THE DIGITAL MATRIX

New Rules for
Business Transformation
Through Technology

VENKAT VENKATRAMAN

"Venkat Venkatraman has created an essential new model for digital business strategy in the age of cognitive systems and artificial intelligence – at once simple, pragmatic and quietly groundbreaking. Although written for incumbents in traditional industries, The Digital Matrix will, I believe, prove invaluable for all leaders, whether of established institutions or born-on-the-cloud startups. It is nothing less than a roadmap for the next era of business transformation."

– GINNI ROMETTY
Chairman, President and CEO, IBM

"Digitization is a global trend and there are no safe sanctuaries in which to shelter outmoded business models': This timely book makes that unconditional caution chillingly real. Happily, it also reveals how, by harnessing the new technology and shaping your business strategy round it, you can not only survive but prosper."

– SIR MARTIN SORRELL
CEO, WPP

"Venkat's book is super helpful to all of us working to drive change in an increasingly digital world."

– MIKE WRIGHT
Global CIO, McKinsey & Company

"The Digital Matrix is not just another descriptive or speculative account about future technologies and their predicted impacts—it is the definitive guide to becoming a proactive player in the new digitally-meditated economy. This book will survive the passage of time."

– BEN M. BANSAOU
Professor, INSEAD, Fontainebleau

"No silver bullets, no killer apps. Instead, Venkatraman provides a brilliant exposition on the perfect storm of digital technologies that will severely test the leaders of every organization, and a framework for analysis and action to help us survive and thrive in the coming decade."

– BRINLEY N. PLATTS
Chairman, CIO Development

"The Digital Matrix captures the different challenges and opportunities of pursuing a disruptive digital strategy for a traditional business. All leaders must be aware of how digital can transform their organization if they want to thrive in this new era."

– TIM THERIAULT
Former Global CIO, Walgreens Boots Alliance, Former President of Corporate and Institutional Services, Northern Trust

"Venkat Venkatraman enthralls with a sense of urgency and offers a practical and composed approach to assess threats and devise winning and competitive strategies."

– DON BULMER
VP, Gartner, Former VP, Shell, SAP

"The Digital Matrix should be read as a clarion call to executives and board members. And for a new wave of leaders, this book should be a go-to guide."

– RICK CHAVEZ
Partner, Digital Practice, Oliver Wyman

"A refreshing read from a scholar who has been at the forefront of strategy and digital technology for over two decades."

– RANJAY GULATI
Professor, Harvard Business School, Author, Reorganize for Resilience

"This book is definitely the best I have read dealing with the digital challenges and how to address them."

– JO GUEGAN
Strategic IT Advisor, Former CTO and EVP of Canal + Group, Former SVP, Capgemini Consulting

RISE OF THE
DIGITAL GIANTS

THE FUTURE of every industry is digital, and that future is closer than you think. Have you prepared your organization for your digital future?

In January 2007, there was only one digital company in the Top 10 most valued companies in the world: Microsoft.

A decade later, in January 2017, five of the Top 10 are digital companies: Apple, Alphabet, Microsoft, Amazon and Facebook. How could these digital giants influence the future of your industry over the next decade?

Digitization is shaped by faster and cheaper computing, exponential connectivity and powerful connections to the cloud. Business infrastructure is no longer defined only by factories, dealers and supply chains. It also includes powerful computing, pervasive connectivity, and potent cloud connections.

What does this nexus mean for your business?

Digitization in the past decade was about "ads, apps and angry birds." Digitization in the next decade is about industries, companies and business models.

Have you analyzed digitization's impact on your revenue and profits?
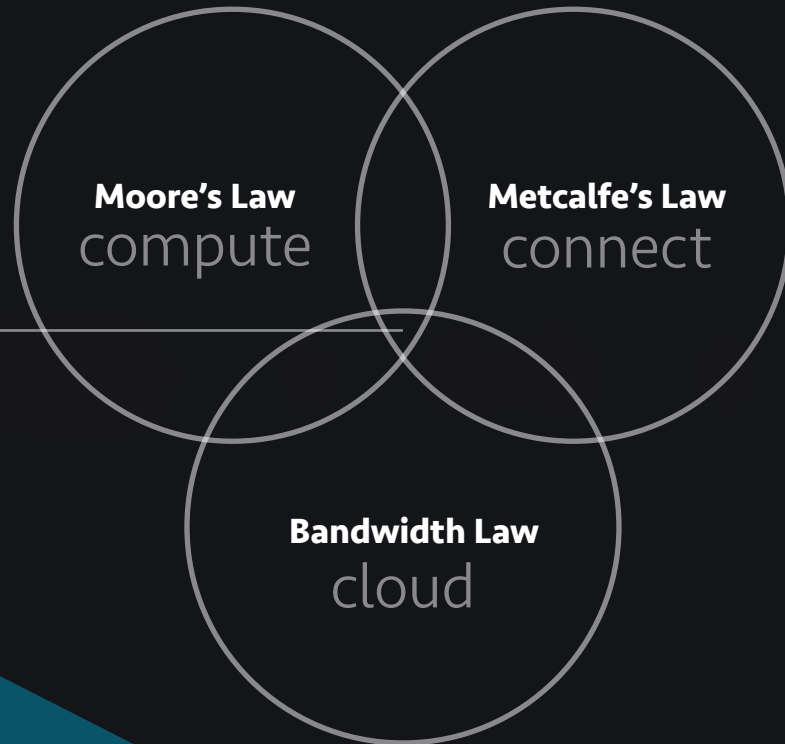
Today's modern automobile runs on 100 million lines of code with sensors, software and cloud connectivity as the new core competencies.

How prepared are you for your products and services to become connected to the cloud?
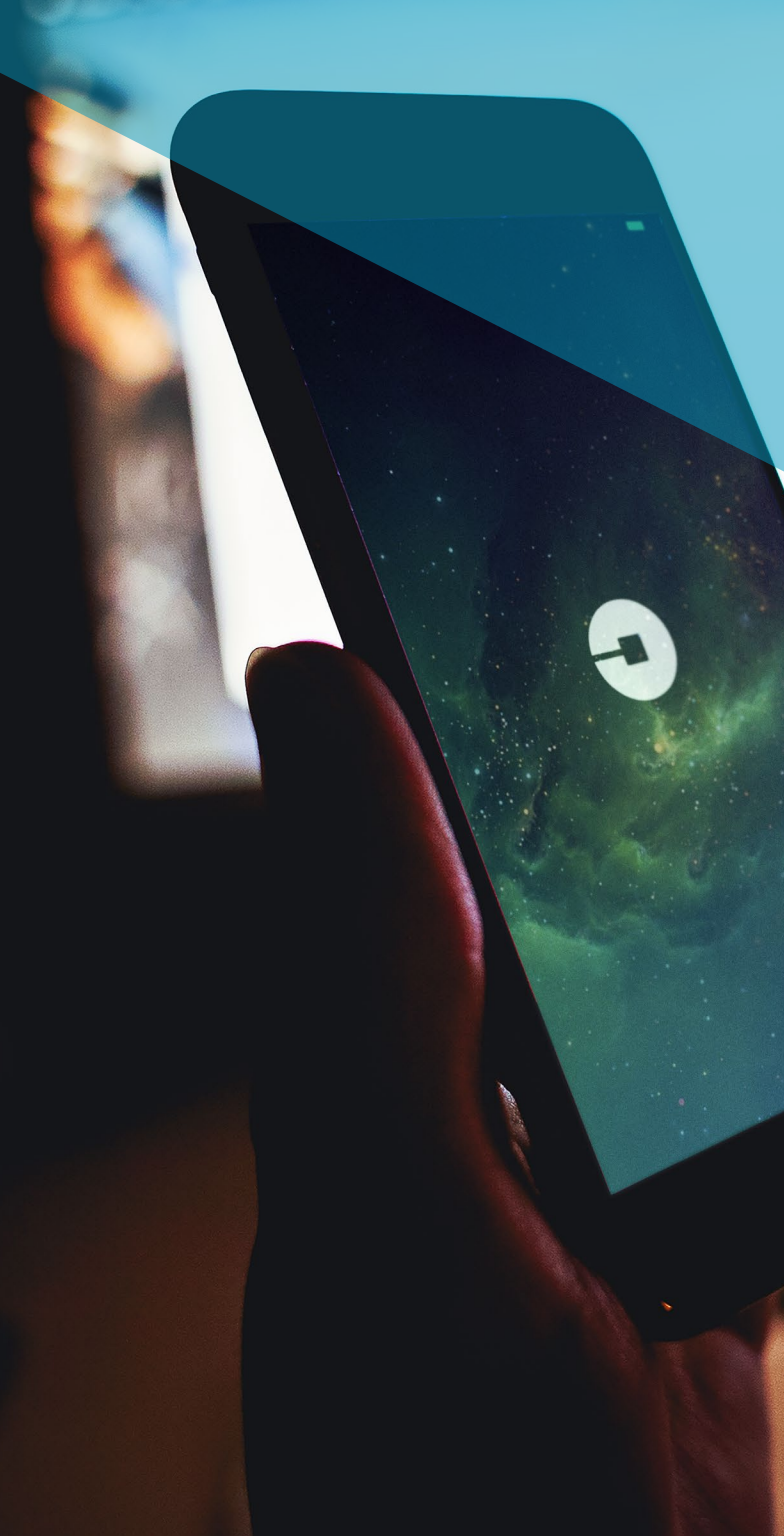
UBER In 2011, Uber was a taxi-hailing app. In 2017, it is competing and collaborating with traditional automakers to define the future of transportation.

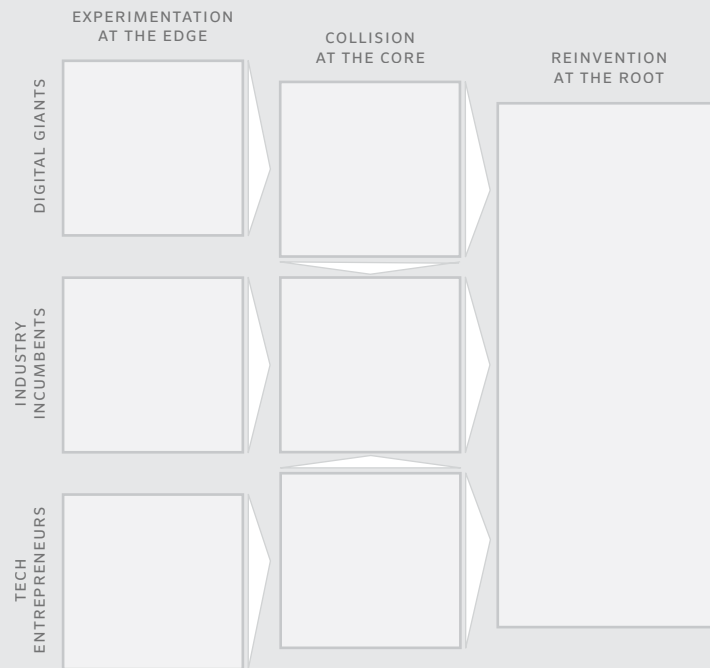**How could this idea play out in your industry?**

"Most cars don't improve over time. By contrast, Model S gets faster, smarter, and better as time passes. With Tesla's regular over-the-air software updates, Model S actually improves while you sleep. When you wake up, added functionality, enhanced performance, and improved user experience make you feel like you are driving a new car. We want to improve cars in ways most people didn't imagine [were] possible." (Elon Musk, CEO of Tesla).

What could this mean for delivering customer value?

Digital Future

Moore's Law
compute

Metcalfe's Law
connect

Bandwidth Law
cloud

3 PLAYERS & 3 PHASES

	EXPERIMENTATION AT THE EDGE	COLLISION AT THE CORE	REINVENTION AT THE ROOT
DIGITAL GIANTS			
INDUSTRY INCUMBENTS			
TECH ENTREPRENEURS			

In the future, you will face three forces of competition from: (1) your traditional competitors who have accelerated their digital transformation efforts; (2) entrepreneurs born the digital-era; and (3) digital giants who have expanded their scope to influence your industry's business models. How prepared are you to win against these three?

Your digital business transformation occurs along three phases—(1) experimentation at the edge, where digital experiments are far removed from the current realities; (2) collision at the core, when digital rules challenge traditional industry practices; and (3) reinvention at the root, where digital solutions are delivered in ecosystems across multiple industry boundaries. What will your role and relevance be when your industry has transitioned to the digital world?
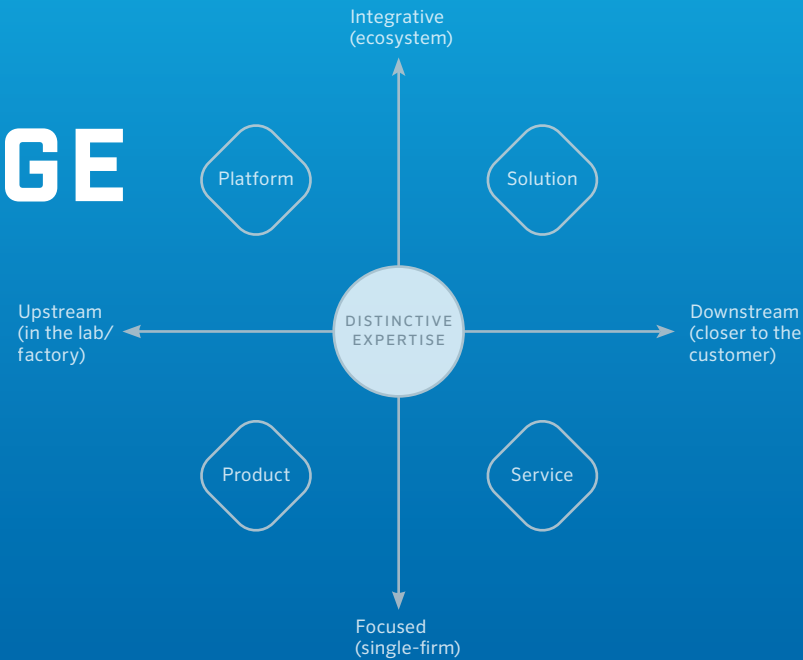
THE DIGITAL MATRIX

IMAGINE YOU HAVE entered a room to play a new business game. You are excited but also apprehensive because you haven't played this game before. You don't know the rules. You don't know all the opponents. You know neither their skills nor ambitions. You may recognize some of the players from a past game with different rules, including a few who have supported you in the past but whose current roles and motives you do not discern. You do not comprehend the total number of contestants. What you do understand is that this game is not purely competitive: you can partner with other individual players to form coalitions that can play against other coalitions of players. You also recognize that the game is played over time, and that new players enter at different times and form new relationships, and that some existing relationships get solidified and new relationships are formed. Some understand linear progression, whereas others are masters at exponential trajectories. The players develop new capabilities as they progress, and the payoffs get bigger and stronger, which means that the losses also get sharper and more severe. No one has been crowned as a grand master yet, and everyone believes that they have a fair chance of winning. Your company is in line to play this new business game in the digital future. You're ready, aren't you?

THE
DIGITAL-AGE

Successful industrial-age business models were combination of products and services. Digital-age introduces two additional models—platforms and solutions. How does your winning portfolio involve these four business models?

Diagram

Integrative (ecosystem)

Platform

Solution

Upstream (in the lab/factory) — DISTINCTIVE EXPERTISE — Downstream (closer to the customer)

Product

Service

Focused (single-firm)

"Any organizational structure you have today is irrelevant because no competition or innovation is going to respect those boundaries. Everything now is going to have to be much more compressed in terms of both cycle times and response times." (Satya Nadella, CEO of Microsoft.)

Is your digital business transformation impacted by internal organizational silos and historical separation of responsibilities for digital technology?

The old strategy question was: "What business are we in?" The digital strategy question is two-fold: "What problems are we trying to solve for whom in the world?" and "How are we uniquely solving them by taking advantage of digital technologies?"

Engage and energize your management team around this digital strategy question.

As a leader, do not look through the lens of your current definitions or products and services. Look instead at where your company could be positioned in the sets of relevant problems and solutions at the intersection of industries.

YOUR THREE WINNING MOVES

1 2 3

1 Digital business futures highlight ecosystems across traditional industries. Yet your businesses intersect multiple ecosystems: you orchestrate some ecosystems while you participate in others. Earn your right from partners to orchestrate those ecosystems in ways that drive new business value.

2 In digital business, you have to compete and cooperate at the same time—labeled as coopetition. You have to manage different patterns of relationships between incumbents and digital giants, between incumbents and tech entrepreneurs, and between digital giants and entrepreneurs. Develop dynamic means of co-creating with others within ecosystems.

3 Future organizational capabilities lie at the intersection of smart humans and powerful machines. Think about your future organization through this three-part question: (1) What tasks could be automated, requiring minimal human intervention? (2) What processes could be augmented with smart assistants? and (3) What jobs could be amplified with active interactions between humans and machines?

THE RULES MATRIX
3 MOVES & 3 PHASES

	EXPERIMENTATION AT THE EDGE	COLLISION AT THE CORE	REINVENTION AT THE ROOT
ORCHESTRATE & PARTICIPATE			
CO-CREATION OF CAPABILITIES			
AMPLIFY TALENT WITH POWERFUL MACHINES			

Who's in your company's digital leadership corps?

The dreamer's crazy ideas need the designer's discipline to translate them into different experiments. The doubter makes sure that the ideas are worthy of investment and commercially viable. The doer builds the organization and ecosystem necessary to implement the ideas at scale.

DREAMERS +
DESIGNERS +
DOUBTERS +
DOERS

DIGITAL LEADERSHIP CORPS

EMBARK ON YOUR DIGITAL TRANSFORMATION JOURNEY

1. Be passionately curious about the future and profoundly uncomfortable with the status quo

2. Design experiments to learn.

3. Master the adaptation cycle (Sense —> Learn —> Act).

4. Test your adaptation cycle against the best-of-the-breed.

5. Redefine your portfolio of experiments

Professor N. Venkat Venkatraman is the David J. McGrath Jr. Professor in Management at the Boston University Questrom School of Business and is that author of *The Digital Matrix: New Rules for Business Transformation Through Technology*, Published by LifeTree Media in 2017.

MY BELIEF
is that by 2025, there will be no difference between digital and non-digital when it comes to functions, processes, business models, and industries. The question then is: **will your company be relevant and influential in global economies and society of 2025?**

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