A GAME OF DEEP TECH

A PLAYER'S GUIDE FOR FOUNDERS MAKING THE IMPOSSIBLE *possible*

OLA WASSVIK

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A GAME OF DEEP TECH *DIGITAL VERSION*
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To my parents Kerstin and Sone,
for teaching me to ask *"why?"* and always
trying their best to answer me honestly,
even though in some cases, it led
to lifelong trauma.

To my first great teacher, the late
Mr. Åke Willenheimer, who was
the first to truly challenge me.

And to my brother Anders,
my very first competitor.

FOREWORD

The reason this book exists is because when I was 25, I traveled to China and kept a travel diary.

Before that, I hadn't really considered myself a writer. I'd always liked it, and I'd had a great teacher in high school who forced me to actually get better at languages. But it wasn't until that very strange trip, and the travel diary I kept during it, that I realized I genuinely loved writing. My friends read it and told me I should write more.

The two books that have had the biggest influence on my approach to writing are *The Elements of Style* by Strunk & White and *On Writing* by Stephen King. In King's book, he says you should write about what you know. More specifically, he talks about a plumber in space, and that example has stuck with me.

So, naturally, I started writing science fiction, making up worlds that only I knew about. I had done it since I was a small child and would spend my free time creating imaginary universes.

The advice to write about what you know came back to me years later when one of my colleagues said, "Ola, you should really write a book about being a deep tech founder."

My immediate reaction? No. That's silly. I can't write a business book. Why would I do that?

Except… I actually do know what it's like to be a deep tech founder. I've spent the last 20 years doing it. Most deep tech founders haven't. That means I've been sitting on a trove of hard-earned experience that might actually help people.

Beyond that, I've always loved sharing knowledge. I think it comes from my parents, both of whom are teachers and treated the craft of teaching as fine art. Sharing information was something to be cherished. We had a lot of books at home. I've always had a lot of books around me.

So that's how this book came to be: a trip to China that ignited a passion for writing, combined with two decades of deep tech founder trench warfare as a deep tech CTO raising close to $100M in venture capital, managing more than 300 patent families, spending money on projects that were doomed from day one, and successfully revolutionizing a technology field that hadn't changed significantly in the previous 30 years. There's been a large amount of pain involved. Not in writing this book, but in living through the things that made it possible to write in the first place.

The ideal reader for this book is a deep tech founder in the early stages of the journey. But even if you're a seasoned deep tech entrepreneur, you will surely get some laughs out of it, and hopefully a learning or two.

In this book, you will notice things being repeated multiple times. That is not me forgetting what I wrote in earlier chapters, but rather an intentional way of forcing the message into your mind. We all know that repetition is the key to learning and the first time you read a book you retain only 10-30% of the content. By repeating a few key items throughout this book, my hope is to at least make the most important points stick.

This book will introduce the Team-TAM-Tech framework that I've found the most useful in my own ventures, but to get there, you first need to understand some basics about deep tech and where my own experience comes from. That introduction will be done in parts 1-3. Then follows parts 4-8 which builds up the framework and my learnings. The full framework is then described in part 9, including how you can apply it to your startup.

The book is intentionally written in short chapters, since I don't want to waste your precious time. The short chapters also allow you to easily come back to a certain subject that stuck in your mind.

What follows is one builder's playbook for winning a very complex game. You cannot outsource your playbook to someone else; it is yours to create, but hopefully I can stop you from making some of the mistakes I have made.

And remember: *You can never outsource conviction.*

If you're not willing to bleed for your startup, you should quit right now.

With that said, I hope you enjoy reading this book as much as I enjoyed writing it.

NOTE TO THE READER

When reading this book, there are a number of TLAs *(Three Letter Acronyms)* and ETLAs *(Extended Three Letter Acronyms)*. This is not to confuse you as a reader, but rather to put you in the right frame of mind. In your specific field, there will be a number of specific TLAs and ETLAs, and possibly even a couple of FLAs and EFLAs. To simplify this, there is a dictionary at the end of this book that explains all the different terms and acronyms.

There is also a suggested readers list for Deep Tech Builders that encompasses all the literature referenced in this book, as well as a few more select choices.

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MAKING THE IMPOSSIBLE POSSIBLE

This book, *A Game of Deep Tech: A Player's Handbook for Founders Making the Impossible Possible*, is born from a single word I've heard more times than I can count: *impossible*.

But remember: Impossible is nothing, if you just keep going.

Every day that I'm not traveling, I take a daily forest walk. It serves multiple purposes: exercise, mind space, perseverance, focus. It's about six kilometers of rugged terrain and runs through the deep forest where I can be alone with my thoughts.

Every time, I have to go up what I call "perseverance hill." I keep the same pace up the hill as I do on flat ground, because that's what I need to do every day when I'm working. Whether the sun is shining with the wind at my back, or if the sleet is coming in sideways, I keep the same pace every day.

Just keep going.

I asked a surgeon I talked to a few years ago, "How do you get through a 12-hour surgery?"

She answered: "Because I have to."

And those words have stuck with me. *Because I have to.* People who give up never succeed. You just have to keep going, no matter what.

There will be bad days, there will be terrible days, and there will be days when you question why in the world you got yourself into this thing. If you don't make it through those days, you will never experience the great days. The success. The accolade from your peers. And then more bad days.

I've heard it from customers: "What you're building? Impossible!"

From suppliers: "You can't do that!"

From investors, especially investors, who often have the least relevant expertise: "That will never work"

But most of all, I've heard it from experienced engineers. The people who know the field. Who knows the math. Who knows what has, historically, been doable.

And yet, here we are.

If there's one thing I want you to take away from this book, it's this: you have to make the impossible possible.

Why? Because only by challenging what the market or conventional engineering wisdom thinks is possible, can you create a product that is 10x better. Only then can you displace incumbent technologies. If all you're doing is building a derivative product in a market dominated by entrenched players, you're dead in the water.

So, here's what I want you to do: close your eyes and picture every single person who has ever told you what you're doing is impossible. And now imagine their faces when you prove them wrong.

That moment, *that feeling*, is priceless.

Over the past 20 years, I've learned something else too: experience matters in tech. But experience is a double-edged sword. Yes, it's critical. You'll need to bring it in, whether through employees, contractors, advisors, or books like this one. But experience also comes with baggage. It comes with rules.

Caution. Risk aversion.

It tells you, "That's not how it's done."

And that's the problem. Because if you want to build a deep tech company, something that shifts the ground beneath us, you can't always follow the rules.

Software founders can often build from nothing. Solo. In their bedrooms. But deep tech? Deep tech is different. It's harder. It demands more. And if you go into it thinking the rules of SaaS or app development apply to you, you're going to get hurt.

Experience helps, but conviction is what carries you through. You'll need both. You'll need to be stubborn in your vision, yet open to learning every single day.

You're here because you want to do something that no one else has done.

That's the game. That's deep tech.

Now let's play.

PART 1

FOUNDER, KNOW THYSELF

"Be curious. Read widely. Try new things.
What people call intelligence just boils down to curiosity."

– Aaron Swartz

CHAPTER 1

WHERE OPPORTUNITY MEETS PREPARATION

Everyone in deep tech begins somewhere, though the real question is *how* those beginnings shape the journey that follows. Every founder I know can trace the arc of their company back to a single, private constellation of chance and choice. It's fashionable to call that moment luck, but luck is just opportunity colliding with preparation. Neglect the preparation, and the opportunity will sail past like a star you never noticed.

I was born in southern Sweden. I'm the eldest son of two schoolteachers, and the descendant of two distinct lineages: on one side, an engineer who flew on refurbished WW2 airplanes through a war-ravaged Europe to bring technology back to Sweden, and on the other, a renegade atheist daughter of a priest from the far North. My parents belonged to the '68 generation, equal parts restless and revolutionary; they turned their backs on the safe careers their own parents expected and became educators, determined to raise their children differently from how "it had always been done."

In her final years, my paternal grandmother told me that she might as well have been born a thousand years earlier. She had grown up without running water or electricity, and when she was just a child, her mother had died of the Spanish Flu. During her lifetime, the world changed. Once, I asked her what she thought the most powerful invention to have emerged during her long life was, and she told me, without hesitation, "The washing machine." It was the invention that allowed her and her sisters to break free from spending hours every day washing clothes. That lineage of slow-turning centuries that spun into rapid decades of massive change gave me an early suspicion: the world can transform overnight *if someone pushes hard enough*.

When the Swedish "Green Wave" hit in the early '80s, Kerstin and Sone (I was never allowed to call them mum and dad since that "was the way it had always been done" and we weren't doing that) packed us off to the countryside. Picture endlessly deep spruce forests, a small village school, and me. I was a skinny kid with long blond hair who quoted *Star Trek* in a Småland accent (which meant I couldn't pronounce my R's), while all the other boys sported crew cuts and drove cut-off Volvo 240s. I fit about as neatly as a floppy disk in a tractor's ignition.

My only true ally was Johan Kaiser, a boy just as gloriously mis-aligned with country life as I was. He was a hard rocker with hair longer than the girls' at school, who played *Appetite for Destruction* on repeat to the chagrin of the local farmers. Together we disappeared into the glow of our Commodore 64s, then into dice-rattling weekends of tabletop role-playing where, inevitably, I became the forever Dungeon Master. We managed to recruit a few other misfits to the group and escape from reality via role-playing games. Finishing most school tasks in a fraction of the allotted time gave

me ample time every day to conjure new realms in my head, and every weekend, we invaded them. That was the seed of my storytelling habit, though I didn't know it yet.

At nine, my grandmother handed me *The Lord of the Rings*. Two breathless weeks later, skin still as pale as the pages of the book after refusing to leave the car on sunny beach days, I closed the back cover and realized a novel small enough to hold in my hands could feel far larger than the landscape outside the window. Those books alone ignited a burning realization that despite being so intangible and fleeting, imagination and storytelling held power to alter the physical world and change people's minds.

School itself was easy, *too easy*, so I manufactured difficulty. At the beginning of seventh grade, I marched into the guidance counsellor's office and asked, "What's the hardest thing a person can study in Sweden?" "*Engineering Physics*," he said. "Perfect," I replied, and steered my life toward that singular mountain.

University delivered its humbling slap. Surrounded by peers who solved tensor equations the way other people spread butter, I realized I was merely average at mathematics. One classmate who would later become my most trusted founding engineer spent his summer doing projectile calculations for a defense contractor. Meanwhile, I'd spent mine grinding through *Ultima VII Part Two: The Serpent Isle*. In that moment, I understood I would never be the sharpest physicist in the room, and that it didn't matter. My edge was different: unquenchable curiosity, the ability to learn at ludicrous speed, and, thanks to all those homemade quests, a knack for weaving a story others wanted to inhabit.

By the end of my third year at university, the thrill had dulled. The problems were harder, yes, but the pattern was the same, more of the same. So, I did what I've always done when stuck: I changed the rules. I applied for an Erasmus scholarship, got it, and packed myself off to Toulouse, a sun-drenched corner of France where the wine was cheap, the cheese eternal, and the engineering... well, let's just say my technical skills plateaued, but my life skills exploded. Suddenly, I was a Swede afloat in a sea of French bureaucracy, a system so labyrinthine it made Swedish Försäkringskassan (Social Insurance Agency) look like a vending machine.

And yet, I grew. I learned how to problem-solve in the wild, with no handbook, parents, or familiar shortcuts. I made lifelong friends. I fell for French culture so hard that I still instinctively reach for a baguette when things go wrong. But the moment that still crackles with energy is my first mechanics exam. I didn't understand the first question. Not figuratively, I mean literally. There were two words I couldn't translate, and the whole thing crumbled. I sat there in a cold sweat, guessing my way through levers and load points, sure I'd blown it. When I saw that I'd passed, I nearly cried. It was the first time I realized that sometimes, survival itself is the win, and that improvisation is as vital as preparation when you're building a future in the unknown.

Mid-way through a dreary master's thesis with an uninspiring professor and itching for real problems to solve, I bailed. It did bother me, because I'm a person who

finishes things, so I went back a few years later and completed my thesis. At the time, however, I had to get out. I had heard whisperings from a friend about a start-up called Anoto that was "doing things no one has done before." To me, it sounded like the *USS Enterprise* pointed at uncharted space. I signed on immediately and discovered my personal definition of deep tech entrepreneurship: *exploring the unexplored and solving problems no one has ever encountered before*.

Shortly thereafter, as I was on a train heading to Denmark, everything I had thought of as certain was upended. It was December 2006, and I had just boarded at Lund station when my phone rang. It was a local number, which was weird because I didn't usually get calls from anyone in Lund. I answered anyway.

It was a doctor. It took a couple of moments before I remembered the sonogram I had done a few days earlier because of some stomach trouble. She said very matter-of-factly, without any lead-in or warning, "Hi Ola, this is your doctor, you have cancer."

That was it.

Probably the most efficient way to deliver the message. No buildup, no preparation. Just straight to the point. I guess I appreciate that, in hindsight, as I've always appreciated straight talk. Then she said, "You need to come in this afternoon, because you're going into surgery tomorrow."

The rest of the day was surreal.

I still went to the office. I walked all the way to the old Tuborg factory in Copenhagen where we were based at the time. I went in to see my manager and said, "Sorry, I have to leave again. I have cancer." He just stared at me. Shock and disbelief. Then he nodded, and I left.

A couple of weeks later, it was New Year's Eve. December 31st, 2006, and I was standing alone on a balcony. Inside, there was still a party happening. Outside, I heard the muffled sound of people laughing, drinking, and cheering. In the distance there were fireworks going off, as people celebrated a new year and its promise of new beginnings. I hadn't told anyone about the cancer apart from a few of my closest friends. So out there on the balcony, it felt like I was the only person in the universe who *knew*. I stood there, staring at the stars for... I don't even know how long. It was freezing, but I couldn't move, couldn't go back inside and return to the party. It was the first time I had felt that kind of solitude, and I haven't experienced something like it since. It was also the pivot point.

It turned out that I was lucky. It was a relatively benign type of cancer. Malignant, yes, but not the worst kind. I had surgery, completed the treatment afterwards, and came through on the other side being cancer-free.

That month, the one that began on a train and ended on a balcony, was a whirlwind of change where life both rushed by and stood still at the same time. Since the night

on the balcony, I've had this deep, almost physical urge to make the most out of every day. Not in the "YOLO" or carpe diem way that people talk about. Not adrenaline or bucket lists. Just this unshakable sense that I need to move humanity forward. That whatever time I have should be spent doing something useful. It flipped a switch in my brain. Since then, I've found it almost impossible to do nothing. If I'm not building something, I'm wasting borrowed time. That's the thread that runs through everything I do, and it started with a phone call.

Since then, storytelling was no longer a pastime, but a survival technique. Investors, customers, future colleagues, even suppliers, all of them had to *see* the destination before they risked embarking on the journey. My job was to paint that destination in colors vivid enough to pull them through the doors. Preparation met opportunity each time a pitch deck made someone's pulse quicken. It isn't enough knowing the ins and outs of the machine that will carry you to your destination, you have to learn how to get people engaged in where you're going. This goes the other way around too: being able to sell tickets to the journey when you don't know how to build the rocket ship won't get you much further than a castle in the sky.

That, then, is my genesis story. Yours is different, must be different, but telling it honestly will reveal two priceless coordinates**:** where you truly began, and the strengths and weaknesses you carried with you out of that beginning. With those plotted, you can recruit the companions whose talents offset your blind spots. In software, you can occasionally venture out alone, but in deep tech where physics, biology, firmware, and fragile supply chains converge, it is, as the old computer games warned, *dangerous to go alone*.

So, pause here, before we dive into sensors and semiconductors and term sheets. Find your own prologue. Hold it up to the light. Because once the adventure starts, the only constant will be change itself, and the only sure map will be the story you carry with you.

Know yourself, and people will know you.

CHAPTER 2

NERDS AND BOOKWORMS

One of the reasons I've always felt I fit so perfectly in the deep tech space is that every single founder you meet is almost guaranteed to be a super nerd myself included.

Most of us are also bookworms and book learners. Even though, unfortunately, at this stage of my life, I don't really have the peace of mind to just sit down and read a book. Constant interruptions are always in the way.

Luckily, technology has caught up. Streamed audiobooks are now just a tap away, and for me, that has been one of the best ways for me to continue learning. I suspect this is true for a lot of other deep tech builders too.

Book learning, of course, needs to be combined with other things. But it's an extremely powerful complement. You're absorbing knowledge someone else has distilled into what they believe is the most efficient way to communicate it. It's an incredibly powerful tool.

I've always been a reader, ever since I first learned how. It took me a while to discover business literature, but once I did, I was all in on that too.

For me, books started out as a way to escape reality and learn new things. Very early on, I got into science fiction, mostly through role-playing games, because to be fair, the sci-fi scene in the 80s and 90s wasn't all that big. Of course, there was *Star Trek* and *Star Wars*. Ever-present. But *Star Trek* was always the more interesting one to me. It showed a potential future that could theoretically exist.

I also read a lot of Asimov, Herbert, Heinlein, Dick, and later Banks, Hamilton, and Reynolds.

Reading all these sci-fi books and playing all these sci-fi games, especially tabletop role-playing games, opened up new mental spaces. The thing about tabletop games, compared to computer games, is that the possibilities are infinite. The only limitations are your imagination and that of the other players. You're not confined by whatever the developers programmed.

And I'm really looking forward to when AI makes a proper augmented reality version of tabletop games. When that happens, we'll return to truly infinite possibilities again.

There was one game in particular that had a big influence on me. It was called *Traveler*. I played it a lot, both as a player and as a game master. It introduced the concept of tech levels, and by the way it was structured, it made the world back in the 90s feel incredibly primitive. There were these distinct tech levels, and each one unlocked specific items such as cures for cancer or personal flying transportation. It felt realistic. Visionary.

So, as technology kept advancing, I was never surprised. People around me would say things like, "Wow, I didn't see that coming," and I'd be thinking, "Of course it's coming. This is exactly what we've been expecting."

Artificial intelligence is the same. What we have now, these large language models, aren't the full sci-fi version of AI. Yet. But it's clear we're on the path. I think we'll get there very soon. And I really hope it ends up more like *The Culture* and less like *The Matrix*.

For me, whether it's AI, fusion energy, or indefinite human lifespan, it's never been a question of *if*. It's always been *when*. I think that mindset is shared by a lot of people in deep tech. We see things and think, "This should be possible." Even if it's not today, we know it's on the path. And so, we just keep pushing until we get there.

If you're into deep tech and haven't read proper science fiction, I highly recommend it. And no, *Star Wars* doesn't count. It's fun, but it's not sci-fi.

Now, back to business literature.

I didn't discover it until I was about 30. Which, in hindsight, is a bit frustrating. It would've helped me a lot earlier. But for some reason it didn't interest me back then.

Nowadays I probably go through one or two business books per month. That's about all I have time for. And I do it via audio, while doing other things, exercising, driving, whatever. If I'm in work mode and I've got an audiobook playing, I absorb a lot.

I'll recommend a few specific books in later chapters, but really, you should find your own favorites. The ones I love might not work for you. I've read books that got amazing reviews that did nothing for me. And I've stumbled across random titles that unlocked entirely new ways of thinking.

The point is: explore. Find the hidden gems that work for you. Books are shortcuts to wisdom. Someone spent years figuring something out and then put it all down for you in a format you can consume in 10 hours. That's leverage. That's learning from other people's mistakes, so you don't have to make them yourself.

Just find what clicks for you. And keep going.

CHAPTER 3

BUILDERS VS. SCALERS VS. CARETAKERS

Most of the people reading this book, or at least the people who will get the most out of it, are what I call builders. In my experience, about 10% of all people are builders. Then come the scalers. Again, from personal experience, maybe 30–40% of people fall into that category. And last come the caretakers. About half of the population, or at least half of all the people I've worked and interacted with, are caretakers.

Caretakers are the ones that, when everything is done, keep the machine running. They maintain the core business. They make sure everything works perfectly every day. There should be some kind of hymn or prize or national holiday for the world's best caretakers, because they are the ones who truly keep humanity going. If the world had only been made up of builders, we'd have invented amazing things, but most of them would have broken immediately and no one would have stuck around to fix them.

Between the builders and the caretakers come the scalers.

It's important to understand if you're a builder, a scaler, or a caretaker. And there's no shame in being any of them. But if you misidentify and try to work in the wrong category, you're going to have a bad time. A caretaker trying to be a scaler might manage for a while, but they'll burn out. A scaler trying to be a builder is not personally something I've seen work. Maybe there are exceptions. Of course there are people who can span the whole spectrum, but they're rare.

The people who absolutely do not fit in the other two categories are the builders. If you put a builder in a caretaker role, they'll die slowly. If you put them in a scaler role, they'll probably fail. The only place they thrive is in building.

This book is written by a builder, talking to other builders.

I'll talk more about scalers and the great experiences I've had working with them. But I'm not a caretaker. I find it very hard to work with caretakers. I need mediators between us. I find them slow and boring. They find me disruptive and reckless. We frustrate each other.

Let me tell you how I first realized I was a builder, and not a scaler or caretaker.

It started with LEGO bricks. Probably the best toy ever invented. It's brilliant.

As a kid, I would beg for LEGO sets for every birthday, every Christmas, and any other occasion I could come up with. And even though we didn't have much, my parents made sure I got them. I'd open the set, read the manual, build it as fast as I could, admire it for maybe 10 to 30 seconds. Then I would tear it apart. I'd start building new things with the parts, using the techniques I'd just learned.

What fascinated me was that the instruction manual was like a portal into someone else's mind. Someone had imagined that build and figured out how to do it with those exact bricks. By following it, I learned new ways to construct things. Then I'd take it apart and create something of my own.

The next set would come, and I'd do the same thing over again. Build, admire briefly, tear down, remix. Eventually, I started combining set. I don't think I've ever rebuilt the same thing twice.

I had a childhood friend who also loved LEGO sets. He'd open the box, study the manual, build it, look at it, and then tear it down. But then he'd build it again. And again. And again. Faster and faster each time. Then he'd leave it finished on a shelf and move on to the next one. When he visited me and saw me mixing kits, he got frustrated. He wanted to perfect the original design. He was a scaler. I was a builder.

Then there were the caretakers. Our other friends. They just wanted to play with the finished creations. I found that incredibly boring, but they loved it. They'd spend hours playing with the worlds I'd built while I was off thinking about what to build next.

That was my early insight into who I was.

Builders thrive in chaos. We make order out of it. Scalers thrive when there's some order to begin with. They optimize it, scale it, perfect it. Then the caretakers take over and keep the machine running.

Later in this book, I'll talk about the concepts of $0 \rightarrow 1$ and $1 \rightarrow N$. Those were some of the most important lessons I ever learned from more experienced people in tech development. Yes, we'll also cover business, fundraising, and all that. But this $0 \rightarrow 1$ and $1 \rightarrow N$ is specific to technology.

As a builder and a founder, getting from $0 \rightarrow 1$ is entirely your responsibility. No one else can do it. And if you try to outsource it, you will have a bad time. After that, once you've reached 1, it's your responsibility to bring in people who can scale. People who can take it from $1 \rightarrow N$.

The only time you're truly done is when those scalers have succeeded. When they're ready to hand over to the caretakers who will keep everything humming.

These transitions happen at different stages of your startup. In the beginning, everything is $0 \rightarrow 1$. Once you've solved that part, maybe you'll start a new $0 \rightarrow 1$ project, while the existing one moves into scaling. At that point, you're doing both at the same time.

And on top of all that, you're also raising money, keeping investors happy, managing sales, and running the company.

If you're a solo founder, you're doing all of it.

Alone.

Yes, I know there are exceptional people who can accomplish that. I'm not one of them. I need complementary skills. That's what I look for in co-founders. Skills that complement mine and allow us to get from 0 → 1 and then 1 → N.

Founders should own the 0 → 1 for their company. And then, when ready, bring in scalers who can take things to N. But do not start handing off things too early. If you do that before something is ready to scale, you're in trouble.

I've done that. It doesn't end well.

This is what I call founder mode for deep tech. You are responsible for getting everything from 0 → N. Even if you're not personally doing the 1 → N work, you're still responsible for making it happen. Ideally, that responsibility is shared with your co-founders. But you cannot limit yourself to just one narrow thing. You have to be everywhere in the company. You're working in chaos, because you are the builder.

And if you bring in other builders, make sure they're better than you at building. Otherwise, you're wasting everyone's time. We'll come back to that when I talk about building teams.

Same thing for scalers. Make sure they are scalers, not builders trying to scale. And make sure they're much better at it than you. If they aren't, you'll still be doing all the work. We'll come back to that too, when I talk about micro-wasting.

For now, ask yourself this: are you a builder?

If not, you're probably not a deep tech founder. Or you are one in name only. And you're going to fail.

Then ask yourself this: does your founding team have all the skills needed to build what you're trying to build?

If not, fix that. Fast.

CHAPTER 4

THE LOST ART OF CONCENTRATION

If there's one thing I was lacking at a certain time in my life, it was the power to concentrate. Growing up, I had no problem being by myself for hours, doing a single task very diligently. I could focus. But that changed.

I know there's a lot of talk about how social media and other distractions disrupt your life, and there's always someone or something vying for your attention. I think it's been true for a long time. Social media and smartphones didn't invent the problem, but they made it worse.

Much worse.

Because once you start working, really working, you realize how many things pull your attention in different directions. It becomes hard to hold a thought for more than a minute.

I read a study a few years back right around the start of Covid, so probably in 2020. It said that more than half the population in the Western world can't concentrate for 20 minutes straight.

I thought that sounded stupid. I decided to test it. I sat down and tried to write for 20 minutes. Uninterrupted.

And I noticed something strange. My hand started reaching for my phone without me even realizing it. Just muscle memory. No conscious decision.

I turned off my phone and tried again.

In the end, what I had to do was set a timer for 20 minutes. And I had to do that every day for weeks until I could actually work for 20 full minutes without any interruption.

That was a huge wake-up call. I had been doing my job, making decisions, and leading people, but I wasn't even capable of focusing for 20 minutes.

Once I realized that, I did what I always do. I started reading about it. I looked into techniques, tips, and systems to fix it.

The first thing I did was block time in my calendar. Every day, I gave myself 30 minutes to work uninterrupted. And that alone was incredibly difficult. At the time, I was the CTO at FlatFrog. There were always fires to put out. Always meetings to attend. Always someone needing something. But I stuck with it.

And it paid off.

In today's chaotic world, the ability to focus has become a superpower. That sounds strange, but it's true. If you can sit down and concentrate. Deeply and intentionally, you have an edge.

And you, as a deep tech founder, are going to need that edge. You are stepping into an insane tornado of chaos. Lightning bolts, decisions, problems, people pulling at you from every direction. And still, you need to be able to sit down and do the work.

The real work.

The thinking. The deciding. The building.

So, here's a challenge.

Put this book down. Right now. Then work on a single task for 20 minutes. No checking your messages. No bouncing to the company messaging system. No email. No phone.

Just one task. Laser focused.

Twenty minutes.

If you can do that already, good. You're better than I was. If you can't, then fix it. Because you need to fix it before you go any further on your deep tech founder journey.

Take care of this first step.

It's foundational.

CHAPTER 5

THE RIGHT IMPOSSIBLE PROBLEM

There are a number of factors that go into finding the right impossible problem to solve. You need expertise in the relevant field. You need some kind of insight. And you need timing. Those are, according to me, the three most important elements if you want to be successful.

People often underestimate the importance of timing. If you build a company at the wrong time, it might be that the technology isn't there yet. Or that the market isn't ready. Or that it's just not what investors are looking for right now. It could be any number of things. And if you go full speed with your shiny new rocket ship, you'll burn all your fuel and crash.

Fuel in this instance, by the way, is money. We'll get back to that later.

Start too early, and you won't have enough funding to reach orbit. Start too late, and the orbit is already crowded. Timing is critical, so let's look at timing from a couple of angles.

In deep tech, the tech itself is exceptionally important. If the technology just isn't there yet, even the best idea in the world will fail. Not because the vision or execution is flawed, but because it simply can't be built. At least not yet.

Back in 2015, I had just gone through the process of hiring and firing a large number of people. And if you haven't had to lay off 50 people, even with help from professionals, you have no idea how much time and energy it drains. Hiring too early is one of the worst mistakes you can make.

So there I was, coming out of that experience. I was on a train with one of my now co-founders, and for some reason we started talking about Tinder. I said, "If only there were a Tinder for hiring people." Sounds like a throwaway comment, but it was rooted in a real insight.

When I was recruiting, we'd spend all this time writing job ads, screening candidates, and analyzing CVs. But within 30 seconds of a video call, I could tell if someone wasn't a fit. Not whether they were a fit, that takes more time. But not a fit? That's instant.

And you still have to be polite. Sit through the rest of the call. Protect your company's reputation. Especially when you're hiring highly skilled engineers. So much time wasted, both mine and the candidates'.

And I'd heard similar things from people hiring for low-skill roles. They could tell immediately. The negative signal is just so strong when you see someone's body language, how they speak, or how they move, even over video.

So we had this brilliant idea: let AI do it. Let it analyze people's video presence, scrape their social profiles, and find ideal candidates before they even apply. Sounds great, right?

Only problem: it was 2015. The state of AI at the time was abysmal. If you've followed AI at all, you know the last five years have been insane. Even the last six months. The pace is unbelievable. But back then, the technology was just not there.

Still, we raised money. Built the thing. And of course, the tech failed. Not because we were bad at building it, but because it couldn't be done yet. I'm sure someone in 2025 either has built it or is about to. We were just early by about 10 years. That's what it means to get the timing wrong on the tech side.

Then there's market readiness. Sometimes the market just isn't there yet. That's a little easier to manage than technology, at least in deep tech. If you're building a deep tech startup, you probably have five to ten years before you're scaling sales. First you build the product, then you find customers, then you scale. It takes time.

So building a market is hard, yes. But not impossible. Disrupting a market is easier than creating one from scratch. Take it from me; I've tried both.

Another example of poor timing happened in 2012. We had this idea for a new type of quantum dot that could revolutionize solar cells. The theory checked out. Early prototypes showed promise. If we could just tune the materials a bit more and get the efficiency closer to the theoretical limits, it would work.

We brought this to investors and said, "Look, here's the tech. Just add money and it'll take off."

Only problem: solar prices had been pretty stable up until that point. And then the Chinese government decided solar was strategically important. They poured money into scaling and reducing costs, and the price of solar panels dropped faster between 2010 and 2015 than in the entire previous history of solar. It was brutal.

Almost every startup in solar got crushed. Ours was way too early to survive that kind of shock. That's what bad market timing looks like.

Another trap is regulation. If you're entering a heavily regulated market, don't wing it. Stay on top of the rules. If you're building something that ends up being banned in your target market, you're screwed. Even a whisper of upcoming regulation can tank you.

Be careful.

And finally, there's competence. This is about your unique insight. Your inception story. You have to see something others aren't, or at least see it first.

FlatFrog started with me being an optical engineer and seeing a product fail miserably because the signal-to-noise ratio was complete trash. Like, 10^{-10}. A simple simulation could've shown it wouldn't work. But it wasn't engineers who had made the initial design, otherwise I would have been thoroughly disappointed in engineeringkind.

I saw the failure. I saw what went wrong. And before that, I had seen Jeff Han, amazing guy, by the way, show off something incredible in 2006: a multi-touch interface on a large display. Tom Cruise in *Minority Report* come to life. Blew my mind. But I looked at it and thought, *that hardware's terrible. I can do it better*. That was the insight that led to my first company.

Then there's the current company. This one started with Dominic Davies, my co-founder. He'd been a patent attorney for over 20 years but originally trained as a software engineer. He hated the repetitive parts of his job, so he started automating himself out of it. He began building tools to do that back in 2013.

In 2013, AI wasn't ready. But unlike me, Dominic didn't raise a lot of money. He just kept chipping away at it in his spare time. When AI finally reached the right point, his system started humming. That's when he found me, we brought in Markus Andreasson, and things took off.

Dominic's insight couldn't have come from anyone else. You needed that exact combination of skills and frustration. And guts. Because most patent attorneys are comfortable. They're not looking to change anything. They're fat and happy.

Which is exactly why I joined him, because disrupting a fat and happy industry is the best thing you can do.

All founders know that deep tech is a different beast, and you have to be a little bit crazy to take it on. You are staring down the impossible and refusing to take no for an answer. If you are 100% certain that you know everything there is to know about TAM, SAM, TRL, TCO, CoGS, RMA, NDA, FMEA, DFM, OEM, CAD, and a whole bunch of other deep tech TLAs, ETLAs, and FLAs – then maybe this book isn't for you.

If you're not entirely certain and you're reading this about to run headfirst into the impossible, you should probably get through this book first. Being a deep tech founder means entering an uneven playing field on hard mode. Loving the game is not enough – you must do everything you can to be prepared.

This book will help you. It is the manual that not only tells you what to do, but how to do it. It is also the manual that tells you what not to do, unfortunately all based on personal experience. Which co-founders, what team, which parts, what prototype, which inventors, what manufacturer, what margin, where to find customers, how to sell, when to hire, when to fire, when to pivot, how to find momentum, and most importantly: how not to kill your dream.

OLA WASSVIK is a deep tech entrepreneur, inventor, and writer with over 20 years of experience building companies at the edge of what is considered possible. As co-founder and former CTO of FlatFrog, he helped pioneer large-scale interactive display technology.

Today, he is the co-founder and CCO of Lightbringer, working at the intersection of AI, patents, and invention intelligence. *A Game of Deep Tech* distills two decades of hard-earned lessons from building, breaking, and rebuilding deep tech companies.

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