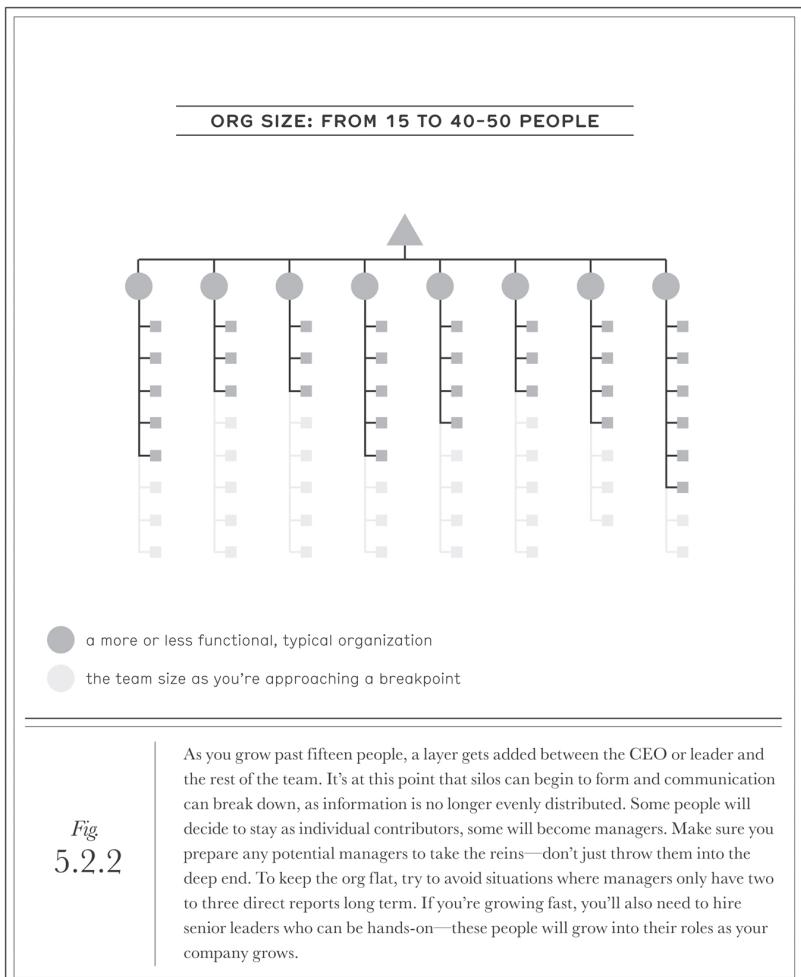
BUILD YOUR TEAM

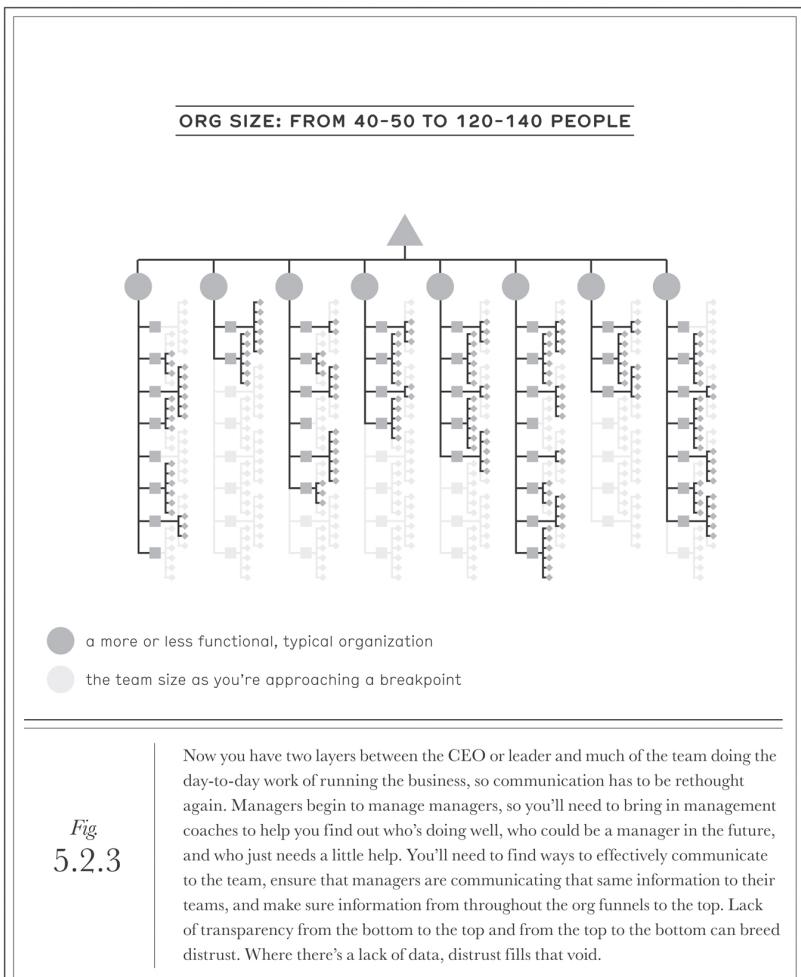
Chapter

5.2

BREAKPOINTS







Chapter

5.4

A METHOD TO THE MARKETING

WHY I WANT IT	WHY I NEED IT			
	WHAT'S MY PAIN		PAIN-KILLER	
I'm stuck-in-a-rut. I crave some INSPIRATION .	STASIS	I'm still in school or in my first cubicle. Maybe I'm trying to quit my job or start my own thing. But I don't know my next move.	Build helps me find that spark again and again. Everyone has to find their own spark. Build tells me where to look for it.	SPARK
I don't know how to start and where I should point my compass. I want some DIRECTION .	RAT-RACE	I've always done what everyone else is doing. I'm getting too comfortable competing for increasingly scarce resources.	Build helps me build a mental framework for the future and how to chart the shortest path to it.	LEAP-FROG
I can't relate to founders like Zuckerberg, Musk, etc. I want realistic ADVICE from someone who's been in my shoes.	INCONCEIVABLE	I want to learn from someone I can relate to, not a Harvard or Stanford drop-out.	Tony's path to Silicon Valley is relatable. He shares painful mistakes he's made along the way, so that I can avoid them altogether.	ACTIONABLE
Not another self-help business book! Give me a proven STRAIGHT-SHOOTER who says it like it is.	TIRED	No ivory tower. No expectation to turn around a tanker. I need small chunks that over time have big lasting impact.	Here's a guy who's built his career from the ground up. Every step is an aggressive step forward, fueled by passion and common sense.	FRESH

5.4.1 This is the template we created at Nest that I've now passed along to endless startups. It's been used for everything from medical diagnostic tools to sensors for shrimp farmers. Now we're using it for this book.

MESSAGING ACTIVATION MATRIX

	Website	Press release	Sales deck	Product sheet	Packaging	Social post	Online banner
Mission/Vision	✓	✓					
Feature/benefit #1	✓	✓	✓	✓	✓	✓	✓
Feature/benefit #2	✓	✓	✓	✓	✓		
Feature/benefit #3	✓	✓	✓	✓	✓		
Feature/benefit #4	✓		✓	✓			
Feature/benefit #5	✓		✓	✓			
Technology	✓		✓				
Applications	✓		✓			✓	
Product specs	✓		✓	✓	✓		
Case studies	✓	✓	✓				
Testimonials	✓	✓	✓		✓		
About us	✓	✓	✓				

Fig
5.4.2

The messaging activation matrix should guide where and when you include certain information so you don't overwhelm or undereducate your customer as they move through multiple touchpoints along the consumer journey.

Fig
5.4.3

The screenshot shows the Nest website's homepage. At the top, there are navigation links: 'Living with Nest', 'Why we made it' (which is highlighted in blue), 'Nest inside & out', and 'Reviews'. Below the navigation bar, the main headline reads: 'We didn't think thermostats mattered either.' To the left of the headline is a small icon depicting a house with various household items like a lightbulb, a television, and a refrigerator. A large grey downward-pointing arrow is positioned below this icon. To the right of the headline, there is a graphic showing a traditional analog thermostat next to a digital Nest Learning Thermostat. The digital device is labeled '50% off your energy bill' and has a temperature setting of 68 degrees. Above the thermostats, a text box states: 'Until we learned they control about 50% of your energy bill.' Below the graphic, a breakdown of energy usage is shown in a bar chart:

Category	Percentage
ELECTRONICS	9%
APPLIANCES	9%
LIGHTING	11%
WATERHEATING	12%
FRIDGES	8%
Total	= 50%

* Source: 2007 Buildings Energy Data Book, Table 4.2.1

As much as the refrigerator, lighting, TVs, computers, and stereos combined. In fact, 10% of all US energy is used by thermostats. That's the equivalent of 1.7 billion barrels of oil per year.

But in most homes the thermostat is an unassuming beige box. And it doesn't matter if it's manual or complicated and programmable, we do with it what we've always done: get up, walk over to it, and change the temperature. Every few hours. Every day, 1,500 times a year.

We still try to save energy of course. We turn the temperature down when we can, we don't set it too high or low. But we're human. We forget. Until we see the energy bills.

We literally took the “why” at the heart of thermostat product development and slapped it on the front page of our website. One of the first tabs on nest.com was called “Why we made it”—that’s where we connected directly with a skeptical audience, where we injected the virus of doubt. [See also: [Chapter 3.2: Why Storytelling](#).] We explained why people thought thermostats didn’t matter—why they were neglected and ignored—and then we told customers about the incredible impact they had on people’s homes, their bills, and the environment.

Chapter

5.7

LAWYER UP



Fig
5.7.1

This is the original Nest Cam, released June 2015, with its original warning label. Sometimes in life you just have to nestle your new product right next to a picture of a baby in mortal peril.

READING LIST

Here are some of the books and articles that have helped me, my friends, and mentors, in no particular order:

Give and Take: Why Helping Others Drives Our Success, Adam Grant

In Praise of Shadows, Jun'ichirō Tanizaki

The Monk and the Riddle, Randy Komisar

Why We Sleep: Unlocking the Power of Sleep and Dreams, Matthew Walker

The Messy Middle: Finding Your Way Through the Hardest and Most Crucial Part of Any Bold Venture, Scott Belsky

The Perfect Thing: How the iPod Shuffles Commerce, Culture, and Coolness, Steven Levy

Creative Confidence: Unleashing the Creative Potential Within Us All, David Kelley and Tom Kelley

Trillion Dollar Coach: The Leadership Playbook of Silicon Valley's Bill Campbell, Eric Schmidt, Jonathan Rosenberg, and Alan Eagle

The Hard Thing About Hard Things: Building a Business When There Are No Easy Answers, Ben Horowitz

Super Founders: What Data Reveals About Billion-Dollar Startups, Ali Tamaseb
Thinking, Fast and Slow, Daniel Kahneman

Noise: A Flaw in Human Judgment, Daniel Kahneman, Olivier Sibony, and Cass R. Sunstein

Beginners: The Joy and Transformative Power of Lifelong Learning, Tom Vanderbilt
Range: Why Generalists Triumph in a Specialized World, David Epstein

How to Decide: Simple Tools for Making Better Choices, Annie Duke

The No Asshole Rule: Building a Civilized Workplace and Surviving One That Isn't, Robert I. Sutton

A Curious Mind: The Secret to a Bigger Life, Brian Grazer

The Defining Decade: Why Your Twenties Matter and How to Make the Most of Them Now, Meg Jay

- Work: A Deep History, from the Stone Age to the Age of Robots*, James Suzman
- Crisis Tales: Five Rules for Coping with Crises in Business, Politics, and Life*, Lanny J. Davis
- Crossing the Chasm: Marketing and Selling Disruptive Products to Mainstream Consumers*, Geoffrey Moore
- Entangled Life: How Fungi Make Our Worlds, Change Our Minds & Shape Our Futures*, Merlin Sheldrake
- Simple Sabotage Field Manual*, U.S. Central Intelligence Agency, United States Office of Strategic Services, 1944 (<https://www.gutenberg.org/ebooks/26184>)
- Read the Face: Face Reading for Success in Your Career, Relationships, and Health*, Eric Standop
- “Architect behind Googleplex now says it’s ‘dangerous’ to work at such a posh office,” Bobby Allyn, NPR, <https://www.npr.org/2022/01/22/1073975824/architect-behind-googleplex-now-says-its-dangerous-to-work-at-such-a-posh-office>
- “Why and how do founding entrepreneurs bond with their ventures? Neural correlates of entrepreneurial and parental bonding,” Tom Lahti, Marja-Liisa Halko, Necmi Karagozoglu, and Joakim Wincent. *Journal of Business Venturing* 34, no. 2 (2019): 368–88.

BONUS

<p>Philips Electronics Company</p> <p>Tony Fadell Vice President Business Development</p> <p>Strategy & Ventures USA 1070 Arastradero Road Palo Alto, CA 94304-1336</p> <p>Tel: +1 (650) 846-4366 Fax: +1 (650) 846-4286 Email: tfadell@pmc.philips.com Website: www.pmc.philips.com</p>	<p>PHILIPS</p> <p>Philips Mobile Computing Group</p> <p>Tony Fadell Chief Technical Officer Director of New Business</p> <p>910 E. Hamilton Avenue, Suite 200 Campbell, CA 95008</p> <p>Tel: +1 (408) 558-2201 Fax: +1 (408) 558-2222 Cell: +1 (415) 271-2862 Email: tony_fadell@pmc.philips.com</p> <p>A division of Philips Electronics North America Corporation</p>
<p>Real Networks™</p> <p>Tony Fadell Sr. Director Music Strategy and Business Development</p> <p>290 S. Balsamino Way Portola Valley, CA 94028 Phone: 650.233.6525 Fax: 650.233.8247</p> <p>E-mail: tfadell@real.com 2601 Elliott Avenue Seattle, Washington 98121 www.real.com</p>	<p>vika</p> <p>Tony Fadell Principal</p> <p>VIKA Group 318 Willow Road Menlo Park, CA 94025</p> <p>T 650.233.0525 F 650.233.8247 tony@vikagroup.com www.vikagroup.com</p>
<p>ANTHONY FADELL President</p> <p>Constructive Instruments, Inc.</p> <p>2385 South Huron Pkwy Ann Arbor, MI 48104 Ph. (313) 677-3690 Fax. (313) 677-3692</p>	<p>Tony Fadell <i>Silicon Sorcerer</i> General Magic 2465 Latham Street Mountain View California 94040 415 965 0400 415 966 6238 direct 415 965 9424 fax</p> <p>トニー・ファデル シリコン・ソーサラー</p> <p>ジェネラル・マジック株式会社 〒94040 カリフォルニア州 マウンテン・ビューエキスポート レイクストリート 2465番地</p>
	<p>Tony Fadell <i>Silicon Sorcerer</i></p> <p>General Magic 420 North Mary Avenue Sunnyvale, CA 94086</p> <p>408 774 4238 Direct 408 774 4020 Fax tony_fadell@gemmagic.com AT&T PersonalLink: Tony Fadell</p>

These are a few of my business cards from college and my 20's. It still makes me laugh that my official title at General Magic was "Silicon Sorcerer."



The Silicon Sorcerer himself, before he learned how to keep his desk clean.
This was taken around 1994 at General Magic, my first real job.



And this was taken in 2010—the very beginnings of my first really successful company. This was Nest Labs, founded in a garage in Palo Alto, with me, Matt, and our first few employees.



This is one of our earliest prototypes of the Nest Learning Thermostat. And a small reminder that even though the technology was cool, the tech was never the point.



It was all about the people who used it. Like my kids, pictured here trying out the prototype at our house.