

Introduction

'The most powerful person in the world is the storyteller. The storyteller sets the vision, values and agenda of an entire generation that is to come.'

Steve Jobs

When the waters started receding off the coast of Meubola, Sumatra, the local people stared in fascination at the seabottom it left behind. A little before that, a 9.1-magnitude earthquake had hit 30 kilometres below the bottom of the ocean, but as it was a few miles out, only a few people felt it. Little did they anticipate the monstrous 50-metre high wave that came in a few minutes later, engulfing the coast and decimating cities and populations.

I have been a business executive and entrepreneur in the technology world for the past two twenty-five years, and there have been a few times that I myself have metaphorically seen the waters receding. There have been tectonic changes in the world over these past two decades—in customer expectations, environment, regulation, and above all, in technology. Each such change fundamentally reshapes the world of business. In recent years, these changes have only intensified on the Richter Scale, and some of them have resulted in massive waves that have wiped out large companies which either

did not see them coming or did not change themselves to withstand them. Kodak, Blockbuster, Yahoo, Toys R Us and many more succumbed in these earlier tsunamis, while more nimble companies and start-ups like Amazon, Google, Netflix and Samsung, to name a few, took their place.

The upheavals shaking the ground beneath companies are even greater now. Customers are expecting everything better, cheaper or even free, and in realtime, and newer companies have emerged to offer them this choice. The Earth and its climate are changing around us, forcing companies to relook at their very business models and technology to quickly adjust. Regulation is tightening, and privacy, data and security have become top concerns for governments. Above all, disruptive technologies the likes of which we have not seen or could not anticipate have arrived or are already here. Artificial Intelligence (AI), blockchain, genomics, extended reality, 5G and the Internet of Things (IoT), drones and robots—each of them by itself is an earthquake; combined, they have the power to alter entire landscapes.

Companies are aware that the waters are once again receding.

In these past few years, I have had the opportunity to interact with hundreds of CEOs and CXOs of large diverse organizations across the world. Every single one of them is looking at the seafloor with a mix of trepidation and excitement, aware of the massive opportunities and existential threats that these new digital technologies and business models bring to them. However, most are unsure of what these technologies are, what needs to change, how and what they should do, and, most importantly, how they'd carry their people along with them. Many are not quite sure that they have the right skills, people and bandwidth to make these changes happen. George Westerman, a leader in the area of digital transformation and the author of the



authoritative book *Leading Digital*, hits the nail on the head when he proposed the First Law of Digital Transformation: ‘Technology changes quickly, but organizations change much more slowly.’¹

Over the last few years, my job as a practicing chief digital officer and a digital transformation adviser, has been to work with these same people and try to make this transformation happen. I have spent more than a decade with the two largest diversified conglomerates in India, and a few years with a global technology company, before I struck out to be a digital transformation and technology adviser and consultant to large corporations. In my last corporate stint, I was driving digital transformation for the \$20-billion Mahindra Group of companies, spanning across auto, agriculture, hospitality and financial services. Thus, my experience is of a practitioner, and my experience and stories of how to make these transformations happen come from the trenches, of having being there and done it.

The Tech Whisperer is the distillation of all this experience. Whisperers, as we know, are people who speak the language of the listeners and serve to allay their fears and prepare them for the challenges they face. *The Tech Whisperer* tries to do that too.

It really is a tale of two books—the first part around digital transformation, and the second on the emerging technology forces that enable it.

The first part of the book (Chapters 1 through 7) is about digital transformation, the area I have dedicated myself to for the last many years. I started working with companies around digital transformation before it became a buzzword, and when you had to explain to people what it was. Many years have passed, but the challenge remains. While digital transformation is now a legitimate \$2-trillion catchphrase, one *still* needs to explain to people what it is all about, and what it can do for their businesses.

Most people speak about digital transformation in one breath, as one word. The fact is that they are two very separate words—digital and transformation. Often, executives tend to focus much more on the ‘digital’ bit—technology, processes, products, systems, gadgets. The digital part is perhaps sexier. Words like AI, machine learning, blockchain, social media carry an element of oomph. The ‘transformation’ part, often, is an afterthought, since this is the more pedestrian and the tougher part of the equation and where the grunt work of changing an organization’s culture and people’s mindsets and skills needs to be done.

There are many definitions of digital transformation, but my favourite one remains the one given by George Westerman of Massachusetts Institute of Technology (MIT): ‘The use of digital technology to radically improve the performance and/or reach of a company.’ The definition is pithy; each word is important; and it has the goals and objectives built in. As we discussed earlier, there are tectonic changes happening around us. These changes are not linear, but exponential in nature. The fact is that customers have changed to keep pace with these revolutions, but organizations have not. Unlike consumers, they are weighed down with their culture, their people’s collective mindset, and most often, their past success.

In the first part of the book, I present the practitioner’s view of making this digital transformation happen in organizations.

My first chapter, *The Twice Borns*, tries to explain and demystify digital transformation. It explains the distinction between ‘Born Digital’ companies like the Googles and Amazons of the world, and the companies which are trying to ‘Become Digital’, like the GEIs and Burberrys of the world (much like the Brahmins in Hindu mythology, they have to be ‘born’ more than once). The second chapter lays down *The Ten Commandments of Digital Transformation*. The

genesis of this chapter lies in an article I wrote for *Mint* a few years back, which gave a practitioner's view of the ten necessary principles for successful digital transformations.² This article went viral, generating a healthy discussion among corporate executives, academicians and students on digital transformation. The discussion around this article and how it was received provided me the inspiration for this book!

The third chapter is a short one and introduces the Holy Trinity—the centerpiece of my beliefs on digital transformation—Business Models (Brahma), Customer Experience (Vishnu) and People and Culture (Shiva). Chapters 4, 5 and 6 explain each one of the Trinity in detail. Business Model transformation is perhaps the beating heart of digital transformation; most often born-digital companies just do business in a model very different from legacy companies, and the shift to these new tech-enabled, consumer-friendly, Uber-like business models is the core of digital transformation. Chapter 4 explains how organizations can manage this very difficult transition successfully. Customer Experience, to which Chapter 5 is devoted, is perhaps the most understood of the Trinity—thousands of organizations appreciate that the customer journeys have changed and are using Design Thinking and other tools to retool their organizations to meet the new demands that these new journeys offer. Digital transformation, looked through the customer experience lens, is conceptually simple—map the as-is customer journey, find out the actual customer journey and use technology, process and people interventions to bridge these gaps. Voila, your company is transformed! The people and organizations which have attempted to do this know how difficult it actually is.

Chapter 6 describes the single biggest enabler and obstacle for transformation of any kind, digital or otherwise, is the

organizational culture and the people who shape it. In my experience, every successful digital transformation exercise or initiative was successful for many reasons; however, the ones that failed, did so for only one reason—people. I spent more than half my time trying to tackle this piece—the culture that forms because of an organization’s history and leadership, and how to make it malleable enough to accept the impact of change. Thus, the most powerful of the Trinity is Shiva, the Destroyer. According to Hindu mythology, Shiva does not destroy for the heck of it; he destroys to recreate. For every transformation, destruction is compulsory. That is why Shiva is the most powerful of the Hindu gods, and I devote a significant part of the first section of the book on how to appease Him.

Chapter 7 is the closest I get to a ‘how-to’—how to make digital transformation happen. This is the distillation of all my practical experience squeezed into this one chapter. I discuss the digital transformation models that thought leaders and strategy consultants like McKinsey, Boston Consulting Group (BCG) and others have successfully used with large corporations globally. I also attempt a model of my own, based on my experience as a practitioner of this art. I call it the Customer Centered Model of Digital Transformation; it might as well be called the *upside-down inside-out* model, since it focused outwards first and asks companies to start with doing the stuff they thought they would do at the end. I have used this, or parts of it, across my various digital transformation assignments, and it is something which I believe every practitioner can use—wholly, or in parts.

In the second part of the book I discuss the fun stuff—the technologies.

Many people tend to think that technology *is* transformation. Another school of thought paints a new emerging technology, say AI, as an all-powerful panacea to



all the problems that a company is facing. Most of us tend to be simultaneously fascinated and afraid of technology and get drawn to it as a moth to a flame. ‘This is the whole point of technology. It creates an appetite for immortality on the one hand. It threatens universal extinction on the other. Technology is lust removed from nature,’ wrote the author Don DeLillo. In the context of digital transformation, these technologies form a part of a massive and very powerful toolset, which is available for us to use in the best way possible. Chapter 8 sets up this context, and posits that every company, irrespective of the business that it is in, needs to become a technology company.

Chapter 9 and 10 describe in detail the technology which I get asked about the most, and which, admittedly, is closest to my heart—blockchain. Chapter 9 attempts to demystify blockchain. I present a couple of analogies, that of a ledger and a kitty party, which have worked well with audiences. It describes the kinds of blockchain, how governments think about it, and the whole cryptocurrency conundrum. I believe that technology, much like mathematics, merges with philosophy at its highest level, and I attempt to explain the philosophy behind blockchain. Chapter 10 is more practical. I describe use cases of blockchain across multiple industry sectors—banking, insurance, manufacturing, supply chain, etc. We get onto more interesting and slightly more futuristic use cases around government, future of work and next generation social networks, and end with some practical tips on when and how to use blockchain.

Chapters 11 and 12 are linked too. In the first one, I try and demystify the whole data story—how it is the new oil and how it is perhaps not! The chapter explains the kind of data, data analytics and data science, and the whole story behind big and small data. We move onto multiple data science use cases across industry, and then the contentious

privacy and security issues which are plaguing it. Chapter 12 is about the most revolutionary technology that mankind has seen after the wheel, the steam engine and the Internet—AI. There is more being written about this than perhaps the rest put together, and it is also probably true that AI will change the world like nothing else has so far. I borrow the chapter of the title from James Barrat's book, *Our Final Invention*, which speculates that AI will be our final invention, after this AI will invent everything else, since it will be more intelligent and capable than us! It is tough to fit in everything about AI in one chapter, but I try and go over its taxonomy, use cases, the wars being fought over it, and finally, the ethics and philosophy behind it. Each one of these subtopics deserves several books, but I hope that this little tasting menu of a chapter whets your appetite for more information on AI. I cannot underestimate the importance of this technology and would urge every reader to delve deeper into it.

Chapter 13 is a surprise! With my partners, Findability Sciences,³ we have rigged up an AI, a bot, which has *actually written* this short chapter on itself, on AI! Admittedly, while this is a rudimentary hack, it still has managed to create a semblance of a chapter from the information we fed it. It is quite heartening for me to know that the chapter written by a human is far more comprehensive and perhaps better written than our friendly neighbourhood bot! But given more resources and time, we could have built a much more accomplished one, which would have come very close to human-level quality. I am super excited by this chapter, since in my knowledge, this is a first in global publishing history —*where an AI writes a chapter on AI!*

Chapter 14, while ostensibly about Industry 4.0, tries to fit in most of the other technologies into one short chapter. Industry and business have progressed in successive waves, each wave propelled by a set of tectonic technologies.



Industry 4.0 rides on a many of them—IoT, drones, robots, and 3D printing. Each one of them have spawned multi-billion-dollar companies and are poised to radically change entire industries. A few have been missed out—5G being the most notable example. I have not covered several others—DevOps, microservices, cloud, mobile payments, open Application Programming Interfaces (APIs), low-code and many others. Vast areas have been completely untouched and not even mentioned—solar energy, genomics, brain-machine interfaces, microbiome, space exploration, quantum computing, and perhaps many others.

But that is the excitement and challenge of writing such a book—this breathtaking, exponential march of technology. I finished the first manuscript of this book in April 2019. The rapid developments that took place within three months after that, from April to July, warranted writing another book, or rewriting this one from start!

There are some great books, academic papers and articles written on digital transformation, and I refer to many of them in my work. There are even greater and far more numerous works of eminence around the technologies that I describe in the second part of the book. What I have tried to do is to simplify and demystify these powerful and sometimes complex topics, through my involvement with them, examples from across the world, and above all, through stories. ‘The universe is made of stories, not atoms,’ said Muriel Rukeyser, the American poet and activist. So, I have tried to string together some of these stories and hopefully woven a book from them.

And as I tell these stories, I do realize that we live in a cacophonous world. We look at our phone more than 2000 times every day, to try and take in the half a million tweets, the hundred thousand Instagram photos, 50 million WhatsApp messages which are sent every minute. Then there are the videos, the old and new social networks, the emails

and somewhere in the middle of all of this, a human being who actually wants to talk to you! As each of them tries to grab your attention, they try and shout louder and louder, they blink, they pop-out, they transform themselves into emojis. They all yell for your attention, squeal and squawk for your time.

In this cacophonous world, I believe that a whisper can be heard far more loudly than a scream. Therefore, I have dredged into my experience and scoured the world to collect all these whispers. And now I present to you *The Tech Whisperer*.

Jaspreet Bindra
India, August 2019