

# LEAN DIGITAL THINKING



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Prepare for the Fourth Industrial Revolution  
and Digital Economy

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# LEAN DIGITAL THINKING

*Digitalizing Businesses in a New World Order*

V. SRINIVASA RAO

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To my beloved maternal grandfather Shri Punnaiah Kosaraju, my maternal grandmother Smt. Ananthamma Kosaraju and my courageous father, Shri Venkata Subba Rao Vegendla, who was a social reformer. They were real family leaders, and their support throughout my life was priceless and commendable.



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# Preface

Today, digitalization has become an important initiative for nearly every organization. Most of the traditional organizations have been facing a few challenges because they are not digital natives:

1. They fail to understand the needs and wants of digital age customers.
2. They do not change their vision to align with the digital era.
3. They are not able to foresee the unknown competition emerging from different corners.
4. They force-fit existing business models and organizational structure to drive digital businesses.

There is a need for acquiring a new mindset and new thinking to bring changes in each building block of business, without which traditional organizations (also called digital immigrants) will not be ready for a digital future.

## **Why Do I Want to Write This Book?**

We have been living in a hyperconnected world due to technology innovations like IPv6, internet, short-range and long-range networks, social, mobile, cloud and analytics technologies, distributed ledger technologies, mixed reality (MR), artificial intelligence (AI), machine learning (ML) and internet of things (IoT). **In a hyperconnected world, people to people, people to things, things to things connections are established in real time. They work together to make organizations nearly**

**autonomous, in which human interventions are optimized or nullified.**

Digital natives like Google, Amazon, Apple and Samsung have been leveraging the power of fusion of technologies (cyber system) and replacing digital immigrants (banking, automotive, manufacturing, music, watch, hospitality, travel industries and others). This means digital natives (technology firms) have been challenging conventional organizations, which have been there for many decades. The only choice left to traditional organizations is to become digital so that they will be successful in the era of the Fourth Industrial Revolution.

Digital immigrants have been facing severe challenges in their journey of digitalization. Digitalization is certainly not limited to implementing the latest technologies; it means a complete transformation of business DNA by leveraging these technologies. In the digital era, conventional business excellence frameworks do not work; hence, in this book, I am introducing a digital business excellence framework called **lean digital thinking** which would help digital immigrant organizations.

### **The Vision of My Book**

**My book is to become a companion, guide and advisor to**

1. business executives,
2. government officers,
3. technology executives and
4. professors and students of academic institutions.

This will enable them to achieve objectives in their digital journey at an accelerated pace.

## Objectives of My Book

1. Build a digital mindset with **lean digital thinking** to identify digital business innovations.
2. Establish a common understanding of what is digitalization and digital business.
3. Establish a common digital language and a shared digital purpose.
4. Bring clarity on how digital technologies impact the entire business.
5. Answer the most challenging questions:
  - a. Why digitalize?
  - b. What to digitalize?
  - c. How to digitalize?
6. Find the lean digital quotient (LDQ) to find digital strengths and weaknesses of organizations.
7. Provide a five-phase digitalization roadmap that ensures a better return on investment (ROI).
8. Introduce new business models, products, services, processes, digital workplaces and operating models driven by digital technologies.
9. Provide insights on how to leverage digitalization to address COVID-19 challenges.

## Why Do You Need to Read This Book?

In the digital immigrant organizations, existing business models, strategies, products, services, processes and culture have been failing to meet the needs of the digital economy and the Fourth Industrial Revolution. Hence, such organizations' existence itself is being challenged. Many organizations which were leaders in the past (Nokia, Kodak, Borders and others) do not exist today as they failed to embrace the changes happening in the market.

The fusion of various technologies like operational technology, communication and collaboration technology and information technology has created a powerful cyber system. The modern cyber system brings supercomputing power, super storage and algorithmic virtual brains that help organizations to become nearly autonomous. Hence, it significantly optimizes human interventions in business operations.

The modern cyber system becomes a driving force which helps build digital businesses. Unfortunately, except for a few, most of the traditional organizations have been struggling to prepare for the digital future by leveraging the cyber system. You need to read this book to understand how, by embracing the cyber system using **lean digital thinking**, organizations can

1. create new revenue streams,
2. delight digital age customers,
3. optimize human interventions to improve operational excellence,
4. develop agility within the organization to respond to the market at speed,
5. leapfrog known and unknown competition and
6. improve overall business performance.

Most organizations have been building digital businesses which are fat and expensive to develop and manage. By reading this book, you will understand the difference between a digital enterprise and a lean digital enterprise. The future is in **Lean Digital Enterprises** as digital enterprises will end up being white elephants.

## **Why Is the Content in This Book Invaluable?**

There are a few great books on digital transformation or digital businesses written by very renowned authors today. Most of



these books cover more about technologies and less on how technologies impact the whole DNA of businesses.

It does not mean that there are no good books on digital businesses. But in these books, there are a few unmet needs. Some authors have covered only digital strategy—including data, innovation, customer, competition and value proposition. However, they missed out the digitalization of other important digital business building blocks.

In a few other books, authors have also addressed how digital capabilities and leadership capabilities of an organization are to be nurtured. But they have missed the most critical aspect of acquiring a new thinking/mindset to build these capabilities. With traditional thinking, organizations fail to digitalize their businesses.

In this book, I have introduced a brand new way of thinking called **lean digital thinking** that includes 12 principles. **Lean digital thinking** prepares the human brain for the digital journey that yields better business results.

I have covered in detail how the 12 principles of **lean digital thinking** impact each of the 12 business building blocks of an organization, creating a 144-dimensional digitalization matrix; something that no author has touched upon till now.

The readers will benefit from the book, as mentioned below:

1. Business executives will be able to easily understand, without jargon, how various digital technologies impact businesses.
2. Technology executives will get an excellent knowledge on how they could become digital innovators or internal consultants, and design digital business models, strategies and products.
3. It is a practitioner's book and readers will find step-by-step guidance if they want to digitalize their businesses.
4. The topics are arranged in such a way that different readers can read their choice of topics rather than going through all the topics. But a few topics are a must-read for all readers.

- 5. There are a few incredibly unique topics, like acquiring a digital mindset that covers 12 **lean digital thinking** principles; digitalizing 12 business building blocks; COVID-19 as the new normal, which bring out new energy and new digital innovations.
- 6. This book has the potential to become a textbook for professors and students of academic institutions.

### How Is This Book Organized?

<p style="text-align: center;"><b>Chapter 1</b></p> <p>How new technologies and contactless lifestyle have been putting CEOs under a lot of pressure and dilemma</p>	<p style="text-align: center;"><b>Chapter 2</b></p> <p>The emergence of the modern cyber system due to various technologies, fusion describes the tectonic impact of the modern cyber system and the need for digitalization of organizations</p>	<p style="text-align: center;"><b>Chapter 3</b></p> <p>The troika of the modern cyber system—digital economy, the Fourth Industrial Revolution, hyperconnectivity—the new trigger point for digitalization of organizations</p>	<p style="text-align: center;"><b>Chapter 4</b></p> <p>Digitalization opportunities to meet the needs of digital age customers by leveraging the physical and digital worlds</p>
<p style="text-align: center;"><b>Chapter 5</b></p> <p>Acquire a new mindset with <b>lean digital thinking</b> that includes four <b>lean digital thinking</b> clusters and twelve principles</p>	<p style="text-align: center;"><b>Chapter 6</b></p> <p>Visualize the digital future by leveraging three <b>lean digital thinking</b> principles</p>	<p style="text-align: center;"><b>Chapter 7</b></p> <p>Achieve digital execution excellence by leveraging six <b>lean digital thinking</b> principles</p>	<p style="text-align: center;"><b>Chapter 8</b></p> <p>Embrace social responsibility by leveraging one <b>lean digital thinking</b> principle</p>

<p><b>Chapter 9</b></p> <p>Design unforgettable moments of experience by leveraging two <b>lean digital thinking</b> principles</p>	<p><b>Chapter 10</b></p> <p>Digitalize the business future—business vision, business model, business strategy and business outcomes</p>	<p><b>Chapter 11</b></p> <p>Digitalize technology foundation—technology strategy, technology governance and technology architecture</p>	<p><b>Chapter 12</b></p> <p>Digitalize offerings—products and services</p>
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<p><b>Chapter 13</b></p> <p>Digitalize business operations—workplace, processes and operating model</p>	<p><b>Chapter 14</b></p> <p>Digitalization roadmap covering five phases of the digital journey: a) Inspire, b) Assess, c) Innovate, d) Experiment and e) Institutionalize</p>	<p><b>Chapter 15</b></p> <p>Digital business solution; use case examples</p>	<p><b>Chapter 16</b></p> <p>COVID-19 pandemic and the new normal—business new normal, governance new normal, society new normal and lifestyle new normal</p>
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<p><b>Chapter 17</b></p> <p>Digital interventions in business, governance, society and lifestyle in the new normal emerged due to COVID-19</p>	<p><b>Chapter 18</b></p> <p>Employee health and safety during and after, and how digital interventions improve the health and safety of employees</p>		
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# Reading Recommendations

## *Target Market*

- Global Market
- All Industries

## *Target Audience*

Senior Business Executives	Senior Technology Executives	Business Executives	Technology Executives	Academia
<ul style="list-style-type: none"> <li>• Chief Executive Officer</li> <li>• Chief Strategy Officer</li> <li>• Chief Marketing Officer</li> <li>• Chief Sales Officer</li> <li>• Chief Operating Officer</li> <li>• Chief Finance Officer</li> <li>• Business Unit Heads</li> </ul>	<ul style="list-style-type: none"> <li>• Chief Information Officer</li> <li>• Chief Technology Officer</li> <li>• Chief Digital Officer</li> </ul>	<ul style="list-style-type: none"> <li>• Sales Manager</li> <li>• Marketing Manager</li> <li>• Supply Chain Manager</li> <li>• Finance Manager</li> <li>• HR Manager</li> <li>• Operations Manager</li> <li>• Others</li> </ul>	<ul style="list-style-type: none"> <li>• Technology Director</li> <li>• Technology Project Manager</li> <li>• Technology Architect</li> </ul>	<ul style="list-style-type: none"> <li>• Academicians</li> <li>• Business Students</li> <li>• Technology Students</li> </ul>

Source: Author

**Figure 1:** Target Readers for the Book

**I advise the readers to read all the chapters. Reading all the chapters will help you get a 360-degree view of digitalizing an organization. In case you have minimal time, I give the following recommendations for your reading.**

Reader Category	Recommended Chapters
All readers	<b>Read the first nine chapters (Chapter 1 to 9)</b> to understand why you must choose to digitalize and how to acquire a digital mindset. These nine chapters will help you get enough knowledge to kick-start your digital journey. You may read all the other chapters as per your requirement and priority.

<p>Readers who are interested in visualizing digital business future</p>	<p><b>Chapter 10</b> Digitalization Cluster 1: Digitalize Business Blueprint  <b>Chapter 11</b> Digitalization Cluster 2: Digitalize Technology Foundation  <b>Chapter 14</b> Digitalization Roadmap: Five-Phase Lean Digital Journey  <b>Chapter 16</b> COVID-19: The New Normal</p>
<p>Readers who are interested in establishing a digital technology foundation that supports digital businesses</p>	<p><b>Chapter 11</b> Digitalization Cluster 2: Digitalize Technology Foundation</p>
<p>Product managers and solution architects</p>	<p><b>Chapter 12</b> Digitalization Cluster 3: Digitalize Offerings  <b>Chapter 16</b> COVID-19: The New Normal</p>
<p>Business process managers, operations management executives, finance executives, HR managers, supply chain managers, sales, marketing executives and others</p>	<p><b>Chapter 12</b> Digitalization Cluster 3: Digitalize Offerings  <b>Chapter 13</b> Digitalization Cluster 4: Digitalize Business Operation  <b>Chapter 16</b> COVID-19: The New Normal  <b>Chapter 17</b> Digital Interventions in the New Normal That Emerged with COVID-19    <b>Chapter 18</b> COVID-19: Employee Safety and Health</p>

Executives who will own and drive internal digital programs and initiatives	<b>Chapter 10</b> Digitalization Cluster 1: Digitalize Business Blueprint <b>Chapter 11</b> Digitalization Cluster 2: Digitalize Technology Foundation <b>Chapter 14</b> Digitalization Roadmap: Five-Phase Lean Digital Journey
Academicians, business students (BBA/MBA)	<b>All Chapters:</b> A textbook for management institutions that will prepare the students for the Fourth Industrial Revolution. It will also empower the professors to design innovative digital business models, products, business processes and business operating models
Professors and technology/engineering students	<b>Chapters 1 to 9;</b> <b>Chapter 11</b> Digitalization Cluster 2: Digitalize Technology Foundation

**Table 1:** Reading Recommendations