

LET GO, LEARN FAST, AND THRIVE IN THE  
FUTURE OF WORK



the  
**adaptation  
advantage**

HEATHER E. MCGOWAN  
CHRIS SHIPLEY

FOREWORD BY THOMAS L. FRIEDMAN

WILEY



## Praise for *The Adaptation Advantage*

Heather McGowan and Chris Shipley are prophets of the Fourth Industrial Revolution. Their extraordinary insights and tools challenge and empower organizations, leaders, and people across society to thrive in a future marked by exceptional technological and societal change.”

—**Major General James Johnson,**  
U.S. Air Force (ret), former Director of Air Force Integrated Resilience

*The Adaptation Advantage* brings sense to the sometimes confusing and scary world of change. McGowan and Shipley give us permission to be entrepreneurial by exploring the nature of opportunity and a natural pathway to engagement. Ambiguity is our friend in a world that understands change as a chance to improve lives. The authors beautifully weave macroeconomic phenomenon with a prod for introspection. Their book is a “self-help meets personal empowerment” treatise. Reading this book is a therapy session with motivational power. You’ll want to reread it again and again.

—**Stephen Spinelli Jr., PhD.,**  
President, Babson College, co-founder of Jiffy Lube

*The Adaptation Advantage* is fueled by the power of an elegant idea: our ability to learn and adapt is inseparable from our sense of identity. And as automation driven by machine intelligence remakes our world, the need to continually transform our identities becomes the very foundation of human growth—and how we thrive. McGowan and Shipley have wrapped a vivid and immensely readable narrative around this idea. My advice: read it!”

—**Randy Swearer, PhD.,**  
Vice President of Learning Futures, Autodesk

In *The Adaptation Advantage*, McGowan and Shipley deliver a powerful message for corporate leaders about success in the future of work. Learning and identity are not only intertwined but fundamental to any organization’s ability to adapt and create value. How exciting to read a book built on the core premise that learning unleashes our human potential while also driving competitive advantage.

—**Sean Gallagher, PhD.,**  
Executive Director, Centre for the New Workforce, Swinburne University

*The Adaptive Advantage* needs to be on every educator’s bookshelf, preferably dog-eared with highlighted pages, guiding their efforts to reorient the education system into continuous and future-focused learning. McGowan and Shipley’s advice is both simple and profound—our students’ competitive advantage is their exponential and expansive capacity as humans to adapt, advance, and add value, rather than to compete with artificial intelligence that mimics their genius.

—**Tonya Allen,**  
CEO, Skillman Foundation

*The Adaptive Advantage* lays out a clear, compelling case to stop defining ourselves by our jobs, to extend formal education into lifelong learning, and to let curiosity lead us through the arc of our working lives. That way we remain resilient no matter how forceful the waves of change become. Most books about the future of work put automation at the center of the story. McGowan and Shipley put humans at the center—as well they should. Many essential capabilities can't be replaced...creativity, collaboration, judgment, sensemaking, empathy, and other forms of social and emotional intelligence are uniquely human. And while technology will continue to evolve the way we work, we have immense agency to determine and design what we do and why we do it.

—**Sandy Speicher,**  
CEO, IDEO

*The Adaptation Advantage* tackles head-on the most critical challenge facing all of us in the near future: Where do we find purpose and prosperity in a world that increasingly feels beyond anyone's control? The extent to which we adapt to a radically shifted concept of "work" will inevitably be determined by our ability to rethink learning – away from a fixed-term preparation for employment, to a continuous way of living. Accordingly, this vital book offers a road map to the oldest question of all: How, then, should we live? Among a growing cadre of dystopians, it's refreshing to hear a much-needed optimistic analysis from McGowan and Shipley.

—**David Price, OBE,**  
Best-selling author of *Open: How We Will Work, Learn, and Live in the Future*

An insightful comprehension of the velocity and force of the multi-tiered and numerous elements of change offer leaders the insight and capability to creatively lead transformations. Resilient and adaptive learners will be the change-makers of the future. How thrilling to read the book that potentially allows us to embrace change as a propellant versus a weight.

—**Lynne Greene,**  
Former Group President, Estee Lauder Companies

McGowan and Shipley's *The Adaptation Advantage* nails it. Adaptive identity requires letting go – letting go of a job or skill set identity in order to thrive in a world of rapidly changing societal norms and technologies. This is required reading for all students of service science, such as myself.

—**Jim Spohrer, PhD.,**  
IBM Director, Cognitive Open Technologies

In a world of exponential change, we all need strategies to help us continually adapt. With *The Adaptation Advantage*, Shipley and McGowan have given us the user manual.

—**Gary A. Bolles,**  
Chair for the Future of Work, Singularity University

Heather McGowan and Chris Shipley have crystalized what the future of work looks like and it is good news for us humans, providing we embrace change, get comfortable with the unknown, and keep adapting and learning. That last bit bodes well for the business events industry, which is the ideal vehicle for professionals to develop and maintain an agile learning mindset, to retool and retrain, and to hone the uniquely human skills—like creativity, empathy, and communication—that will ensure our future success, individually in our careers and collectively as a species.

—**Sherrif Karamat,**  
President and CEO, Professional Convention Management Association (PCMA)

Twenty years of research have shown me the importance of bringing humans to the forefront of the future of work. By recognizing the centrality of human potential, *The Adaptation Advantage* illuminates the value of resilience, adaptability, and the qualities that make us uniquely human in the future of culture, work, and self.

—**Vivienne Ming, PhD.,**  
Theoretical neuroscientist, founder, Socos Labs

*The Adaptation Advantage* is the clearest, most compelling, and most original examination of the present and future workplace. Packed with powerful data-driven insights and provocative examples, this book is a masterclass in how individuals and organizations can and must develop the capacity to change fast and learn faster. McGowan and Shipley offer sage advice and wise counsel on every page, and it's imperative that you take their lessons to heart. But the big surprise in this book is that it's not about learning to live with more robots, but rather learning to become more human. Whether you were born digital or born analog, *The Adaptation Advantage* is your indispensable resource for thriving in a world that is transforming as you read this.

—**Jim Kouzes,**  
Coauthor of *The Leadership Challenge* and Executive Fellow at the Center  
for Innovation and Entrepreneurship, Leavey School of Business,  
Santa Clara University

This book is an essential guide for anyone who seeks to understand what it means to be human in the age of intelligent machines. The sources of advantage in the future of work have shifted to our uniquely human capabilities. Heather and Chris urge us to go on an inward journey to uncover who we are and consider how we manifest our passion, character and collaborative spirit as our most enduring and sustainable means of making positive progress as people, leaders, and institutions.

—**Dov Seidman,**  
Author of *HOW* and founder and chairman of LRN and The HOW Institute for Society

This book will change the way you see yourself within the future of work, give you very practical ideas for leading in that new but unknown world, and leave you genuinely inspired about what the future holds.

—**Peter Sheahan,**  
CEO, Karrikans Group

The paradigm of pursuing higher education is shifting. For example, American workers are now getting a job to go to college versus going to college to get a job. In this must-read, Heather and Chris effectively describe these and other trends that are playing out across corporate America today. In a world where rapid learning and adaptation are essential to prepare for the future of work, we need leaders across industries, disciplines, and functions to work together to become champions of human potential.

—**Rachel Carlson,**  
CEO and co-founder of Guild Education

In a world where we are drowning in information, and misinformation, clarity is power. Many jump on the fear bandwagon around the future of work, but Chris and Heather have done their homework, the thinking, and crafted a vision for how humans can adapt and thrive, with supreme clarity. They tackle this subject with original thinking and substance.

—**Annalie Killian,**  
Vice President Strategic Partnerships, sparks & honey

Speed is the only constant in today's world. That much is clear to all of us. We read tomes upon tomes deploring it or analyzing it, but most of it is opinion and editorial whereas Heather and Chris break it down into clear, actionable concepts and better yet, anchor them with science and examples so plentiful that this book will become your absolute go-to when you mean to school others in the potential perils and opportunities of VUCA.

—**Duena Blomstrom**  
Author, co-founder, and CEO, PeopleNotTech Ltd.

The digital revolution is overturning careers as well as companies. This book will be an essential guide to the future of work for both individuals and organizations.

—**Mark Bonchek,**  
Chief Epiphany Officer, Shift Thinking

*The Adaptation Advantage* paints a vivid and compelling picture of a future of work in which the most successful and fulfilled participants will be those who continually learn and relearn in order to adapt to accelerating social, economic, and technological change. As a result of these changes, our current system of higher education is being presented with exciting challenges and opportunities to evolve to support that increasingly dynamic societal and work force future.

—**Russell L. Moore, PhD.,**  
Provost and Executive Vice Chancellor for Academic Affairs,  
University of Colorado, Boulder

Microchips cannot and will not replace relationships. Your next job starts where the robots stop. Learn to embrace that handoff. The best way to do that, Heather and Chris argue, for both individuals and organizations, is through rapid learning, unlearning, and adaptation. Heather and Chris's book is an indispensable guide to how to navigate this new era in the workplace.

—**Thomas L. Friedman,**  
Foreign Affairs Columnist, *New York Times*

LET GO, LEARN FAST, AND THRIVE IN THE  
**FUTURE OF WORK**

**the**  
**adaptation**  
**advantage**

**HEATHER E. MCGOWAN AND**  
**CHRIS SHIPLEY**

**WILEY**

Cover image: Wiley

Cover design: © ambassador806/Getty Images

Copyright © 2020 by John Wiley & Sons, Inc. All rights reserved.

Published by John Wiley & Sons, Inc., Hoboken, New Jersey.

Published simultaneously in Canada.

No part of this publication may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning, or otherwise, except as permitted under Section 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, Inc., 222 Rosewood Drive, Danvers, MA 01923, (978) 750-8400, fax (978) 646-8600, or on the Web at [www.copyright.com](http://www.copyright.com). Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, (201) 748-6011, fax (201) 748-6008, or online at <http://www.wiley.com/go/permissions>.

**Trademarks:** Wiley and the Wiley logo are trademarks or registered trademarks of John Wiley & Sons, Inc. in the United States and other countries. All other trademarks are the property of their respective owners.

**Limit of Liability/Disclaimer of Warranty:** While the publisher and author have used their best efforts in preparing this book, they make no representations or warranties with respect to the accuracy or completeness of the contents of this book and specifically disclaim any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives or written sales materials. The advice and strategies contained herein may not be suitable for your situation. You should consult with a professional where appropriate. Neither the publisher nor author shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

For general information on our other products and services or for technical support, please contact our Customer Care Department within the United States at (800) 762-2974, outside the United States at (317) 572-3993 or fax (317) 572-4002.

Wiley publishes in a variety of print and electronic formats and by print-on-demand. Some material included with standard print versions of this book may not be included in e-books or in print-on-demand. If this book refers to media such as a CD or DVD that is not included in the version you purchased, you may download this material at <http://booksupport.wiley.com>. For more information about Wiley products, visit [www.wiley.com](http://www.wiley.com).

***Library of Congress Cataloging-in-Publication Data:***

Names: McGowan, Heather (Consultant), author. | Shipley, Chris, author.

Title: The adaptation advantage : let go, learn fast, and thrive in the future of work / Heather McGowan and Chris Shipley.

Description: Hoboken, New Jersey : John Wiley & Sons, [2020] | Includes bibliographical references and index.

Identifiers: LCCN 2020001497 (print) | LCCN 2020001498 (ebook) | ISBN 9781119653097 (paperback) | ISBN 9781119653059 (adobe pdf) | ISBN 9781119653172 (epub)

Subjects: LCSH: Labor supply—Effect of technological innovations on. | Work—Forecasting. | Manpower planning. | Organizational change.

Classification: LCC HD6331 .M34 2020 (print) | LCC HD6331 (ebook) | DDC 650.1—dc23

LC record available at <https://lcn.loc.gov/2020001497>

LC ebook record available at <https://lcn.loc.gov/2020001498>

Printed in the United States of America

10 9 8 7 6 5 4 3 2 1



*For my wife, Pat, from whom I learn every day; for my family, who supports my learning adventures; and especially for my brother Jonathan, who models persistent adaptation every day. —Heather*

*Nancy Latta has always understood that identity and joy come from work well done and so very much more. Shirley Shipley embarked on life-changing learning when most mothers of five would have opted for a well-deserved nap. My work on this book is for them. —Chris*



# CONTENTS

	<i>Foreword</i>	<i>xiv</i>
	<i>Introduction</i>	<i>xix</i>
	Breaking with Identity to Seize the Adaptation Advantage	xix
	So What's Changing?	xx
	How Did We Get Here?	xxi
	How Big Is the Challenge?	xxii
	The Adaptability Gap	xxv
	Amid Rapid Change, Keep Calm and Adapt On	xxvi
	So What's in This Book?	xviii
	Who Is This Book For?	xxix
	Notes	xxx
	<b>Part I: Adapting at the Speed of Change</b>	<b>1</b>
<b>1</b>	<i>The World Is Fast: Technology Is Changing Everything and Planting Opportunity Everywhere</i>	<b>3</b>
	Wait a Second	3
	Technological Climate Change	5
	Environmental Climate Change	8
	Climate Change of the Market	10
	The Force of Three Amplifying and Interlocking Climate Changes	12
	Notes	15
<b>2</b>	<i>The Only Things Moving Faster Than Technology Are Cultural and Social Norms</i>	<b>17</b>
	Shifting Ground Beneath Our Feet	17

	From Linear and Local to Exponential and Global	19
	Race	20
	Religion	22
	Age	23
	Family	25
	Gender Identity	25
	Truth and Trust	26
	Consent and Power Shifts	28
	Death of Distance Reshapes Human Relationships	30
	So, Who Are You? Occupational Identity and Expertise	30
	Notes	32
<b>3</b>	<b><i>You're Already Adapting and Not Even Noticing</i></b>	<b>35</b>
	We've Already Begun to Outsource Our Memory	35
	People Aren't Horses	37
	Atomization, Automation, and Augmentation	38
	Atomization in Action	39
	Automation in Action	39
	Augmentation in Action	41
	Putting Atomization, Automation, and Augmentation Together	41
	Notes	46
<b>4</b>	<b><i>Getting Comfortable with Adaptation: The Slowest Rate of Change Is Happening Now</i></b>	<b>47</b>
	The Power of Pause	47
	From Scalable Efficiency to Scalable Learning	48
	From Stocks to Flows of Knowledge	53
	From Learning to Work to Working to Learn Continuously	54
	Identifying Patterns to Build Bridges	56
	Notes	60
	<b>Part II: Letting Go and Learning Fast to Thrive</b>	<b>63</b>
<b>5</b>	<b><i>What Do You Do for a Living? The Question That Traps Us in the Past</i></b>	<b>65</b>
	The Questions That Limit Our Identity	65
	The Identity Trap	71
	How Identity Is Formed	71
	Narratives Can Trap Us in the Past and Limit Our Future	73

	Gender, Narratives, and Identity	73
	The Confidence Gap	74
	Identity Is Never Done	77
	An Occupational Identity Crisis Isn't Limited to Job Loss	78
	Notes	80
<b>6</b>	<b><i>Finding the Courage to Let Go of Occupational Identity</i></b>	<b>83</b>
	What Does the Parable of the Three Stonecutters Have to Do with You?	83
	The Day 1 Mindset: You Are a Prototype; Start with Why	85
	How Job Loss Can Be a Gain	89
	Modeling Vulnerability: We Share Our Hard Lessons	91
	What Do You Do Now?	95
	Notes	95
<b>7</b>	<b><i>Learning Fast: Why an Agile Learning Mindset Is Essential</i></b>	<b>97</b>
	Learn Fast—What Does That Even Mean?	97
	What Do We Mean by Learning? First-, Second-, and Third-Generation Learning Organizations	98
	The S-Curve of Learning: Explore, Experiment, Execute, Expand	99
	The Curse of Expertise: The Challenge of Unlearning	102
	The Iceberg: The Substance Beneath the Surface	102
	Identity: The Core of the Adaptive Mind	103
	The Agile Learning Mindset	104
	The Enablers: Uniquely Human Skills	108
	Why We Need the Agile Mindset: The Broken Education-to-Work Pipeline	111
	ABL: Always Be Learning	114
	Notes	114
<b>8</b>	<b><i>Rise of the Humans: Developing Your Creativity, Empathy, and Other Uniquely Human Capabilities</i></b>	<b>117</b>
	Play Is the Way Forward	117
	The Uniqueness of the Human Drive to Learn and Create	119
	The Predictive Markets Declare Future Skills Favor Humans	122
	Understanding Uniquely Human Skills	127
	Chasing STEM at Our Peril	128
	The Skills Battleground: Humans Need Apply	132
	The Return on Being Human	133
	Return on Humans for All Jobs: The Special Power of Empathy	134

	Evolving Beyond Shareholder Value: The Purpose of a Company	135
	To Maximize Human Potential, Place the Human in the Center	137
	Notes	139
	<b>Part III: Leading People and Organizations in the Evolution of Work</b>	<b>143</b>
<b>9</b>	<b><i>Leading in Continuous Change: Modeling Vulnerability, Learning from Failure, and Providing the Psychological Safety that Builds Trusting Teams</i></b>	<b>145</b>
	You Are at the Wheel	146
	Leadership, Power, Cookies, and Chickens	146
	What Makes a Modern Leader?	153
	Transformational Leadership	167
	Transformational Leadership and Change Management Models	168
	Leading with Fear: The Burning Platform	170
	Putting It All Together	173
	Notes	173
<b>10</b>	<b><i>The Adaptive Organization: Creating the Capacity to Change at the Speed of Technology, Market, and Social Evolution</i></b>	<b>175</b>
	What Should We Measure?	175
	The Power of the Culture and Capacity Focus	177
	Culture at the Core	177
	Capacity: Culture's Partner	184
	Capability and Context: The Scissors Metaphor	186
	In Accelerated Change, Focus on the Inputs Rather Than the Outputs	187
	Becoming a Learning Company	190
	Notes	193
<b>11</b>	<b><i>Capability Is King: Looking Beyond the Resume to Design Your Adaptive Team</i></b>	<b>195</b>
	No More Little Boxes	195
	The Job Description Is History	197
	Job Descriptions Become Traps	198
	Fire Your Job Description	200
	Hire for Cultural Alignment	205
	Hire Adults and Let Them Do Their Jobs	208
	Turn the Right People into Great Teams	209
	Embrace Cognitive Diversity	212

	Get Comfortable with Failure	214
	Live in a State of Continuous Learning	215
	Manage a Multigenerational Workforce	216
	How Do We Get from Here to There?	217
	The New Leadership Imperative	218
	Notes	219
<b>12</b>	<b><i>Getting Ready to Seize Your Adaptation Advantage</i></b>	<b>221</b>
	Note	223
	<b><i>Additional Resources</i></b>	<b>225</b>
	Books	225
	Videos	226
	<b><i>Acknowledgments</i></b>	<b>227</b>
	<b><i>About the Authors</i></b>	<b>229</b>
	<b><i>Index</i></b>	<b>231</b>

## FOREWORD: FROM FLAT TO FAST TO SMART TO DEEP

**T**here are a lot of snappy, shorthand ways I could summarize Heather and Chris's book, but my favorite is this phrase that they use to encapsulate the essence of what they are saying: the abiding cliché and dominant news headline in the workplace these days is that the robots are going to take your job. What you learn from this book, though, is that, yes, indeed, robots can take your job. But if we're smart, they can also guide you to and define your next job. Because whether it's robots or automation or digitization, two things are true and always will be: there will always be another technological advance that will devour existing jobs—and, yes, those advances will be coming faster and faster. But we will always need humans to translate and augment the latest technology and we will always need humans to make meaning, joy, and connections that entertain us, inspire us, and connect us the moment we put our technology down. Microchips cannot and will not replace relationships. Your next job starts where the robots stop. Learn to embrace that handoff.

The best way to do that, Heather and Chris argue, for both individuals and organizations, is through rapid learning, unlearning, and adaptation. These skills are the new normal. Rapid learning, by the way, is not just about how to augment machines as they spin off new jobs, but how to augment humans as they stay the same, always craving meaning, joy, and new forms of entertainment and connections in every new epoch.

Rapid unlearning and adaptation are both about how we embrace and absorb new skills and how we let go of old ones. To be able to do both effectively and



constantly, they argue, requires a mind shift and an identity shift—a letting go of “who we think we are” and a regular reinventing of yourself. I find this the most original aspect of their book—the important role that identity plays in how and how much we can learn and adapt at the steady pace demanded by this age of acceleration.

Heather and Chris argue that those who do it best will be those who allow themselves to be vulnerable, forcing themselves to be more open to the new and to the other. And that is not always easy under any conditions, but it is especially challenging when social norms are rapidly changing, or new immigrants are arriving with greater speed and numbers, and your identity—your sense of home, work, and norms—feels like it is under assault. That people today all over the world are reaching for walls to slow down the pace of change and protect their identities is not an accident.

I will let them tell you the rest ...

If there is anything I can contribute from my own research and writing, it’s the conviction that the technological forces that are requiring such rapid learning, unlearning, and adaptation—this new normal—are not going away. Indeed, they just keep getting faster and touching deeper into more areas of daily life, commerce, governance, and science. Why?

The short answer is that technology moves up in steps, and each step tends to be biased toward a certain set of capabilities. Around the year 2000, for instance, a group of technologies came together that were biased toward “connectivity.” Because of the dramatic fall in the price of fiber-optic cable, thanks to the dot-com boom, bubble, and bust, we were suddenly able to wire much of the world and, as a result, *connectivity became fast, virtually free, easy for you, and ubiquitous*. Suddenly I could touch people I could never touch before and I could be touched by people who could never touch me before. I gave that moment a name. I said it felt like “the world is flat.”

Around 2007, another set of technologies came together that had the effect of making the world “fast.” This was also driven by a price collapse—a collapse in the price of computers, storage, software broadband, and smartphones. This enabled us to do a huge number of complex tasks on the cloud with just one touch on a mobile device. We took friction and complexity out of so many things. Suddenly, with just one touch, on an Uber or Didi app, I could page a taxi, direct a taxi, pay a taxi, rate a taxi, and be rated by a taxi. With just one touch! *Complexity became fast, virtually free, easy for you, and invisible*.

Indeed, the year 2007 was a remarkable year. In 2007, Steve Jobs introduced the iPhone. Facebook opened its platform to anyone with a registered email address and went global in 2007. Twitter split off onto its own platform and went global in 2007. Airbnb was born in 2007. In 2007, VMware—the technology that enabled any operating system to work on any computer, which enabled cloud computing—went public, which is why the cloud really only took off in 2007. Hadoop software—which enabled a million computers to work together as if they were one, giving us “Big Data”—was launched in 2007. Amazon launched the Kindle e-book reader in 2007. IBM launched Watson, the world’s first cognitive computer, in 2007. The essay launching Bitcoin was written in 2006. Netflix streamed its first video in 2007. IBM introduced nonsilicon materials into its microchips to extend Moore’s Law in 2007. The Internet crossed one billion users in late 2006, which seems to have been a tipping point. The price of sequencing a human genome collapsed in 2007. Solar energy took off in 2007, as did a process for extracting natural gas from tight shale, called fracking. Github, the world’s largest repository of open source software, was launched in 2007. Lyft, the first ride-sharing site, delivered its first passenger in 2007. Michael Dell, the founder of Dell, retired in 2005. In 2007, he decided he’d better come back to work—because in 2007, the world started to get really fast. It was a real turning point.

Today, we have taken another step up to another platform: now the world is getting “smart.” And it is being driven by still another price collapse—the collapse in the price and size of sensors. Now we can put sensors—“intelligence”—into anything and everything. We can put intelligence into your refrigerator, your car, your lightbulb, your toaster, your front door, your golf club, or your shirt. And with that intelligence, we can make your car drive itself, your refrigerator stock itself, and your shirt talk to your doctor and then tell your grocer which healthy foods to deliver to your home. And we can do all of that now with “no touch.” It all just happens by sensors talking to machines and vice versa. The other day I got a text message on my cellphone that said I had an appointment in my office in 30 minutes, but I was still 35 minutes away by car. It made me smart—or at least aware—with not even a touch, because it was sensing from my smartphone and GPS where I was, how far I was from my next meeting, and who that meeting was with when.

So what’s the next platform? I believe that when the world gets this flat, fast, and smart, what happens next is that it starts to get deep. How so? Well, when your shirt has sensors in it that can measure your body functions and then tell your e-commerce

grocery store what foods are right for your particular body type and DNA and then order them for you at Walmart and have them delivered by an autonomous vehicle or drone to your refrigerator and restock them when the refrigerator announces that you are running low—that’s “deep.” And that’s where we’re going. Deep is the ability to hit that precise target you are looking for—no matter how small or hidden—in the precise context you are looking for it and then impact that target—heal it, fix it, track it, extract it, illuminate it, fake it, or destroy it—with an accuracy that a decade ago would have been dismissed as science fiction.

And that is why, in my opinion, *deep* is the word of the year. Have you noticed how many things we are now describing with the word deep?—deep mind, deep medicine, deep war, deep fake, deep surveillance, deep insights, deep climate, deep adaptation.

We discovered that we needed a new word, a new adjective, to describe the fact that “deep technologies” have two qualities that we could tell were a difference in degree that was a difference in kind. One is physical. Deep technologies literally get imbedded deep inside your neighborhood, your home, or your bedroom. Having Siri or Amazon Alexa in your bedroom is deep. Having 5G wired into the streets of your neighborhood is deep. Having a shirt that monitors all your key bodily functions is deep.

The other quality is existential. Deep technologies can reach into places so deep and produce outcomes, insights, and impacts so profound and accurate that we also needed a new adjective to describe them. Deep technologies are almost God-like in their powers to hit precise targets in medicine or war; to find the right needles in the right haystacks of data; to manipulate the right atoms and cells in science; to create machines that can defeat any human in chess, Jeopardy, or Go; or to fake any face, voice, or image—always with an accuracy or at a depth that was considered science fiction just 15 years ago. And that is why deep technologies also need to be governed in new ways, because they can be used for so much more good or evil in so many new ways.

As the world has gone from flat to fast to smart to deep, it is overturning and melting traditions, foundations, and bonds in every realm of our lives—how we work, how we communicate, how we learn, how we educate, how we conduct business, how we conduct trade, how families communicate with each other, and how governments control their people—to name but a few. In my opinion, this

inflection point may in time be understood as the single biggest and broadest inflection point since Guttenberg invented the printing press. And you just happened to be here. And it's not over—in fact, it's just getting started.

Heather and Chris's book is an indispensable guide to how navigate this new era in the workplace.

—Thomas L. Friedman  
Foreign affairs columnist, the *New York Times*

# INTRODUCTION

## Breaking with Identity to Seize the Adaptation Advantage

“Human beings are works in progress that mistakenly think they’re finished,” psychologist Dan Gilbert famously observed in a 2014 TED Talk viewed by more than 4.5 million people.

It’s in that space, between work in progress and finished, that workers find themselves today. We are incredibly well prepared for the past, and woefully unready for a future of work that has yet to be defined. This in-between space can be—and is—unnerving when the future is so difficult to see. “Most of us can remember who we were 10 years ago,” Gilbert says, “but we find it hard to imagine who we’re going to be, and then we mistakenly think that because it’s hard to imagine, it’s not likely to happen. When people say, ‘I can’t imagine that,’ they’re usually talking about their own lack of imagination, and not about the unlikelihood of the event that they’re describing.”<sup>1</sup>

But change *is* happening, and happening at a rate that is only getting faster. The good news is that we can change, too. And while that might seem like a scary proposition, it’s important to realize that we are already very, very good at changing. Again, from Gilbert’s TED Talk: “The person you are right now is as transient, as fleeting, and as temporary, as all the people you’ve ever been.”

Read that again: *As all the people you’ve ever been*. There is hidden wisdom in Gilbert’s assurance, a wisdom that finds itself at the heart of this book. Each of those “people you’ve ever been” is a version of a personal identity that has evolved over your

life—a child, a student, a partner, an athlete, a traveler. Yet, when it comes to work, we cling to a professional identity to direct our understanding of work and career. We are executive or entrepreneur, teacher or technician, politician or plumber. We are boss or crew, leader or team member, foreman or lineman. That identity plays a critical role as a social signal and is, in many cases, the basis for self-esteem.

It's also an anchor that makes the necessary reimagining of work much, much harder than it needs to be. It is the barrier to making the crossing from the past of work to the future of work. But cross we must because the future is coming at us faster than we can understand it. If we're going to keep up, we'll have to adapt. Indeed, the ability to adapt is our key advantage.

The first step to seizing that advantage is letting go of professional identity, and in that letting go, tapping into our imaginations to reimagine ourselves and our work.

## So What's Changing?

In a word: everything. In his eloquent foreword, Tom Friedman made the case that we are moving from flat to fast to smart to deep because of the exponentially expanding capabilities of technology. To his list, we add two more, seemingly at odds, elements of change: *invisibility* and *visibility*. On one hand, we can see things now that were hidden before. The data that flows like water brings insight into just about everything. On the other hand, we no longer see the working of everyday things that have been made invisible through automation. Our thermostats jumps to our preferred temperature when we walk into our homes. Already our phones and computers download and update software without our intervention. Driverless cars, one day soon, will automatically arrive to whisk us to our scheduled appointments, and groceries will be delivered to our doors from orders placed by a smart refrigerator that senses we are out of milk or need eggs.

With all this visible and invisible technology coming at a rate that is fast and only getting faster, what is a person to do? Who are we in the context of a rapidly transforming digital revolution?

In truth, we are all works in progress and we need to imagine, or rather reimagine, work. In order to do that, though, we're going to have to confront who we think we are, at least professionally, so that we can reimagine, and reimagine again, and again, who we are in the context of a changing future of work.

That’s a tall order. And that’s why we wrote this book: to help you better understand what is happening to work and why it matters to you. In doing so, we hope you’ll gain the adaptation advantage.

### How Did We Get Here?

The old model that parsed life into sequential steps of education, career, and retirement (Figure I.1) is blurring. Once, we were “educated” early in our lives enough to get us on a 40-year career ladder that we climbed until we retired and then, by design, soon after died. Today, considerable leaps in human longevity have stretched that career phase out a decade or longer.

A single dose of “education”—a process that infers an end state of being “educated”—isn’t sufficient for a career arc that looks more like a spiral. Instead, we need to swap education for learning, a continuous state of discovery and reinvention. Work, then, leverages that learning and the work itself becomes another form of learning. And retirement? Societally, we neither planned for nor funded the 20 or 30 years of retirement that is the reality of our longer lives. Simply, we need to imagine

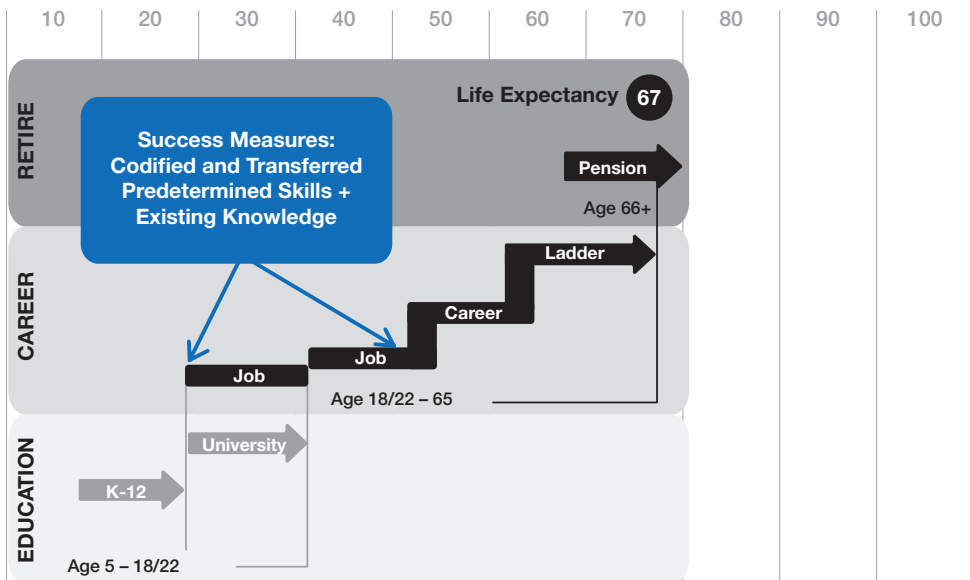


Figure I.1: The Old Economy

a different model that blends these three bands of life, mixing learning, work, and retirement in an iterative cycle that spans 50 or 60 years or more (Figure I.2).

We've talked about this old economy/new reality dichotomy in hundreds of talks, workshops, and conversations, and something finally struck us. Many listeners accepted the old economy as their reality and assumed the new reality existed only for their children or grandchildren. Not so fast, friends. The truth is that many of us will have to leap from the old economy into the new reality, and with that leap we'll have to navigate from a professional identity bestowed by degree and experience into a new identity we create for ourselves (Figure I.3). In short, we will all need the adaptation advantage. This is something we'll talk about in detail throughout the book, but especially in Part II.

### How Big Is the Challenge?

In a 2019 report, IBM projected that 120 million people in the 12 largest economies alone would need to retrain in the next three years in order to keep pace with rapidly changing technological capabilities impacting work.<sup>2</sup> The Organisation for Economic Co-operation and Development (OECD) 2019 Employment Outlook predicted that

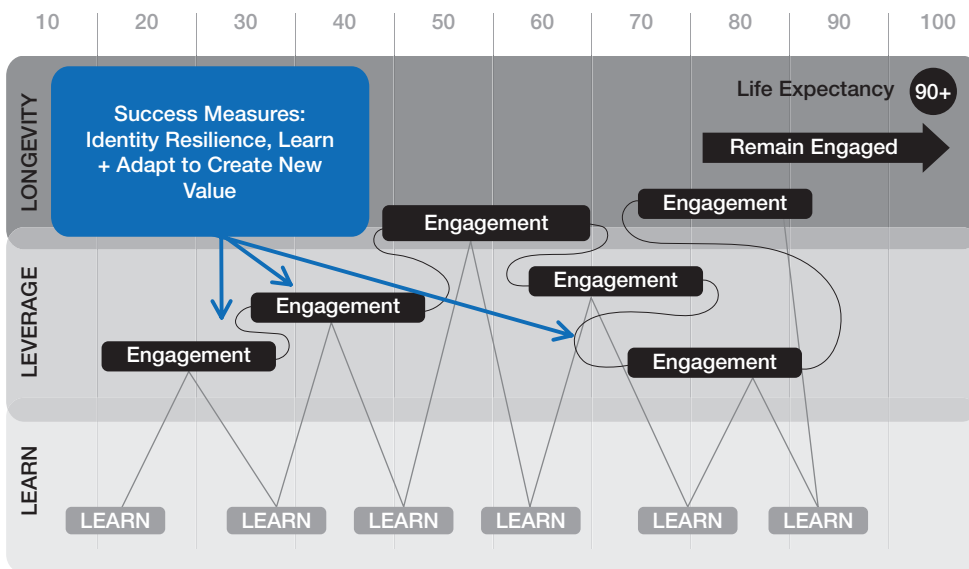
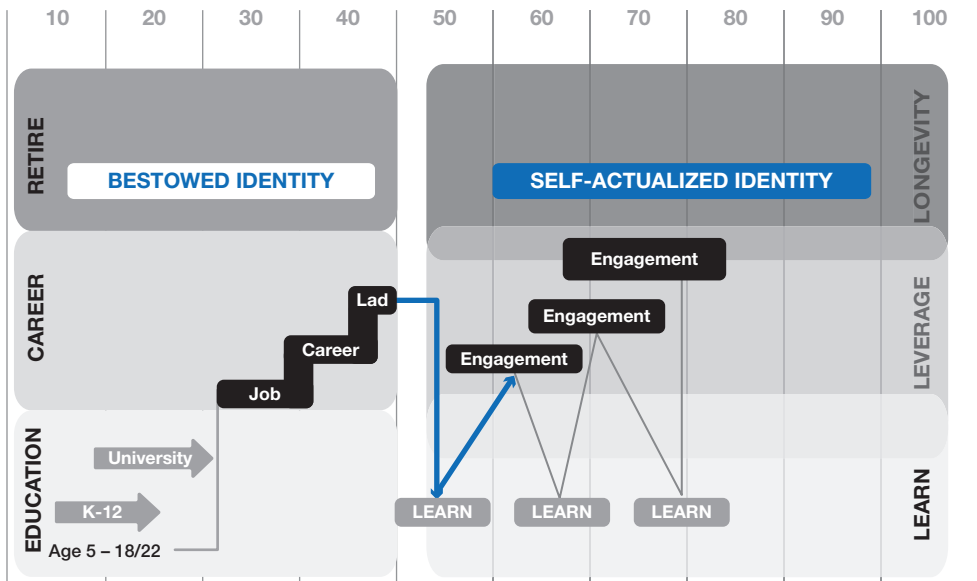


Figure I.2: The New Reality



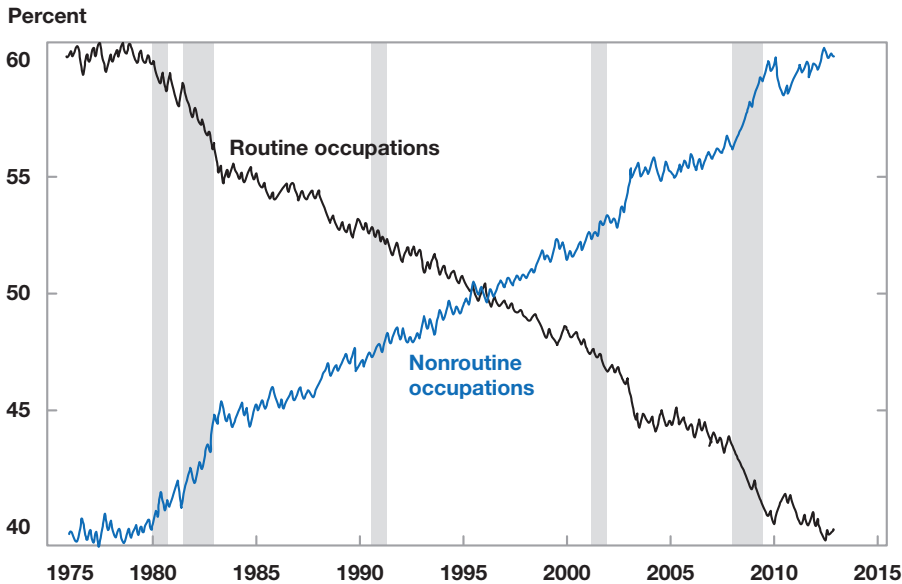


**Figure I.3: The Leap from Old Economy to New Reality**

14% of jobs could be lost and 32% transformed through automation and that 60% of all workers lacked the necessary information and communications technology (ITC) or computer skills for that new work.

And this isn't just a future state. The labor market, the OECD determined, has already transformed, resulting in a profound loss of middle-skill jobs. Specifically, the 20 years between 1995 and 2015 saw a 20% decline in manufacturing jobs and a 27% increase in service jobs that do not require little training or education.<sup>3</sup> The greatest shift thus far has been in technology's ability to consume routine work, giving rise to nonroutine work (Figure I.4). This shift has restructured the physical labor market and very soon it will upend the knowledge labor market as well. In short, the OECD describes a world of work rapidly transforming while most of us are flat-footed, unprepared to respond, let alone proactively adapt.

In 2013, the famed but flawed Frey-Osborne model predicted that 47% of work tasks in the United States could be automated. Some argue that the numbers in the Frey-Osborne model are not entirely reliable because the formula did not account for the cost of labor or capital, the impact of political resistance, or whether replacement technology could actually free workers to focus on other tasks,<sup>4</sup> which are all criticisms that the framework's authors acknowledged. Even so, the report



**Figure I.4: The Rise of Nonroutine Work and the Fall of Routine Work**

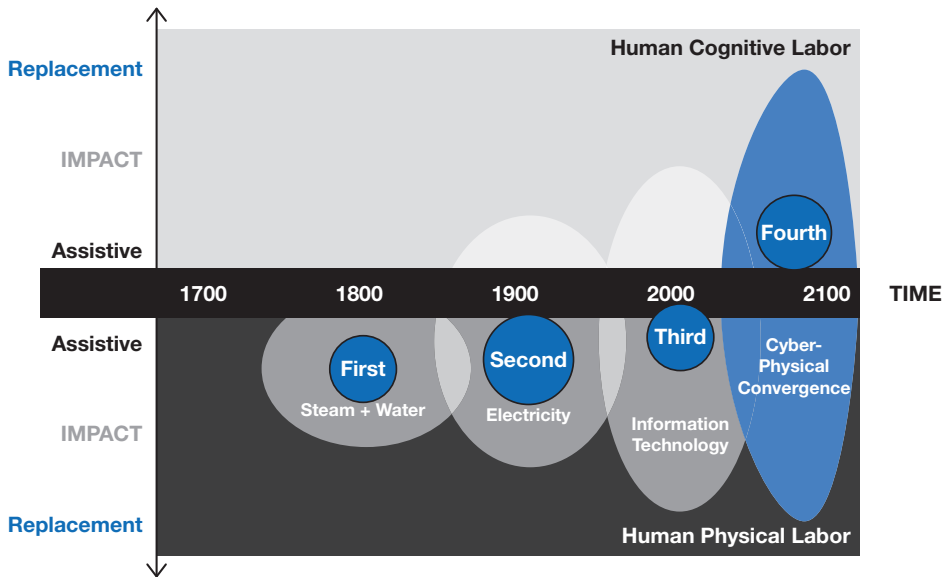
Note: The bands indicate recessions as defined by the National Bureau of Economic Research.

Source: U.S. Census Bureau, Current Population Survey.

caused a bit of panic, as people saw a future that evaporated their jobs. Automation *does* replace some jobs, but mostly automation *alters* jobs. IBM CEO Ginni Rometty puts a fine point on this distinction: “I expect AI to change 100% of jobs within the next five to 10 years.”

Rometty isn’t alone in this prediction. The World Economic Forum places the value of digital transformation to the Fourth Industrial Revolution at \$100 trillion over the next decade.<sup>5</sup> A 2018 survey of 10,000 workers in the United Kingdom conducted by Barclays LifeSkills identified a significant employability skills gap. In the report “How Employable is the UK? Meeting the Future Skills Challenge,” Barclays found that nearly 60% of adults lack all the core employability skills needed for the future world of work, notably among them proactivity, adaptability, and leadership.<sup>6</sup>

It should be no surprise, then, that our old measure of potential success—IQ (intelligence quotient)—has given way to EQ (emotional intelligence quotient) and is shifting yet again to AQ (adaptability quotient). In the 1980s, skills learned in a university or on the job held their relevance for nearly three decades, about as long as



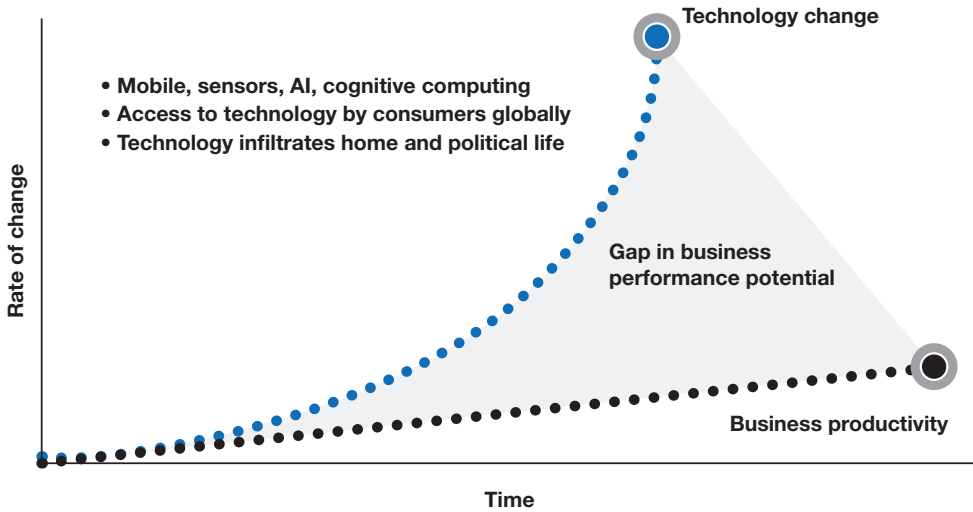
**Figure I.5: The Fourth Industrial Revolution Reshapes Work**

a typical career arc. Today, skills have a shelf life of less than five years, according to researchers at the World Economic Forum.<sup>7</sup>

The First Industrial Revolution was marked by the steam engine and the Second Industrial Revolution brought electrification and the division of labor; together, these first two revolutions created tools that supplemented muscle. The Third Industrial Revolution delivered tools, in the forms of computer technology, that assisted our mental labor. Now, we are entering the Fourth Industrial Revolution, steeped in advanced software and real-time data and offering tools that augment, and in some cases even replace, human cognitive labor (Figure I.5). Unlike the capital-intensive machines and robots that replace manual labor, the tools of this economic transformation are relatively cheap. They will scale very quickly and be incredibly cost effective. Are we ready? The answer is decidedly no.

## The Adaptability Gap

Even as advanced tools and data become increasingly available, we are failing to harness the potential of that technology. Technology is growing exponentially, yet business productivity grows linearly (Figure I.6). The management consulting firm



**Figure I.6: Bersin/Deloitte's Productivity Gap**

Source: © Deloitte University Press | Dupress.Deloitte.com | Josh Bersin.

Deloitte first noted this divide in its *Deloitte Human Capital Trends* report. “Data from the US Bureau of Labor Statistics and other sources,” the report noted, “show that productivity growth remains low despite the introduction of new technology into the business environment. In fact, since the 2008 recession, growth in business productivity (gross domestic product per hour worked) stands at its lowest rate since the early 1970s (1.3%).”<sup>8</sup>

Why the gap? The Deloitte report attributes it to “human capital strategies—how businesses organize, manage, develop, and align people at work.”

That gap does not appear to be narrowing. At IBM, for example, the company reported that the average of 4 days of training needed to close the skills gap in 2014 had jumped to 36 days by 2018. That works out to between 14% to 16% of all working hours now required for skills training just to stay current.

## Amid Rapid Change, Keep Calm and Adapt On

The future of work need not be a dystopian nightmare. Rather, with careful planning and some essential policy interventions, this future could unleash the potential of humanity to create more and more meaningful work for everyone. The key is preparation for rapid cycles of adaptation and learning.