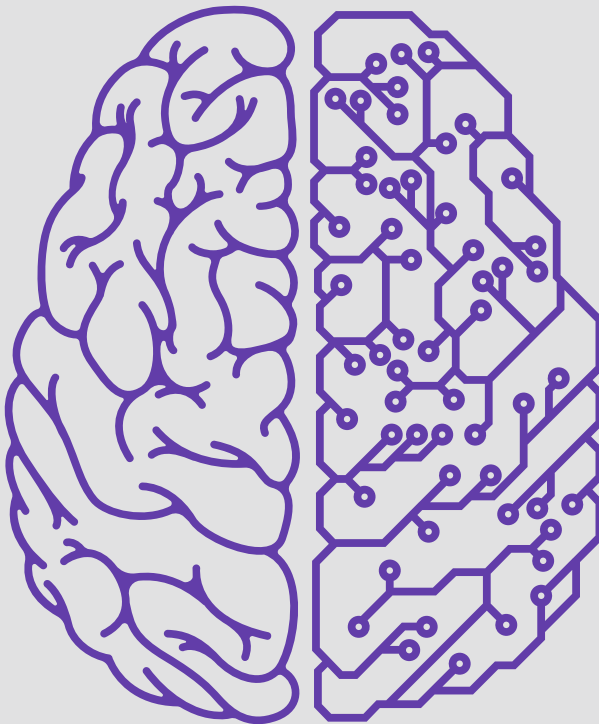


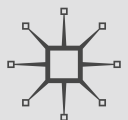
PALGRAVE
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TRANSFORMATIVE MARKETING

Combining New Age Technologies
and Human Insights



V. Kumar
Philip Kotler



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V. Kumar · Philip Kotler

Transformative Marketing

Combining New Age Technologies
and Human Insights

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Dedicated with Love

To my parents, Patta and Viswanathan, my uncle, Kannan

My wife, Aparna

*my daughters' family—Anita, Rohan, Ryan, Devin & Prita, Matt, Stephen and
Austin*

*my sister Shanti, brother-in-law Prasad, and their family,
my in-laws, Dr. Lalitha and Ramamurthy, and my spiritual guru, M.*

Karthikeyan

—V. Kumar

Dedicated with Love

*To my wife Nancy in celebration of our
69 wonderful years of marriage, love
and happiness.*

—Philip Kotler

Preface

The realm of new-age technologies is captivating and profound about their influence on the constantly evolving marketing landscape and human understanding. In continuing with the ongoing evolution of digital technologies, we stand at the intersection of innovation and interconnectedness, where state-of-the-art technologies are revolutionizing the methods through which businesses engage, comprehend, and establish connections with their customer bases.

Progress in technology has a significant impact on the way consumers establish connections with companies. With the rise of tech-savvy customers, there is a growing demand for quick and effortless digital experiences, along with an expectation for immediate solutions to their requirements. Consequently, businesses are adapting their practices by embracing technology at a faster pace, revamping their procedures, creating new organizational frameworks, and introducing innovative business models. By allocating more resources to technological advancements, companies can reap the advantages of reduced expenses, improved efficiency, and a better ability to meet the expectations of stakeholders.

Welcome to a new marketing era, one that is powered by technologies of the modern age—the likes of artificial intelligence, machine learning, drones, robotics, and many more. This book serves as a valuable guide to navigating this new world, where the marketing function takes on various roles in shaping, creating, executing, and influencing both human minds and technological advancements in the rapidly evolving marketplace.

The emergence of cutting-edge technologies like AI, metaverse, drones, and IoT has paved the way for a fresh wave of marketing opportunities. This signifies the commencement of a transformative journey that explores the complexities of these technologies, their role in driving innovation, how they reshape customer interaction, and how they enhance the effectiveness of marketing endeavors. From the tailored experiences enabled by machine learning algorithms to the captivating encounters made feasible by the metaverse, this book will guide readers through the technological terrain that is propelling marketing through interesting times.

Significantly, this book delves into more than just the visible technological progress that surrounds us. By delving into these advancements, this book uncovers the interconnectedness between technology and human emotions and understanding. In the age of extensive data, comprehending the intricacies of consumer behavior has become more complex and nuanced than ever before. Modern technologies not only enable the gathering of massive data sets but also empower marketers to extract valuable insights that can guide strategic choices and foster business expansion. In essence, this book commemorates the essence of the human spirit within the realm of technology.

Moreover, this book delves into the challenges that marketing departments face when dealing with new-age technologies. It emphasizes the need for knowledge on which technology to use, how to use it, and when and why it should be used. Additionally, it highlights the significance of the data generated from successful technology deployment, which provides valuable feedback to marketers. The book also addresses the handling of this abundant data and the insights it offers for developing solutions and designing growth strategies that align with both firm profitability and stakeholder well-being.

This book is aimed at the top-level and mid-level management, who have the power and resources to change the design, development, and implementation of marketing strategies in their organization. This book also serves as a guide for executives on the rise to understand how new-age technologies interface with conventional and emerging marketing practices in the marketplace. Further, graduate /undergraduate/honors students in Business and Marketing programs will also stand to gain from this book as it covers emerging topics in technology and marketing. Therefore, this book

can be adopted as a required/ supplemental/ recommended reading for courses including Customer Relationship Management (CRM), Customer Engagement, Technology Marketing, Technology Management, Social Media Marketing, Digital Marketing, Marketing Analytics, and Marketing Strategy.

St. Catharines, Canada
Evanston, USA

V. Kumar
Philip Kotler

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We thank Bharath Rajan, Namrata Manchiraju, and Ben deHooge for their assistance in the preparation of this book. Many thanks to our colleagues, who stimulated us and brought new ideas and approaches to our attention in writing this book.

We also thank our coauthors in each of the studies referenced in this book for their contributions. Additional thanks are also to the practitioner community who gave us many opportunities to put ideas into practice and thus broaden our understanding of new-age technologies as it is currently evolving.

We are grateful to the students who, through constant interaction, provided valuable input and feedback from the consumer's perspective.

We are thankful to Renu for copyediting the book content.

Dr. V. Kumar, who is also the Distinguished Scholar of Research, We School, India; Distinguished Fellow, MICA, India; and Chang Jiang Scholar, Huazhong University of Science and Technology, Wuhan, China, thanks the generous support from these institutions for his ongoing research.

Praise for *Transformative Marketing*

“This is an important book from two of the most influential thought leaders the marketing profession has produced. They welcome you, the reader, as follows: ‘*Welcome to a new marketing era.... powered by technologies of the modern age...artificial intelligence, machine learning, drones, robotics, and...more. This book [is a] guide to navigating this new world...*’. A world traveler who arrives in unfamiliar country needs a reliable guidebook. All marketing executives are now on a journey to an unfamiliar, rapidly changing, technological world. They need this guidebook. A must read.”

—Gary L. Lilien, *Distinguished Research Professor of Management Science, Penn State*

“I consider Prof. Kotler as my Marketing Guru. Partnering with Prof. Kumar, he has produced yet another groundbreaking book, which is a must-read for anyone looking to understand the dynamic interplay between cutting-edge technologies and modern marketing practices, deftly integrated with human insights. Whether you’re a top-level executive, a rising leader, or a student in the field of business and marketing, this book will equip you with the knowledge and strategies needed to thrive in today’s rapidly evolving marketplace.”

—Raja Rajamannar, *Chief Marketing Officer of Mastercard*

“Technology always transforms businesses by changing customer behavior, which, in turn, influences marketing strategies to attract new customers. V. Kumar and Philip Kotler’s outstanding book is an excellent guide for businesses looking to embrace the right technologies in the Marketing 5.0 era.”

—Hermawan Kartajaya, *Founder and Chairman of MCorp (MarkPlus), Indonesia*

“This book is a breakthrough because it identifies the enormous breakthrough technologies for marketing. The book is a must read for every marketer who wants to stay on the ball.”

—Hermann Simon, *Founder and honorary chairman of Simon-Kucher*

“Marketing leaders that mindfully apply the capabilities of New Age Technologies ahead of rivals give their firms a durable advantage. Kotler and Kumar give these leaders a valuable guide to the transformative potential of these technologies.”

—George Day, *Professor of Marketing, Wharton School, University of Pennsylvania*

“In their groundbreaking book, Kumar and Kotler provide a comprehensive and insightful guide to the future of technology-powered marketing. By expertly weaving together the latest advancements in technology with timeless marketing principles, they offer a roadmap for businesses to stay ahead in an increasingly competitive landscape. This book is a must-read for anyone looking to transform their marketing capabilities by leveraging the full potential of new age technologies.”

—Mohan Sawhney, *Associate Dean for Digital Innovation, Director, Center for Research in Technology & Innovation, Northwestern Kellogg School of Management*

“*Transformative Marketing* brilliantly navigates the evolving landscape of marketing, offering a comprehensive guide to harnessing new-age technologies for success. In this groundbreaking work, the authors navigate the dynamic landscape of modern marketing, skillfully dissecting the impact of new-age technologies like AI, GAI, metaverse, robots, ML, drones, IoT, and blockchain. This book is a must-read for marketers seeking to not only survive but thrive in the dynamic, technology-driven future of the industry.”

—Prof. Dr. Marc Oliver Opresnik, *Distinguished Professor of Marketing, Luebeck University of Applied Sciences, Germany*

“It is a New Age. Advances in technology have forced us to change the way we make marketing decisions. It brings exciting opportunity for what we produce, how we market our products and services, how we understand our customers, and how customers connect with us and others. Kumar and Kotler are at the forefront of the marketing impact brought to us by cutting edge technology. *Transformative Marketing* is a must read—the alternative is to be left behind.”

—David J. Reibstein, *William Stewart Woodside Professor of Marketing, Wharton, University of Pennsylvania*

“Professor Kotler’s legacy in marketing is unparalleled, and *Transformative Marketing* cements his position as a thought leader for the digital age. Don’t just adapt to change; embrace it with the transformative insights offered within these pages. Highly recommended!”

—Waldemar A. Pfoertsch, *Senior Marketing Professor, CIIM Business School, University of Limassol, Cyprus*

“If you want to know how far behind you are in marketing technologies – read this book!”

—Professor Hooi Den Huan, *Nanhang Technological University, Singapore*

“*Transformative Marketing* offers marketing managers a much needed roadmap of how to utilize eight new technologies to deliver superior customer experience and value while simultaneously increasing marketing efficiency.”

—V. “Seenu” Srinivasan, *Adams Distinguished Professor of Management, Emeritus, Stanford University*

“With technological advances profoundly changing the marketing world, there is a critical need for top marketers to develop new skills and thinking. Thankfully, *Transformative Marketing* delves into the eight most important new-age technologies to offer clarity and invaluable insight and inspiration to front-line marketers of all ranks.”

—Kevin Lane Keller, *E.B. Osborn Professor of Marketing, Tuck School of Business at Dartmouth College*

“Professors Kotler and Kumar are ideally placed to describe the “marketing of the future” and do so with remarkable clarity and prescience. A must read for marketing practitioners and students alike!”

—Dominique M. Hanssens, *Distinguished Research Professor of Marketing, UCLA Anderson School of Management*

Contents

1	Transformative Marketing Has Begun	1
	Introduction	1
	A Brief Overview of NATs	4
	Looking Beyond the Digital Frontier of NATs	11
	Organization of the Book	13
	Notes and References	15
2	Transformative Marketing: A Marketing 5.0 Perspective	19
	Introduction	19
	Meaningful Connections Using Human Insights	20
	Convergence of NATs and Marketing	22
	Understanding Resources, Capabilities, and Strategies of NATs	23
	Notes and References	26
3	Transformative Marketing with Artificial Intelligence	29
	Overview	29
	Origin, Definition, and Components of AI	32
	The Rise of the Transformative Home	34
	Personalized Education	35
	The World of Wearables	36
	AI in the Marketing 5.0 World	38
	Data-Driven Marketing Using AI	39
	Predictive Marketing Using AI	39
	Contextual Marketing Using AI	40

Augmented Marketing Using AI	41
Agile Marketing Using AI	42
Current AI Applications in Marketing	43
Understanding Customer Needs to Deploy AI	44
Revisiting Firm's Capabilities to Integrate AI	45
Designing Marketing Mix Strategies with AI	46
Driving Customer Engagement Through AI	47
Designing Digital Strategies with AI	48
Future of AI in Marketing	49
AI in Social Media	51
Marketing Tools for AI	52
Seamless Integration of AI with Marketing—The New Marketing Culture	52
Notes and References	55
4 Transformative Marketing with Generative Artificial Intelligence	65
Overview	65
Origin, Definition, and Classification of Generative AI	67
Origin	67
Definition	68
Classification	69
Some Commercial Applications of GAI	71
Generative AI in the Marketing 5.0 World	75
Data-Driven Marketing Using GAI	75
Predictive Marketing Using GAI	76
Contextual Marketing Using GAI	77
Augmented Marketing Using GAI	78
Agile Marketing Using GAI	79
Current Generative AI Applications in Marketing	79
Understanding Customer Needs to Deploy GAI	81
Revisiting Firm Capabilities to Integrate GAI	82
Designing Marketing Mix Strategies with GAI	83
Driving Customer Engagement Through GAI	87
Designing Digital Strategies with GAI	88
Future of Generative AI in Marketing	89
Ultra-Personalized Experiences	90
Personalized Marketing at Scale	90
New Forms of Creative Content	91

Ethical Considerations for Developing Marketing Campaigns	92
Notes and References	94
5 Transformative Marketing with Machine Learning (ML)	103
Overview	103
Origin, Definition, and Components of ML	104
Analytics-Oriented Technology	108
Link to Artificial Intelligence	110
Machine Learning Models	112
Machine Learning in the Marketing 5.0 World	114
Data-Driven Marketing Using ML	114
Predictive marketing using ML	115
Contextual Marketing Using ML	116
Augmented Marketing Using ML	117
Agile Marketing Using ML	117
Current ML Applications in Marketing	118
Understanding Customer Needs to Deploy ML	119
Revisiting Firm Capabilities to Integrate ML	120
Designing Marketing Mix Strategies with ML	121
Driving customer engagement through ML	124
Designing Digital Strategies with ML	125
Future of ML in Marketing	126
ML and Customer Churn Analytics	127
Improvement to demand forecasting	128
Strategy Development for Customers and Products	130
Notes and References	133
6 Transformative Marketing with Metaverse	141
Overview	141
Origin, Definition, and Classifications of the Metaverse	142
Origin	142
Definition	144
Classification	145
Metaverse in the Marketing 5.0 World	145
Data-Driven Marketing Using the Metaverse	148
Predictive Marketing Using the Metaverse	149
Contextual Marketing Using the Metaverse	150
Augmented Marketing Using the Metaverse	151
Agile Marketing Using the Metaverse	151
Current Metaverse Applications in Marketing	152

Understanding Customer Needs to Deploy in the Metaverse	153
Revisiting Firm Capabilities to Integrate in the Metaverse	154
Designing Marketing Mix Strategies in the Metaverse	155
Driving Customer Engagement Through the Metaverse	158
Designing Digital Strategies Within the Metaverse	159
Future of Metaverse in Marketing	160
Technical Considerations	161
Social/Ethical Considerations	162
Economic Considerations	163
Notes and References	164
7 Transformative Marketing with the Internet of Things (IoT)	171
Overview	171
Origin, Definition, and Classifications of IoT	172
Individuals	173
Organization	174
Industry	174
National	175
IoT in the Marketing 5.0 World	181
Data-Driven Marketing Using IoT	181
Predictive Marketing Using IoT	182
Contextual Marketing Using IoT	183
Augmented Marketing Using IoT	184
Agile Marketing Using IoT	185
Current IoT Applications in Marketing	186
Understanding Customer Needs to Deploy IoT	186
Revisiting Firm Capabilities to Integrate IoT	187
Designing Marketing Mix Strategies with IoT	188
Driving Customer Engagement Through IoT	190
Designing Digital Strategies with IoT	191
Future of IoT in Marketing	192
IoT and Transportation	193
Smart Cities	194
Real-Time Buying Process and Purchasing	196
Notes and References	199
8 Transformative Marketing with Robotics	211
Overview	211
Origin, Definition, and Classifications of Robotics	212
Origin	212
Definition	213

Classification of Robots	214
Industrial and Business Applications	216
Domestic-Oriented Technology	219
Humanoid Robots	221
Robotics in the Marketing 5.0 World	222
Data-Driven Marketing Using Robotics	223
Predictive Marketing Using Robotics	224
Contextual Marketing Using Robotics	224
Augmented Marketing Using Robotics	225
Agile Marketing Using Robotics	226
Current Robotics Applications in Marketing	227
Understanding Customer Needs to Deploy Robotics	227
Revisiting Firm Capabilities to Integrate Robotics	228
Designing Marketing Mix Strategies with Robotics	229
Driving Customer Engagement Through Robotics	232
Designing Digital Strategies with Robotics	233
Future of Robotics in Marketing	234
Robotics and the Interactive Service Industry	235
Interactive Marketing	236
Creative Content Curation	238
Notes and References	241
9 Transformative Marketing Using Drones	255
Overview	255
Origin, Definition, and Classification of Drones	256
Origin	256
Definition	257
Classification of Drones	257
Military-Oriented Technology	262
Consumer Applications	263
Business Applications	265
Disaster Response	268
Drones in the Marketing 5.0 World	269
Data-Driven Marketing Using Drones	269
Predictive Marketing Using Drones	270
Contextual Marketing Using Drones	271
Augmented Marketing Using Drones	272
Agile Marketing Using Drones	273
Current Drone Applications in Marketing	274
Understanding Customer Needs to Deploy Drones	275
Revisiting Firm Capabilities to Integrate Drones	276

Designing Marketing Mix Strategies With Drones	277
Driving Customer Engagement Through Drones	278
Designing Digital Strategies With Drones	280
Future of Drones in Marketing	281
The “Good,” “Bad,” and “Ugly” of Drones	282
Enhanced Customer Experience	283
Customer Contact Solutions	284
Notes and References	287
10 Transformative Marketing Using Blockchain	299
Overview	299
Origin, Definition, and Classification of Blockchain	300
Origin	300
Definition	302
Classification of Blockchain	304
Security-Oriented Technology	306
Link to AI and ML	308
AI/ML Improving Blockchain’s Effectiveness	309
Blockchain in the Marketing 5.0 World	310
Data-Driven Marketing Using Blockchain	310
Predictive Marketing Using Blockchain	311
Contextual Marketing Using Blockchain	312
Augmented Marketing Using Blockchain	314
Agile Marketing Using Blockchain	314
Current Blockchain Applications in Marketing	316
Understanding Customer Needs to Deploy Blockchain	316
Revisiting Firm Capabilities to Integrate Blockchain	317
Designing Marketing Mix Strategies with Blockchain	318
Driving Customer Engagement Through Blockchain	321
Designing Digital Strategies with Blockchain	322
The Future of Blockchain in Marketing	324
Data and Transaction Security	325
Impact on Advertising Transparency	325
Online Marketing Campaign Management	327
Notes and References	331
11 Putting It All Together	345
New-Age Technologies for Better Marketing: A Strategic Framework	346
New-Age Technologies	346
Generation of Firm Capabilities	351

Strategic and Tactical Marketing Actions	353
Customer Experience	354
Stakeholder Engagement/Benefits	355
Value and Social Well-being in a New-Age Technology World	359
Notes and References	360
Index	365

List of Figures

Fig. 2.1	The Marketing 5.0 concept	21
Fig. 3.1	Role of AI in personalized engagement marketing	50
Fig. 3.2	Popular and emerging applications of AI	51
Fig. 4.1	Amazon's customer review highlights feature developed by GAI	81
Fig. 5.1	Data mining process for marketing purposes	106
Fig. 11.1	NATs for transformative marketing: A strategic framework	347
Image 3.1	Smart locks for homes. A smart lock device used for home protection	34
Image 3.2	Wearable devices. A smartwatch is a wearable device that provides several features such as local weather, to-do lists, appointments, personal communications, personal health-related information, and much more	37
Image 5.1	Shopify. Shopify facilitates businesses through its machine-learning capabilities	109
Image 5.2	Ride-sharing Applications. Ride-sharing apps such as Uber and Lyft use a combination of AI and ML to provide the most relevant route results	111
Image 5.3	Video and Music Editing Software. Video and music editing software work in tandem with humans to create content that can be personalized and highly engaging	129

Image 5.4	Machine Learning-powered Warehousing Solutions. Machine learning solutions deployed at warehouses aid in demand fulfillment, warehouse automation, and route optimization for maximum efficiency	130
Image 5.5	Chatbots and intelligent agents. Chatbots and intelligent agents use ML capabilities to assist customers in making informed choices	131
Image 6.1	Fortnite. A person playing Fortnite on a mobile device	143
Image 6.2	Pokémon Go. A person playing Pokémon Go on a mobile device	143
Image 6.3	Product design using Metaverse. Product design and ergonomic features can be configured on the metaverse	155
Image 6.4	Metaverse in public spaces. Metaverse can be used in public spaces such as museums to blend physical and virtual worlds	158
Image 7.1	Wearable. Personal wearables such as the Apple Watch can perform and monitor a wide range of actions	177
Image 7.2	Smart Homes. Consumers can connect and control their devices via Google Home	178
Image 7.3	Smart Thermostats. Smart home energy management systems such as Nest can automatically regulate room temperature based on learning energy usage patterns over time	191
Image 7.4	IoT Warning Applications. IoT applications for smart cities such as this one, LOCUS, provide a direct connection between the citizens and the information system of the city in a visualized form	195
Image 7.5	Amazon Go store. An Amazon Go store that uses a combination of machine vision, IoT sensors, and a mobile app to facilitate contactless retail customer transactions	197
Image 8.1	Robots in manufacturing. Robots in an automobile manufacturing plant	217
Image 8.2	Service robots. Robots serving drinks at a bar	220
Image 8.3	Interactive robots. Robots can be used in interactive settings in social spaces	237
Image 8.4	Robots in airports. A robot assisting passengers at Incheon airport, South Korea	238
Image 8.5	Collaborative robots in manufacturing. Collaborative robots are used alongside humans in an industrial setting	239
Image 9.1	Fixed-wing drone	259
Image 9.2	Multicopter drone	259
Image 9.3	Drones used in Aerial Photography	264
Image 9.4	Drone Racing. First-person view drone racing	265

Image 9.5	Drones used in spraying farms	267
Image 9.6	Drones used in construction	268
Image 9.7	Drones used in apple-picking	274
Image 10.1	Bitcoin. Bitcoins are used widely as a reliable means of digital currency	301
Image 10.2	Tracking food origin using blockchain. Nestlé allows users to trace the coffee origins of their Zoégas coffee brand through blockchain-recorded data	315
Image 10.3	Blockchain for advertising effectiveness. Blockchain is used to improve efficiencies in ad buying and ad development	327
Image 10.4	Blockchain for managing influencer marketing. Blockchain can be used to manage influencer marketing programs efficiently	329

List of Tables

Table 1.1	Understanding new-age technologies for transformative marketing	5
Table 3.1	AI adoption worldwide 2022, by industry and function	30
Table 3.2	Selected companies in the AI ecosystem	31
Table 4.1	Representation of how GAI is used by industry worldwide	66
Table 4.2	Definition of Generative AI offered by various organizations	69
Table 4.3	Classification of GAI	70
Table 4.4	Types of GAI models	71
Table 4.5	A comparison of the popular GAI models—ChatGPT, DALL-E, & Bard	73
Table 4.6	Top 10 professions that show the most automation potential for GAI	80
Table 6.1	Types of metaverses	146
Table 8.1	Select definition of robotics	214
Table 8.2	Select conceptualization of robots	214
Table 8.3	Classification of robots	215
Table 8.4	Select conceptualization of social robots	221
Table 9.1	Similar terms relating to drones	258
Table 9.2	Changing nature of user demographics in the United States	281
Table 10.1	Select conceptualizations of Blockchain	302
Table 10.2	Classification of Blockchain	305



1

Transformative Marketing Has Begun

Introduction

Avant-garde. This is a term that can be used to describe the current state of business and marketing. In the vast canvas of human history, there have been pivotal moments that have redefined the way we live, work, and connect. Today, we find ourselves at the cusp of such a transformative era, where the convergence of new-age technologies is reshaping the world as we know it. The rapid and relentless march of innovation, fueled by advances in technology has ushered in a new chapter in the human story.

Essentially, everything we know, have, and see today is different from what it was a decade ago. There may have been signs of technology penetrating our daily lives in popular culture, but the rate at which it is taking place is both scary and exciting. As with many things, marketing has also adapted to these technological advancements. Originally, marketing was product-driven (1.0), which then evolved to be customer-oriented (2.0), and then human-centric (3.0). These phases have taken seven decades to come into place.

In this era of unprecedented change, traditional boundaries are dissolving, and established norms are being upended. The impact of these technologies reaches into every corner of our lives, from the way we communicate and access information to the way we address global challenges, including climate change and healthcare. Just as we currently reflect on past transformative periods, such as the Industrial Revolution or the rise of the Internet, future marketing experts will undoubtedly look back on this era as a pivotal moment in history. The impact of these technological advancements on marketing

strategies, consumer behavior, and the overall business landscape will be analyzed and studied for years to come.

In this regard, while many thought that Marketing 3.0 (human-centric marketing) would be the last of the evolution; a new set of values and principles of Generation Y and Z have ushered in marketing with new frameworks to serve customers in the hybrid customer journeys. Thus, emerged Marketing 4.0, which discusses the use of technologies, digital media, and channels. Undoubtedly, technology's role in marketing extends beyond that—thus paving the carpet for Marketing 5.0.¹ Companies are unleashing technologies into their strategies, tactics, and operations, while also leveraging them for the good of humanity. In this phase, the human-centricity of marketing and technological empowerment are integrated, with the core intention of using new-age technologies to emulate the capabilities of human marketers.

At the heart of this transformation lies the exponential growth of data, which has become the lifeblood of innovation and progress. Our digital footprints, from the websites we visit to the products we purchase, are now meticulously analyzed by algorithms to understand our behaviors and preferences. These insights are then leveraged to create personalized experiences, from curated content recommendations to tailored personal solutions. Further, the rise of social media platforms, search engines, and e-commerce has fundamentally changed the way businesses reach and interact with their target audience. Traditional marketing channels, such as print advertisements or television commercials, are being supplemented, and in some cases replaced, by digital advertising methods that offer greater precision, personalization, and measurability.

Furthermore, the way we interact with our environment is evolving. Smart cities are emerging, harnessing the power of the IoT to enhance urban living, from intelligent transportation systems that reduce traffic congestion to energy-efficient buildings that reduce our carbon footprint. Recognizing the impact of new-age technologies on human lives and the environment, many organizations now track the performance of cities in their efforts to use technology to improve human lives.²

Moreover, the proliferation of smartphones and other mobile devices has further accelerated this shift towards digital marketing. Consumers now have constant access to the internet and are increasingly relying on their mobile devices to research products, compare prices, and make purchases. As a result, businesses must adapt their marketing strategies to effectively engage with consumers on these platforms, ensuring their brand message is accessible and compelling across various devices and channels.

In addition to digital marketing, emerging technologies such as artificial intelligence (AI), virtual reality (VR), and augmented reality (AR) are poised to have a profound impact on the marketing landscape. AI-powered chatbots and virtual assistants are already being used to enhance customer service and provide personalized recommendations. VR and AR technologies enable immersive brand experiences, allowing consumers to visualize products in their environment before purchasing.

Furthermore, the increasing emphasis on data-driven marketing is transforming the way businesses understand and target their audience. The vast amount of data generated by consumers' online activities, combined with advanced analytics tools, allows marketers to gain valuable insights into consumer preferences, behaviors, and purchasing patterns. This data-driven approach enables businesses to deliver highly targeted and personalized marketing campaigns, resulting in improved customer engagement and higher conversion rates.

Yet, as we stand on the edge of this brave new world, we must also grapple with profound questions about the ethical and societal implications of these advancements. Issues of data privacy, algorithmic bias, and the potential for job displacement loom large, calling for careful consideration and responsible regulation.

Here, new-age technologies (NATs) are expanding known marketing boundaries. It is the leveraging of these innovative, new-age technologies as we understand them when viewed through the lens of marketing that will both inform and redefine our approach to customers for many years to come.³ Particularly, NATs such as artificial intelligence (AI), generative AI, metaverse, robots, machine learning (ML), drones, Internet of Things (IoT), and blockchain are just the beginnings of an infrastructure whereby marketing is both experiential and instantaneous, a constant loop that marketers will be able to tap into to shift perceptions, provide goods and services and satisfy consumers.

Academic research has defined transformative marketing as, "...the confluence of a firm's marketing activities, concepts, metrics, strategies, and programs that are in response to marketplace changes and future trends to leapfrog customers with superior value offerings over competition in exchange for profits for the firm and benefits to all stakeholders."⁴ Considering the confluence of new-age technologies in the marketing function, we define transformative marketing in this context as, *the usage of new-age technologies and human insights to revolutionize how businesses and customers interact to create more personalized and immersive experiences to engage customers with superior value offerings over competition in exchange for profits for the firm and benefits to all stakeholders.*

How did we get here? What is the potential for new-age technologies in marketing? What strategies, capabilities, and resources can we explore to prepare? By examining the attributes of these eight key technologies, their larger impact on marketing management, and taking a closer look into countries currently making advancements, we can better understand how new marketing advancements in a digital world emerge.

A Brief Overview of NATs

As mentioned earlier, this book deals with eight rapidly emerging NATs. To better understand these technologies and what they offer to firms and users, a brief overview of these technologies is warranted. Table 1.1 presents a brief overview of these technologies.

As listed in Table 1.1, each of the eight NATs denotes specific contexts, serving tangible needs for firms and users through various marketing applications. A brief discussion of the NATs that can serve as a good starting point to illustrate their potential for marketing applications is presented here.

Artificial intelligence. AI operates in the domain of continuous learning and automation, acting as the intelligence that drives data-based analytics and enables automated decision-making. AI uses technologies like deep learning and natural language processing, to train machines to accomplish specific tasks by processing large amounts of data and recognizing patterns in the data. AI can analyze complex data to identify behavioral patterns and insights. This ability prepares a firm to implement AI solutions to learn from experience. As a result, AI can aid firms in making transformative decisions, with minimum error, and automatically trigger responses based on prior experiences.

Generative AI. Generative AI refers to a category of artificial intelligence (AI) algorithms that generate new outputs based on the data they have been trained on.¹³ This data can take many forms, including text, images, music, and even entire virtual worlds. The goal of generative AI is to create machines that can not only replicate human creativity but, in some instances, also surpass it, producing content that is both novel and high-quality. One of the key techniques used in generative AI is deep learning, a type of machine learning that involves training neural networks on large datasets. These networks can then be used to generate new content by sampling from the learned distribution. Other techniques used in generative AI include reinforcement learning, evolutionary algorithms, and Bayesian networks. Generative AI has the potential to transform the way businesses

Table 1.1 Understanding new-age technologies for transformative marketing

	AI	Generative AI	Machine Learning	Metaverse
Definition	<ul style="list-style-type: none"> A system's ability to interpret external data correctly to learn from such data, and to use those learnings to achieve specific goals and tasks through flexible adaptation.⁵ Philosophy Cognitive Science Computer Science 	<ul style="list-style-type: none"> A category of artificial intelligence (AI) algorithms that generate new outputs based on the data they have been trained on.⁶ Philosophy Cognitive Science Computer Science 	<ul style="list-style-type: none"> Computational methods using experience to improve performance or to make accurate predictions.⁷ 	<ul style="list-style-type: none"> A fully immersive, hyper spatiotemporal, and self-sustaining virtual shared space blending the ternary physical, human, and digital worlds.⁸
Fields of origin	<ul style="list-style-type: none"> Philosophy Cognitive Science Computer Science 	<ul style="list-style-type: none"> Philosophy Cognitive Science Computer Science 	<ul style="list-style-type: none"> Mathematics Computational Statistics Computer Science 	<ul style="list-style-type: none"> Computer Science Virtual Reality Augmented Reality Sensors
Popular marketing uses	<ul style="list-style-type: none"> Digital Marketing Content Marketing Interactive Marketing 	<ul style="list-style-type: none"> Email Marketing Digital Marketing Social Media Marketing Predictive Analytics 	<ul style="list-style-type: none"> Digital Marketing Content Marketing 	<ul style="list-style-type: none"> E-commerce Test marketing Content Marketing Digital Marketing Structured, semi-structured, or wholly unstructured
Types of data used	<ul style="list-style-type: none"> Text Audio Video 	<ul style="list-style-type: none"> Text Audio Video Images Code 	<ul style="list-style-type: none"> Numerical data Categorical data Time series data Text 	
Types of human/technology interaction	<ul style="list-style-type: none"> Direct/Visual Mobile Web-based 	<ul style="list-style-type: none"> Direct/Visual Mobile Web-based 	<ul style="list-style-type: none"> Mobile Web-based 	<ul style="list-style-type: none"> Mobile Web-based AR/VR headsets
Key end user benefits	<ul style="list-style-type: none"> Continuous learning Automation of non-routine tasks Decision support aid Personalization 	<ul style="list-style-type: none"> Personalized results Solution to complex inquiries Humanlike conversations 	<ul style="list-style-type: none"> Automation of learning Decision-making support 	<ul style="list-style-type: none"> Interactivity Easier to try out new offerings
Key user challenges	<ul style="list-style-type: none"> Requires a specialist level of understanding Importance of trust in results 	<ul style="list-style-type: none"> Inaccurate results Potential intellectual property violations 	<ul style="list-style-type: none"> Understanding potential benefits Managing user expectations of the results 	<ul style="list-style-type: none"> Privacy/ Data concerns Early stages of technological know-how Relatively higher cost of usage

(continued)

Table 1.1 (continued)

	AI	Generative AI	Machine Learning	Metaverse
Key firm benefits	<ul style="list-style-type: none"> • Customer strategy development • Omnichannel marketing • Marketing intelligence capabilities • Employee training • Compliance with government regulations • Identifying and using relevant knowledge to drive the development of AI solutions 	<ul style="list-style-type: none"> • Saving time and resources • Delivering superior customer experience • Enhancing user engagement • Create personalized offerings • Bias and accuracy issues • Ethical and legal uncertainties • Integration with existing infrastructure 	<ul style="list-style-type: none"> • Pattern recognition • Data management • Integration with traditional job roles • Security concerns, especially with sensitive data • Infrastructure for testing, implementing, and managing of large data • Financial and operational planning regarding talent management, data management, and solutions development • Managing firm expectations • User education efforts • Rapidly evolving • Early focus remains on improving customer service, with more promising areas of use in the future • Emphasis on efficient problem-solving 	<ul style="list-style-type: none"> • Virtual work environment and collaboration • Expanded learning spaces • E-commerce opportunities • Social media proficiency • Higher level of initial investment to set up the infrastructure • Limited clarity on the regulatory and compliance framework • Potential misuse of data
Key reasons for the breadth/depth of firm adoption	<ul style="list-style-type: none"> • Growing acceptance among users and marketers • Faster turnaround of data-driven decision-making • Elimination of human errors 	<ul style="list-style-type: none"> • Quick response time to customers • Real-time insights • Scalable personalized marketing • Access to high-quality data 	<ul style="list-style-type: none"> • Easy integration with other NATs • Ability to create digital twins • Enhance operational performance 	