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THE LIVE ENTERPRISE

Sample Chapter

CHAPTER 1:
The Live Enterprise Model

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THE LIVE ENTERPRISE

CREATE A CONTINUOUSLY EVOLVING AND LEARNING ORGANIZATION

JEFF KAVANAUGH AND **RAFEE TARAFDAR**
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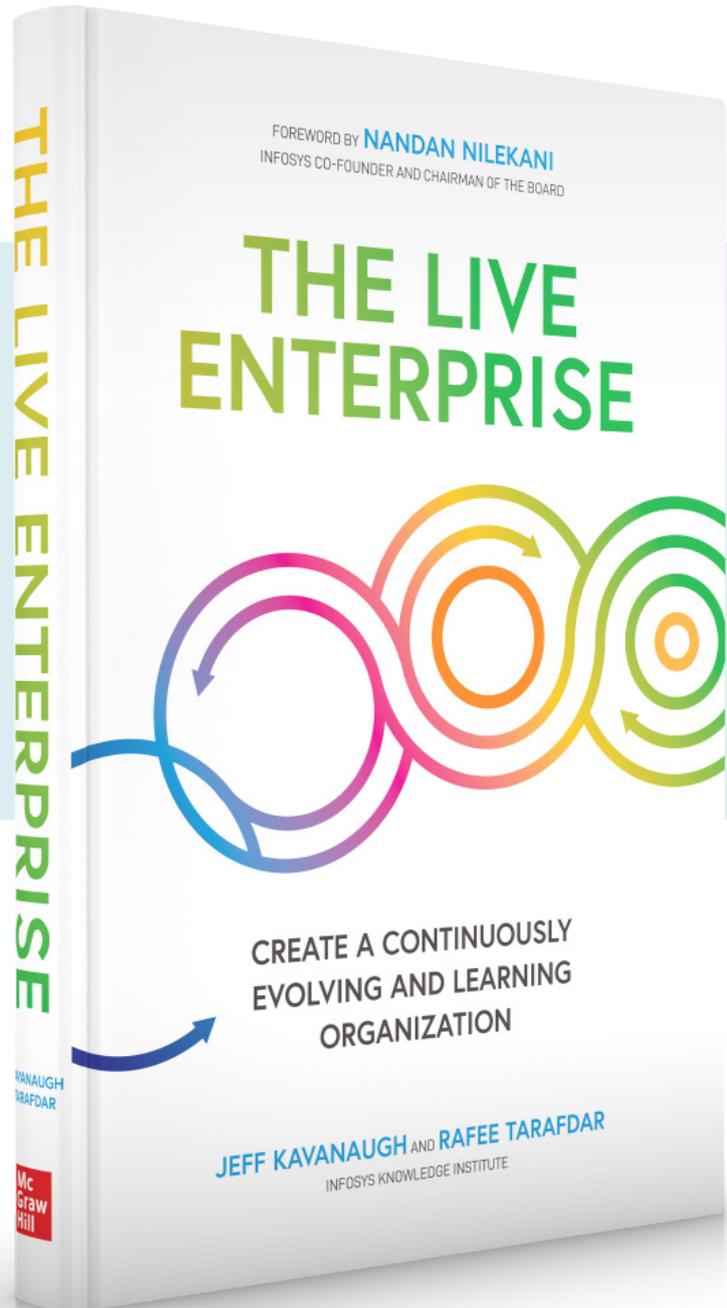
THE LIVE ENTERPRISE MODEL

Ten Digits

On September 29, 2010, 10 people met in Tembhli, a village in the Indian state of Maharashtra, to receive their Aadhaar numbers, the very first in India, perhaps even in the world. Aadhaar is a 12-digit unique number based on an individual's unique biometric details such as fingerprints and iris scans, plus demographic data such as date of birth and address. Named after the Hindi word for "foundation," Aadhaar is managed by the Unique Identification Authority of India (UIDAI),[1] with each user issued a card cross-referenced with their biometric data held in a database. Infosys cofounder Nandan Nilekani stepped away from his highly successful tenure as CEO to launch this audacious Indian moonshot. The original idea behind Aadhaar was simple—"better inclusion"—to create a centralized system based on a single recognizable ID to replace the former decentralized system, which often left marginalized people struggling to obtain state services and was prey to corruption.

Since those first 10 people in Tembhli, Aadhaar has become the world's largest biometric ID system, with World Bank Chief Economist Paul Romer calling it the most sophisticated ID program in the world.[2] Aadhaar now has over 1.2 billion enrolled members and has seeded over 250 additional

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programs, delivering high-velocity access to government and private sector services. In effect, Aadhaar has become a digital network shifting the equilibrium of citizen and state, at scale. The initiative took only six years to reach a billion people—from 10 *digits* (fingers on two hands) to *10* digits (a billion). This is all the more remarkable because the experts at the Bank for International Settlements concluded that based on current state in 2008, India was predicted to take a full 46 years to get from 20 percent banking inclusion to 80 percent.

Aadhaar was the first move in the India Stack,[3] the project creating a unified software platform to bring India's population into the digital age. India Stack is a set of application programming interfaces (APIs) that allows governments, businesses, startups, and developers to use a unique digital infrastructure to solve India's hard problems toward presence-less, paperless, and cashless service delivery.

These APIs have brought millions of Indians into the formal economy by reducing friction, plus fostered innovation to build products for financial inclusion, healthcare, and educational services at scale. At the same time, Aadhaar costs only $1.16 for each enrollment,[4] the lowest of any ID program in the world. From the government's perspective, they drove a paradigm shift in the way government services are delivered in a transparent, accountable, and leakage-free model—saving the Indian government as much as $12.4 billion in costs annually.[5]

How were Aadhaar and India Stack able to make this moonshot leap in enrollment and financial impact in under a decade? The answer is deceptively simple—*it was designed to evolve from inception*. In essence, it was an exponential decade of progress. Nandan and the other architects of Aadhaar were justifiably proud. Yet as he stepped away from government service, he wondered, "Why can't we apply the India Stack learnings in enterprises that are also large, complex, and struggle to make nonlinear moves in their systems?"

That question was very much on Nandan's mind when he came back to Infosys in 2017 as chairman of the board. That is how the India Stack principles mutated from a societal platform and were reapplied in the corporate world as the genesis of Live Enterprise. Many of the principles proved to be applicable in a commercial enterprise, shifting the landscape equilibrium to higher purpose and higher performance.

The Next Big Leap

When Nandan returned to Infosys in 2017, it was a similar but different company. While the campuses were still pristine and the staff completed

projects with professionalism and energy, the previous innovative high-growth trajectory had become operationally, asymptotically stale. The employee experience was desktop centric, enterprise processes had not leveraged the power of digital native technologies, and open-source adoption was limited. Putting it politely, there were ample opportunities across Infosys to be more agile, responsive, and networked, and to increase the velocity of ideas and innovation.

We took a hard look at our own organization, as what had served us phenomenally well for over three decades had reached the limits of its effectiveness. Innovation had become more an exercise in optimization and efficiency, not creativity and brand value. After a succession of founder CEOs, it took an external CEO and then return of a charismatic founder to find the courage to change the strategy and enterprise operating model. This change was difficult because the executive team was justifiably proud of their legacy and the economic miracle that propelled Infosys to that point. For the subsequent transformation, senior leadership commitment was critical to be sure, but there are also specific practices highlighted in this book that actually made it happen and became part of the company culture.

This agile startup resilience imperative was not unique to Infosys. As a technology consulting and services firm, Infosys has a firsthand view to the digital transformation journeys of over 1,400 of the largest, most complex enterprises on the planet. These are not trivial commercial arrangements—often strategic, decades-long relationships with multiple active programs at each client. This responsibility requires us to be practical and deliver results in the tight space of moving requirements, shrinking budgets, and a dynamic set of stakeholders. This perspective also provides many data points, as we observe, assist, and colead in the digital journeys of our clients.

Recognizing the need for change, our senior executives tasked a small group of Infosys leaders and external visionaries to brainstorm as to the next potential, exponential leap. That spawned more research and experimentation, specifically on the future of experience, cloud, data, artificial intelligence (AI), edge computing, cybersecurity, organizational model, and potential conceptual constructs to aid in the journey. Through that process the idea emerged that *while the industrial economy was shaped by Adam Smith's invisible hand, we hypothesized that the digital age is constructed by the invisible brain*. We then deconstructed what that meant and how to do it.

We developed principles that could sit on top of such a brain—how to create zero proximity and conduct simulations—and we drew parallels from the biological brain and how the enterprise can replicate it. We imagined how to leverage the potential of 240,000 people as if they were all connected together as one, and how such an enterprise would be sentient because that's

how human brains function. However, sentience is a state, so we chose "Live" as the theme because it conveys motion and embodies evolution—a journey, not a destination.

The India Stack success with identity, electronic credential, and unified payments gave our team the confidence this can be applied within enterprises at scale, and let us reimagine what the next couple of decades would look like for Infosys and industry overall. Traditionally, companies find a solution and then immediately move to replication. They find a problem, pilot in some areas to prove that it works, and then say, "now let's replicate." At Infosys we think differently. We also conduct that experimental pilot, we find it works, and then we *don't* replicate it—we unbundle it. What works in Dallas may not work in Frankfurt. The solution is unbundled in Dallas—say, we find there's one policy, one process, and three skills required. Something is moved to the enterprise learning platform, something goes into the policy framework, and so on. Then it can be rebundled for Frankfurt and see how it works there. This unbundle, rebundle, unbundle, rebundle is like the natural world. We call it dolphining, for how dolphins swim in the ocean. Like dolphins, the model keeps going up and down, and up and down, in cycles. Over time the frequency becomes faster and more efficient, because an organization gets better at the "unbundle—rebundle—apply" approach to improvement and adoption.

All of this thinking, principles, and ideas went into conceptualizing the Live Enterprise. We reimagined Infosys to be an ecosystem of humans and things that are connected with each other through a network that is continuously emitting signals and is observed, processed, and acted upon by a digital brain. This brain manages the connective knowledge and ecosystem, learns from each interaction, and drives value exchange in each interaction. This is all designed with a platform mindset, a digital runway for the company.

Before developing market offerings, and consequently platform services around these offers, we applied the ideas and technology at Infosys to prove the concept, refine the approach, and show evidence of success. We and our Infosys colleagues experienced all this firsthand during the transformation at Infosys, and through working with clients on their journeys as well. This experience led us to envision and develop a new, nontraditional operating model for the modern era.

The Case for Live Enterprise

As we undertook our journey at Infosys, we stayed focused on the fundamental question: *How can large complex enterprises behave like startups with nonlinear moves while maintaining resilience?*

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The research for this book shares the learnings from putting these ideas into practice at Infosys. It also highlights feedback from clients facing similar challenges and extends earlier Infosys research tracking the progress of digital transformation globally. In each of the last few years, the Infosys Knowledge Institute surveyed more than 1,000 respondents from large companies globally about the digital initiatives they adopted. Based on their responses, we categorized companies into low, medium, and high-performance categories. Across the multiple studies, we found that organizations readily moved from the low to medium category, but making the leap to the highest level was far less frequent. Despite investment and management support, these companies reached a digital ceiling (see Figure 1.1).
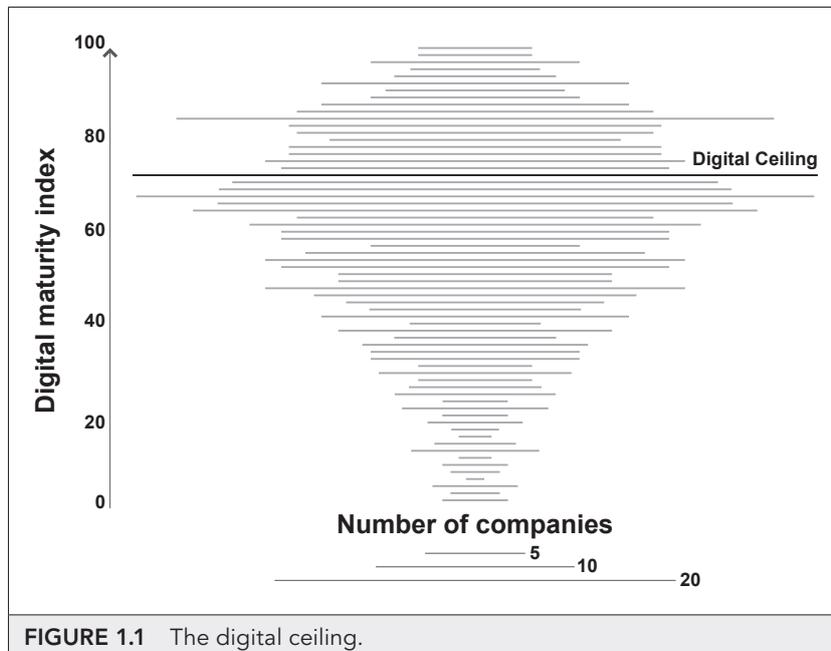

| FIGURE 1.1 | The digital ceiling. |

What held these companies back, and what was special about firms that did reach the next level? What did they do differently? We used our own company as the ultimate laboratory to experiment aggressively, scale efficiently, and adopt with empathy.

Our Infosys experience, complemented by client services and our research, has provided an abundance of data points as to what works and what does not. How do we know the Live Enterprise model works? This approach

helped Infosys increase its market valuation from $33 billion to $69 billion (over 100 percent) in three years. Importantly, it provided enterprise resilience during the COVID-19 pandemic, moving 240,000 workers from office to remote work in a matter of days, and actually surpassing previous year financial results in the quarter ending June 2020, in the heart of the global lockdown. Infosys has also helped numerous companies make the transition to digital technologies and resilient, sustained performance. However, this book is not about Infosys—it shares insights and practical recommendations for leaders to improve their own operating model and performance. It also celebrates the emerging stars of the post-COVID digital age, business leaders who evolve their legacy business, as well as visionary stakeholder capitalists who are blazing a trail for environmental and social impact.

The promise and peril of the digital future has been forecast for years, from turn-of-the-century dotcom boom and bust, through the rise of mobile applications and social media, and more recently through Industry 4.0. What's changed is that exponential technologies like cloud, mobile, AI, open source, and Internet of things have matured and converged. We are seeing the results of this converged life-cycle maturity at the same time that stakeholder capitalism has come of age: the next generation of customers and employees is more than simply aware of sustainability and equality—they demand action from enterprises. Globalism has spurred the rise of the corporate city-state, where large enterprises have additional societal responsibilities in addition to, or perhaps even because of, their role as generators of financial returns. And of course, the COVID-19 pandemic was the match that lit the tinderbox and dramatically accelerated change. We see this manifested in seven areas or domains, and traditional and Live Enterprise perspectives for each are illustrated in Table 1.1.

The very nature of **organizations** has come under pressure. Hierarchical and even matrix models are simply too static in a world where, much like water follows lower-lying land, real authority and influence cut across traditional silos and evolve frequently based on customer and project needs. Organizations must be able to address many initiatives simultaneously and update structures quickly based on market needs.

The way we think about **experience** has changed. In their lives outside work, employees can ask Alexa for anything, enjoy the conveniences of smart homes, and use a variety of communication apps without having to type emails. Then they come to work and deal with a torrent of emails, struggle with archaic processes and tools, while creating cumbersome manual workarounds. Employees, especially digital natives, count on anytime, anywhere, personalized, and predictive experience, whether work occurs in an office building or from home.

TABLE 1.1　Evolution of operating model elements.

Operating Model Element	Traditional (from)	Live Enterprise model (to)
Organization	• Command and control • Functional, line-of-business-based large teams • Physical workplace • Waterfall processes • Technology as enabler	• Self-organizing work teams • Cross-functional and platform-mindset-based small teams • Anytime, anywhere workplace • Distributed agile processes • Technology as strategic differentiator
Experience	• Efficiency • Usability • Limited personalization • One size fits all • Qualitative	• Effectiveness • Delight • Predictive • Inclusive design • Measurable
Value Chain	• Distant from input • High latency • Offline, periodic analysis • Periodic surveys • Complex process	• Proximity to source • Zero latency • Instant simulation • Instant micro-feedback • Guided practice
Decisions	• Deterministic • Manual • What-if analysis • Distributed organizational knowledge • Insights for review	• Stochastic • Semi-automated • Predictive and prescriptive • Connected and curated organizational knowledge • Insights to actions
Talent	• Cost center • Retention • Problem-solving • Instructor-led training • Uniskilled	• Competitive advantage • Employee engagement • Problem-finding • Anytime, anywhere, any topic learning • Multiskilled
IT Systems	• Features and functionality mindset • Designed for known requirements • Monolithic systems • Moderate automation • Limited telemetry	• Platform mindset • Designed for evolvability • Unbundled services • Extreme automation • Observable
Change	• Program-driven large change • Program level • Top down • Existing routines • Unidirectional	• Sigma of micro-changes • Significant change level • Bottom up • Building new routines • Bidirectional

Source: Infosys

Value chains have changed. For decades value chains focused on process effectiveness and product and service delivery, fulfilling value propositions to customers and other beneficiaries. Supply chains delivered goods from source of supply to the end consumer in a high-quality, timely manner. But now enterprises must consider responsive value chains that can be reconfigured quickly for changing business needs, have zero latency, are circular in nature, and are part of an ecosystem. Further, they must address labor practices, worker health, and alternatives in case of sudden supply disruption. While the concepts are not new, the detailed data enable rapid response times that were simply not possible before.

Decisions are the triggers of the digital economy, the actions that initiate response and provide it shape and direction. Deterministic rules engines have accelerated decision making, but more is needed. Like the human mind, which is wired to see patterns, the explosion of data requires new ways to process real-time information in conjunction with insights from past experiences to create machine-based intuition and action.

Talent has progressed from a cost to be minimized to source of competitive advantage. The so-called war for talent is actually a talent famine, as broad swathes of in-demand skills are greatly underserved. This also applies to talent sources, which are no longer a small batch of traditional business schools but entire new talent pools and learning pathways to groom the workforce of tomorrow.

IT systems are evolving from static processing engines to agents of change. However, many of them are designed for specific features and functionality and therefore struggle to evolve as newer features, functions, and experiments have to be rolled out. There is a need to develop using a platform mindset that enables continuous unbundling and rebundling, increasing the velocity of new ideas and innovation, and is designed for change and evolvability.

Change management is changing as well. Gone are the days of rigid, top-down, novel-length communication plans and forms-driven change. When program operations are driven by daily scrum stand-up meetings, much smaller increments are needed to keep change initiatives in synch with the rapidly evolving world around it. The sigma of these micro-changes helps bring about larger change during a transformation. Change interventions are instituted bottom-up in a micro-change—aided by changing routines in the current process (routine +1) and by providing the right cues, nudges, rewards, and recognition, leading to the ultimate behavioral shift and the desired outcomes. As users are empowered to drive change, then convenience, adoption, behavior, and value realization replace system go-live as the metric for success.

The Live Enterprise Model

There is perhaps no more powerful nor less understood tool than the humble operating model. They visually represent how organizations deliver value to internal and external customers and influence the entire organization. Unfortunately, they simply can't keep up with rapid market changes, and that's why executives struggle to apply existing frameworks. As Infosys developed the Live Enterprise model, we found that the traditional operating model framework does not meet the requirements of a modern large, complex organization. To seek nonlinear change, we dismantled old operating models rather than supplemented them. We took a page from the agile playbook and focused on guiding principles over rigid structure.

We started with six strategic objectives:

- Agility of a startup
- Responsive to customer needs
- Networked and connected ecosystem
- Velocity of ideas and innovations
- Competitive advantage through platforms
- Extreme automation in everything we do

These objectives are strategies. The organization is agile enough not to be constrained by specific models and metrics, and is constantly evolving to better itself. In the true sense, it behaves like all living beings, which continually evolve in response to the world around them.

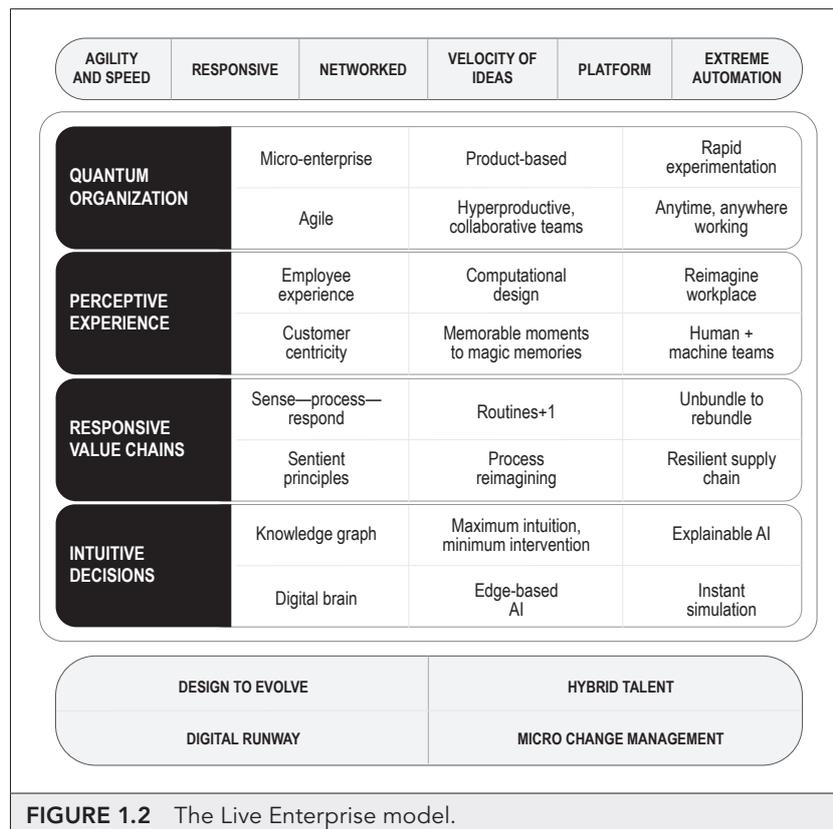These objectives work in concert to accomplish four outcomes:

- **Quantum organization.** Agile organizational structure that drives collaboration, innovation, strategic alignment, and new culture across distributed interconnected teams.
- **Perceptive experiences.** Respond quickly, yet thoughtfully and scientifically, to opportunities to create valuable new employee and customer experiences.
- **Responsive value chains.** Repurpose, reimagine, and reengineer the value chain to see what is not there, can be improved, or can be eliminated.
- **Intuitive decisions.** Automate systems and activate intelligence so that routine decisions and responses can be acted upon with maximum human intuition and minimum human intervention, so that humans can focus on higher order analysis and decisions not suited for machines.

These outcomes are made possible through four ingredients:

▶ Hybrid talent
▶ Design to evolve
▶ Digital runway
▶ Micro is the new mega

Given the pressures leaders face to survive, they need new models to address the challenges. Taken together, the eight elements—the four outcomes and four ingredients—described previously can be seen as the leverage points in the enterprise operating model. Each of the operating model elements has a core theme: quantum organization, perceptive experience, responsive value chain, intuitive decisions, hybrid talent, design to evolve, digital runway, and micro is the new mega (see Figure 1.2).

AGILITY AND SPEED	RESPONSIVE	NETWORKED	VELOCITY OF IDEAS	PLATFORM	EXTREME AUTOMATION
QUANTUM ORGANIZATION	Micro-enterprise		Product-based		Rapid experimentation
	Agile		Hyperproductive, collaborative teams		Anytime, anywhere working
PERCEPTIVE EXPERIENCE	Employee experience		Computational design		Reimagine workplace
	Customer centricity		Memorable moments to magic memories		Human + machine teams
RESPONSIVE VALUE CHAINS	Sense—process— respond		Routines+1		Unbundle to rebundle
	Sentient principles		Process reimagining		Resilient supply chain
INTUITIVE DECISIONS	Knowledge graph		Maximum intuition, minimum intervention		Explainable AI
	Digital brain		Edge-based AI		Instant simulation
DESIGN TO EVOLVE			**HYBRID TALENT**		
DIGITAL RUNWAY			**MICRO CHANGE MANAGEMENT**		

FIGURE 1.2   The Live Enterprise model.

These eight themes offer guidance on how to change perspective and view the enterprise as a living organism, enabled by technology. Table 1.2 shows a summary of the Live Enterprise model themes, along with the key ideas for each theme. Let's review each of the eight themes in more detail.

TABLE 1.2 The Live Enterprise model.

Model Element	Operating Theme	Key Ideas
Organization	Quantum organization	• Product-centric organization • Agile development at scale • Hyper-productive teams • Workplace collaboration
Experience	Perceptive experience	• Interactions over transactions • Adaptable design • Inclusive design • Measurable design
Value chain	Responsive value chain	• Proximity to source • Zero latency • Instant simulation • Micro-feedback • Guided practice
Decisions	Intuitive decisions	• Digital brain • Knowledge graph • AI services • Explainable and ethical AI
Talent	Hybrid talent	• Problem-finding • Learnability • Creativity • Alternate talent pools
IT Systems	Design to evolve	• Architect for evolvability • Layered architecture and services • Augmented existing core systems • Micro-releases
IT Systems	Digital runway	• Enterprise shared digital infrastructure • Unbundling and rebundling • Open source as a strategy • Everything as code
Change	Micro is the new mega	• Move enterprise equilibrium • Small, irreversible changes • Sigma of micro-changes • Nudges and new routines

Source: Infosys

Quantum Organization

The first theme is the **quantum organization**. Traditionally, an organization was a static set of containers in which operational targets were assigned and head count placed. Even as old-school command-and-control organizations are transitioning to distributed, leaner organizational models, the venerable organizational chart and command-and-control leadership persists. It was slow to change, but economies of scale and influence still enabled success, with skunk works teams for new initiatives and sufficient numbers of risk-taking intrapreneurs.

Yet today the organization is under pressure like never before, and traditional models are challenged for effectiveness, agility, and even fairness. Developing a sustainable, resilient organization requires a fresh look at the design, funding models, team collaboration, and ultimately a culture shift throughout the enterprise. We refer to this as the quantum organization, and similar to a multistate particle, a modern enterprise must successfully manage many initiatives simultaneously in multiple changing states. A quantum organization provides the tools and playbooks required to help distributed teams solve their own problems, based on their context and needs using the unbundling and rebundling strategy.

It is not enough to have a few groups innovating outside the core business, because scale is necessary for sustained impact. Incumbents have tried to emulate the nimbleness of startups by refining their long-standing models, and they have turned to agile software development for answers.

Agile has grown from a niche methodology to drive tech products at the edge to a mainstream management philosophy. But companies struggle to take it beyond the project team level and achieve more than superficial results. Agile has also given rise to the product-centric organization, where pods of workers organize around a "product" to be delivered, not a function to be supported. In the old organizational model, a person's function, title, and span of control were important, and now priority has evolved to what they know, their expertise, and how fast they get things done.

Perceptive Experience

The experience landscape looks markedly different today than it did a decade ago. Design thinking has been a tremendous success, enabling the creation of products and services that better serve both customer expectations and business needs.

At the same time, design thinking has reached the point of diminishing returns as more companies adopt it and new challenges emerge. This and other traditional methods of designing digital experiences, which rely

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exclusively on the creative and analytical abilities of designers, are limited in their ability to solve design challenges to their full potential. Designers need a new approach to maintain current momentum and meet growing expectations and responsibilities.

Today we are moving to a world of computational power of technology, which augments and amplifies designer problem-solving abilities, breaking through current limitations. The goal is not to replace people with technology, but to use technology where it outperforms humans (data processing and algorithmic calculations) and allow designers to focus on what they are best at (creative thinking and emotional intelligence). These changes can be understood in terms of three macro-level challenges: *design adaptable* for change, *design inclusive* for evolving consumers, and *design measurable* for evidence in design.

These challenges have enlarged the locus of experience from customer to employee, and from transactions to interactions. Interactions happen in three distinct categories: human to human, human to platform, and platform to platform. The objective is how value can be created in each interaction. This includes responding quickly yet thoughtfully and scientifically to opportunities to create valuable new employee and customer experiences. Learnings are incorporated to spot emerging and unmet needs.

Perceptive experiences also require reimagining underlying processes using the five sentient routines to provide all the information to users at the point they make decisions (*proximity to source*), enable their needs to be met without multiple steps and approvals (*zero latency*), and enable users to evaluate alternatives at the point of decision making (*instant simulation*). Perceptive experiences also recommend routine decisions and actions, seek feedback at the end of each interaction (*micro-feedback*), and help users navigate on their own through *guided practice*. The telemetry captured across each of these interactions measures and continuously improves the experience and underlying processes.

This represents a major shift in how experiences will be designed. The success of design as a discipline has driven a profound change in the operational landscape: design excellence matters, to customers, employees, and even shareholders. While design thinking is part of the toolkit, especially in the early "art of the possible" phase, a more quantitative approach is required.

Responsive Value Chains

Traditionally value chains were viewed as "delivering the goods," literally for product companies and through cavernous call centers and distributed depots for services firms. There was intelligence on the front end to design

product and service offerings, but the bulk of the chain was seen as a one-way exercise in efficiency, to fulfill the product or service at the lowest price point to meet service level requirements. Logistics and trade regulations made life interesting, but were relatively static, as was the supplier base, which often took a long time to certify and establish and therefore only changed when absolutely necessary.

Stakeholder capitalism in the form of environment, social, and governance (ESG) requirements has turned this model on its head in multiple dimensions. Two-way communication is required up and down the network. Provenance or place of origin has become a traceable requirement. Consumers are concerned about labor practices for lower-tier suppliers to the brands they purchase. After the COVID pandemic burst onto the world scene, worker health and safety instantly became top priorities even as they created numerous challenges to operate, while following rapidly evolving and often confusing government policies. All the while, operations leaders have had to be vigilant and ready to quickly alter supply networks or trading partners in the case of sudden disruption.

Taken together, this has forced enterprises to take a fresh look at what they offer and how they fulfill their value proposition. They must think ecosystem, not chain, as everything is becoming integrated across many nodes. The ecosystem view encourages a repurpose, reimagine, and reengineer mindset to see what is not there, what can be improved, how it can be made sentient, and what can be eliminated to deliver more value.

Businesses now need much more information about their raw material inputs and the suppliers who extract, modify, and transport them. Businesses shoulder a greater responsibility for what happens beyond their corporate borders. From supplier to consumer-facing firm, this is both a challenge and opportunity to remake a long-standing chain of supplier relationships into a web of ecosystem relationships.

Solely focusing on customer-facing value chains will not be enough. Internal organizational processes and policies also need to be reimagined to ensure that they establish the foundation to drive internal agility, cross-collaboration, and speed to bring responsive value chains to life.

Intuitive Decisions

The human mind is wired to see patterns. It processes information in conjunction with insights from past experiences to create intuition, and intuition guides much of our decisions. Today leading organizations are developing a similar intuition to drive decisions swiftly and accurately, and to act with resilience in the face of disruption. AI and automation lie at the core of

this endeavor to automate systems and develop sentient principles so that decisions and responses to data-led insights are acted upon with maximum human intuition and minimum human intervention.

This manifests in an ecosystem of tools that captures and maps complex and vast process environments. Businesses will rely on historical data, both qualitative and quantitative, to learn from and then guide the formation of patterns that automatically detect, classify, and resolve problems. These patterns also help companies see opportunities to get better at the things they already do.

For existing IT systems and core systems, tools like robotic process automation have created a cyber worker that takes on much of the deterministic decision load. Organizations now have the potential to drive intuitive decisions swiftly and accurately and to operate with resilience. Artificial intelligence, with machine learning and related tools, lies at the core of this capability and should be weaved into all new organizational initiatives.

This allows businesses to automate routine and deterministic decisions while providing instant simulation capabilities for users to experiment and test, before making more complex decisions about what and how to adapt in response to disruption that emanates after a crisis situation. In the stark COVID example, businesses have had to make many significant decisions quickly, and businesses running on the cloud with AI-enabled intuitive decisions gained a distinct edge.

Hybrid Talent

Employees have always been an important capital resource, but in the digital age the emphasis has evolved from labor costs to knowledge work productivity. With automation taking over repetitive known tasks, the challenge is to attract and nurture a pool of problem-finders to find the right problems that need solved. Hybrid talent is the future of the workforce. Beyond "full-stack" workers who possess both STEM (science, technology, engineering, and math) skills and empathetic creativity, hybrid talent will be a seamless mix of humans, machines, and the gig economy to bring the right talent at the right time for the task at hand.

Hybrid talent is at the forefront of the so-called war for talent. However, for the digital jobs of today and the future, there is actually a talent famine. Millions of positions remain unfilled, despite the many job losses associated with the COVID pandemic and its economic aftermath, which disproportionally affected lower-skilled workers. This epic demand–supply mismatch for digital skills has become the human capital challenge of the decade.

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To fill this gap, a variety of new models have entered the market to provide alternatives to traditional pools like the major universities. Liberal arts colleges, community colleges, private certifications, and even online learning platforms have become providers of digital talent at all levels and provide better access to underserved populations. Some large enterprises and regional economic development groups also provide their own professional training programs to bridge students from educational institutions to true job readiness.

This new approach to professional education focuses on practical learning, where foundational professional skills are complemented by specific technology skills. For experienced employees, lifelong learning and access to anytime, anywhere learning platforms enable reskilling and a workforce that adapts to whatever business or technology requirements arise. The "anywhere" aspect is important, because COVID-19 drove home the point that a high percentage of work—and learning—can be done remotely from home. With the world of work permanently changed, a resilient, reskilled workforce is required to keep up with the evolving work roles and locations.

Design to Evolve

Most enterprises deal with the duality of accelerating their cloud and digital initiatives while maintaining business operations in their new normal. While enterprises continue to leverage technology to improve productivity, the most successful businesses also transform to improve customer experience and employee engagement. The enterprises that survive will be those that navigate this duality and become resilient. In human terms, when one arm gets injured, the rest of the body makes up for that injured arm and copes until it gets healed. Business resilience means ability to respond to market disruptions with another capability compensating for the area under duress, while still meeting continually rising expectations.

This duality means defining and developing an evolutionary architectural approach using the Live Enterprise thinking that makes the existing IT landscape robust and resilient, hides the complexity, and lays down a strong foundation for the digital runway. Given the complexity and scale of existing IT core systems, a rip-and-replace approach is too disruptive, and a more evolutionary approach to continuously unbundle and rebundle critical processes and functionality is required. These changes are accomplished over a period of time using agile methodology and six-week sprints. These sprints are crucial to transformation and enable the evolution one change at a time, happening continuously and at scale.

As enterprise architecture evolves, three underlying themes stand out. First, architecture is unified, but not uniform. Second, the model shares the

ability to solve, so the entire organization learns and is able to solve its own problems. Third, micro-change leads to progress at scale, every six weeks across the organization. These three important elements of the evolution can be easily overlooked because people tend to only see things on the surface and can forget the underlying building blocks of architecture, learning, and micro-change at scale.

Digital Runway

In large global organizations, we have seen that unfortunately the best ideas and innovation happen in pockets, local occurrences without scale. It may be straightforward to rapidly experiment, innovate, and develop point solutions, but it is a real challenge to unbundle them into shared digital infrastructure services. Further, few companies can then scale, productize, and deploy across the organization so that global users can unbundle these services and then rebundle to solve problems specific to their lines of business and geographies. Those able to do this successfully have built a digital runway for their company, increasing the velocity of new ideas and innovations across their user community in a short span of time.

Digital runway provides a shared digital infrastructure for the company. It curates and organizes knowledge, platforms, processes, and other resources required to deliver initiatives in an accelerated manner. The idea is to bring all these elements together in a cohesive manner and drive velocity of new innovations by aggressively using the shared digital infrastructure. This also enables proven ideas from one area to be unbundled and scaled to the rest of the organization at an accelerated pace, since they are based on the same digital infrastructure.

Digital runways use unbundled functionality across services—a powerful approach to building software architectures. Traditional service-oriented architectures integrate business applications; microservices architectures are built from small, independent processes that communicate with each other using language-agnostic APIs. This provides a solid current foundation with maximum future flexibility. The digital runway also enables development of a partner ecosystem, where partner solutions are quickly integrated to deliver new features and innovations.

Micro Is the New Mega

Large-scale enterprise transformations take time, and value realization typically takes even longer. However, by thinking micro, the larger transformation is deconstructed into a number of smaller initiatives. These are delivered by

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micro-teams composed of hybrid talent that reimagine micro-processes, unbundle them into micro-front-ends and micro-services, with micro-releases done in sprints of six weeks, and manage the change for each release.

The Live Enterprise model uses frequent releases at scale in continuous short sprints, which renders traditional organizational change management ineffective. This required us to develop micro-change management as a new approach to drive adoption, convenience, change in behavior, and ongoing value realization.

The entire sprinting cycle to make a change at scale every six weeks is an amazing discipline. If the equilibrium of the company moves by an inch or even a millimeter every six weeks, the collective effect over a year moves the organization to a completely different place, because it creates a compounding and not linear effect.

Journey to Live Enterprise

The operating themes indicate where to focus and what do differently. The question then becomes, how do you get there? This section provides an overview on the journey to become a Live Enterprise—continuously evolving and learning (see Figure 1.3).

FIGURE 1.3   Journey to the Live Enterprise.
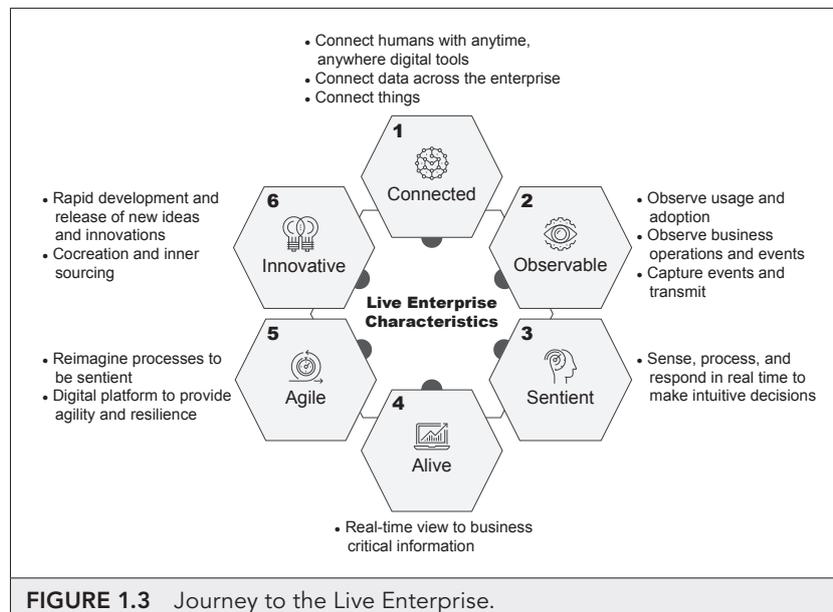
The first characteristic is **connected**, across three aspects: humans, data, and things. *Human* connectedness means organizations put digital tools in the hands of each of their human users so that they can access information and services wherever they are, anytime, anywhere, using any mechanism they want, and perform these actions by themselves. For example, Infosys converted dozens of separate systems to power the employee life cycle through three key mobile-first interfaces: LaunchPad to onboard new employees, and once they become an employee, they use InfyMe for personal productivity and Lex for learning. The second aspect of connected is *data*. Across the hundreds of client organizations we reviewed, we found that unlocking value from data is a significant challenge, especially factoring the need to develop data into insights and then convert insights into actions. To overcome these challenges, tools like knowledge graphs link all this data together in useful form. The third part of connectedness is *things*. As more and more things (hardware) become driven by software, it has become easier to connect, operate, and monitor through APIs. This is showing up everywhere: corporate campus entry doors, employee ID cards, and building controls, as examples. API-driven means easier integration, and they can be instantiated at the click of a button, enabling any physical device.

The next characteristic is **observable**. Once an organization has connected humans, connected data, and connected things, each of these emits telemetry data, signals streaming from each of these connections. This is similar to the human central nervous system, where we have five senses that capture external signals as input and send to the brain. In this case, humans, data, and things capture these signals, and observability enables it to be sensed and processed. There are three aspects to this observability. The first part is simply analyzing the data itself, to understand what's going on across the connected ecosystem and where to improve. The second is how well the most important features delivered through these connected tools are being used, what is working, and what is not working that requires reimagining. The third part of observability is the capability to capture data across all architectural layers in a coherent manner to enable sense, process, and respond through the relationships between data.

Once organizations start observing, then they can also sense, process, and respond—become **sentient**. If all these signals are in place, they can be acted upon. Decision making is typically deterministic, based on predefined rules. While good for individual decisions, these quickly run into problems at complexity and scale. Slowly, companies are moving to make more decisions through predictive models and using machine learning, deep learning, differential programming, and other probabilistic methods. An individual or organization becomes autonomous as more decisions are made in this way.

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Once the organization develops the ability to make decisions in an automated manner and has real-time visibility to everything, it becomes **alive**.

To bring sentience to everything within a Live Enterprise, **agility** is required in the business processes, operating model, and underlying infrastructure. Existing processes and experience are reimagined to create sentient routines, then designed and implemented by distributed agile teams, and rolled out through micro-releases and change management. Modern agile redefines value delivery in an AI-first way, beyond development operations and security. This also requires a digital runway that provides shared digital infrastructure, with the ability to provision hardware and software at the click of a button or through APIs.

This is the point at which it is possible to quickly unbundle and rebundle at enterprise scale to drive **innovation** and increase the velocity of ideas and solutions. This innovation also includes distributing intellectual property quickly to capture new market opportunities. This capability is also enabled by the digital runway that is essential to link competencies with execution at the edge.

Guide to the Rest of the Book

The next eight chapters explore each of the eight Live Enterprise model themes. The chapters also cover how to apply them. We share a rich mix of examples from companies that get it right, as well as cautionary tales. We highlight experiences from our own transformation at Infosys and weave in findings from our primary research conducted over the last few years.

In the following chapter we cover how organizations can be structured to reflect multistate quantum principles and how automation accelerates change, even for large enterprises. Next, we explore how experience can become more perceptive. Then we look at value chains, how to reimagine processes and make them more responsive. We then cover how decision making becomes more intuitive and evolves knowledge management to sentience.

Chapter 6 explains how talent is now a hybrid combination of humans, machines, and the gig economy, and the critical role of learning. Then the next chapter, "Design to Evolve," addresses the design, architecture, and deployment of the Live Enterprise operating themes. The following chapter establishes the digital runway needed to enable the organization to do so many things, so quickly, at scale. The best ideas are not valuable unless they see the light of day, and the subsequent chapter on micro-change management addresses how small changes can drive big results.

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Chapter 10 brings all these ideas together in the context of stakeholder capitalism and the complex set of constituents that businesses must now serve. In addition to generating returns for shareholders, leaders must also operate with heightened focus on environment, society, and governance. This includes employees, activist consumers, and responsibilities on broad societal topics like diversity and inclusion. We show how just as in nature, the Live Enterprise model provides guidance to a more sustainable, learning, and evolving organization.

The epilogue brings the book full circle, recapping the Live Enterprise model, macro lessons from the Infosys journey, and an aspirational message for the future.

While flashy success is highlighted where relevant, the emphasis of this book is on the practical reality of building long-term success in a short-term, whipsawed world. As the lessons of COVID-19 have taught us, resilience comes not from marginal improvements when times are good, but from flexible foundational capabilities that hold true even in highly adverse conditions.

The focus for leaders is still employees, customers, and the value propositions they represent. But if Live Enterprise appears to be a tech-heavy construct, that's because it is. The famous words of Marc Andreesen ring true: Software is indeed eating the world, and this model makes full use of the tech phenomenon while keeping customers, employees, and societal interests top of mind.

RECAP: The Live Enterprise Model

- The Live Enterprise is a journey, not an event. The model enables the organization to rapidly experiment, learn, and scale—the strategy of "micro is the new mega" being critical to demonstrating early and continuous wins to build momentum and turn naysayers into believers.
- The digital runway is shared infrastructure upon which platforms and solutions can be developed to increase the velocity of new ideas and innovations. Sentience is at the core of this, providing the ability to sense, process, and respond.
- While the vision and plans can be big, the journey must be broken into manageable, smaller chunks that can then be executed in short sprints for quick, iterative improvements. This creates an operating environment where new platforms and initiatives can be launched at rapid scale.
- Resilience is effective response to disruptions, without stepping off the treadmill of delivering core business expectations. In the new normal, this requires an anytime, anywhere operating model, where users are empowered and enabled with digital tools and self-service capabilities, consumed synchronously or asynchronously.

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