

AT THE  
SPEED  
OF  
IRRELEVANCE



HOW AMERICA BLEW ITS  
AI LEADERSHIP POSITION  
AND HOW TO REGAIN IT

AL NAQVI AND MANI JANAKIRAM

WILEY

# Table of Contents

[Cover](#)

[Title Page](#)

[Copyright](#)

[Dedication](#)

[Preface](#)

[Acknowledgments](#)

[About the Authors](#)

[DR. AL \(ALI\) NAQVI](#)

[DR. MANI JANAKIRAM](#)

[CHAPTER 1: The Dawn of Irrelevance](#)

[AT THE SPEED OF RELEVANCE](#)

[OUR JOURNEY IN THIS BOOK](#)

[WE ARE NOT ALONE](#)

[THE WOLF IN PANDA'S SKIN](#)

[THE EMERGENCE OF STRATEGIC CONFUSION](#)

[AI RISES](#)

[THE UNEXPECTED EMERGENCE](#)

[AI AND THE AMERICAN PERCEPTION](#)

[THE AMERICAN AI DISASTER](#)

[BUILDING AI NATION IN A COMPETITIVE WORLD](#)

[JOIN US IN THE JOURNEY](#)

[REFERENCES](#)

[CHAPTER 2: The Painful Effects of Losing the AI Battle](#)

[THE NEW AMERICA: FUCK CHRISTMAS](#)

[THE COGNITIVE WMD](#)

WAR UNLEASHED ON AMERICA  
THE FIRST ATTACK  
BATTLE II: COVID  
RISE OF DOMESTIC TENSIONS  
AI INDUSTRIALIZATION  
CHANGE IN DEMAND PATTERNS  
GREAT-POWER COMPETITION: HYPED OR REAL  
OR WHO CARES?  
THE MAKING OF THE DRAGON  
THE IT THAT WASN'T IT  
THE OPPORTUNITY OPENS UP  
VICTORY LIES IN LOSING THE GAME  
AMERICA FIGHTS BACK, BARELY  
POPULAR NARRATIVE  
INFLATION AND FAILING SUPPLY CHAINS  
THE AMERICAN AI PLAN  
REFERENCES

### CHAPTER 3: The Containment Strategy

THE NEW LEADERSHIP  
PRESIDENTS MEET AND GREET  
FROM DECOUPLING TO RECOUPLING AND  
BEYOND  
DECOUPLING, RECOUPLING, AND RE-  
DECOUPLING  
THE SHIPS WITH EMPTY BELLIES  
ACT 1: THE BATTLE BEGINS  
WHAT ARE THE DRIVERS OF THE AI  
LEADERSHIP?  
WARNINGS WERE ISSUED

ALLIES AND ALLIANCES

PLAN B IS WORKING, OR IS IT?

REFERENCES

CHAPTER 4: The Presidents' Call to Duty

THE EXECUTIVE MESSAGING

EXECUTIVE LEADERSHIP DROPPED THE BALL

TRUMP'S AMERICAN AI

VIRTUE SIGNALING

PRESIDENT BIDEN AND AI

THE IMPORTANCE OF EXECUTIVE LEADERSHIP

A DIFFERENT AMERICA

REFERENCES

CHAPTER 5: The Great Deception of the 2016 RFI

THE OBAMA-ERA AI

THE PROCESS FOR FORMULATING THE 2016  
PLAN

THE RFI GIMMICK

RFI COMMENTS

WHO RESPONDED?

HOW MANY QUESTIONS WERE ANSWERED?

FREQUENCY OF QUESTIONS ANSWERED

ACADEMIC INSTITUTIONS

COMPANIES

ASSOCIATIONS AND NONPROFITS

THE MIRACULOUS REPORT

REFERENCES

CHAPTER 6: The OSTP Obsession Continues

BETWEEN 2017 AND 2018

THE EXECUTIVE ORDER AND PLAN WAS  
UPDATED

THE 2019 UPDATE, A CLOSER LOOK

HISTORY BEGINS IN 2018—REALLY?

THE THINKING WAS UPSIDE DOWN

GROUPTHINK ON STEROIDS

THE CADRE OF ETHICISTS AND FUTURISTS

STRATEGY 8

REFERENCES

CHAPTER 7: The Wake-Up Call

BARBARIANS AT THE GATE

THE FINAL REPORT

WHAT WAS HUSHED

1. MORE MONEY

2. THE FALLACY OF AVOIDANCE

3. CHINA IS IMPORTANT, BUT NOT REALLY

4. BELIEVABILITY

5. BREAKING DOWN THE SILOS

REFERENCE

CHAPTER 8: Congress

THE BILLS OF AI

THE SCIENTIST SPEAKS

2020 AND BEYOND

REFERENCES

CHAPTER 9: AI for Agencies

THE AGENCY PROBLEM

STRATEGIC PLANS

DELIVERING AI-ENABLED CAPABILITIES THAT

ADDRESS KEY MISSIONS

SCALING AI'S IMPACT ACROSS DOD  
CULTIVATING A LEADING AI WORKFORCE  
LEADING IN MILITARY ETHICS AND AI SAFETY  
THE CIO AND AMERICAN AI  
STRATEGY DEVELOPMENT IN AGENCIES  
THE DLA STORY  
REFERENCES

CHAPTER 10: A Chaotic Private Sector

THE SUPPLY SIDE PROBLEMS OF AI  
SENSEMAKING ABOUT AI  
THE AI SUPPLY CHAIN  
THE ERA OF DATA MANAGEMENT  
THINK WITH SENSORS  
RPA IS THE AI IN AMERICA  
THE FUTURISTS AND VIRTUE SIGNALING

CHAPTER 11: Of Capital and Measurements

THE PRESIDENTIAL SPAC  
THE CAPITAL INVESTMENT IN THE PRIVATE  
SECTOR  
MEGA INVESTMENT  
MEGA INVESTMENT IS MADE IN LARGE BLOCKS  
MEGA INVESTMENT IMPACT ON INNOVATION  
THE INVESTMENT PLAN  
DATA  
SKILLS DEVELOPMENT  
SEMICONDUCTORS  
WITH AN EYE ON THE WORLD  
CAPITAL INVESTMENT IN AI

[REFERENCES](#)

[CHAPTER 12: At the Speed of Relevance](#)

[WHY THE CRITICAL TONE?](#)

[UNDERLYING THEORY](#)

[RECOMMENDATION 1: MAKE A DISTINCTION  
BETWEEN NATIONAL AI STRATEGY AND R&D  
PLAN](#)

[RECOMMENDATION 2: DEVELOP A REAL  
NATIONAL STRATEGY](#)

[SUMMARY OF THE BOOK](#)

[REFERENCES](#)

[Index](#)

[End User License Agreement](#)

## **List of Illustrations**

Chapter 1

[FIGURE 1.1 The AI Span](#)

Chapter 5

[FIGURE 5.1 Respondent Type](#)

[FIGURE 5.2 Respondent Origination](#)

[FIGURE 5.3 Total Responses by Question](#)

[FIGURE 5.4 How Did Respondents Answer  
Questions?](#)

[FIGURE 5.5 Frequency Total](#)

[FIGURE 5.6 Frequency](#)

Chapter 6

[FIGURE 6.2 AI Scorecard](#)

[FIGURE 6.3 Upside Down Planning](#)

Chapter 8

[FIGURE 8.1](#)

[FIGURE 8.2](#)

Chapter 12

[FIGURE 12.1](#)



# **At the Speed of Irrelevance**

***How America Blew Its AI Leadership  
Position and How to Regain It***

**AL NAQVI  
MANI JANAKIRAM**

**WILEY**

Copyright © 2022 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) 750-4470, 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/permission>.

**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. Further, readers should be aware that websites listed in this work may have changed or disappeared between when this work was written and when it is read. Neither the publisher nor authors 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 also publishes its books in a variety of electronic formats. Some content that appears in print may not be available in electronic formats. For more information about Wiley products, visit our website at [www.wiley.com](http://www.wiley.com).

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

ISBN 9781119861270 (Hardback)

ISBN 9781119861294 (ePDF)

ISBN 9781119861287 (ePub)

COVER DESIGN & ILLUSTRATION: PAUL McCARTHY

For Nur, Mahek, and Marya

Dr. Al (Ali) Naqvi

Dedicated to my wife, my son, and my parents

Dr. Mani Janakiram

## Preface

AS THE REVERBERATIONS ABOUT China's ascendancy over the United States in artificial intelligence are coagulating, America must consider the root causes of falling behind. The popular narrative is about China doing something magical to close the technological gaps. This book argues that America is losing the AI competition not because China is doing something extraordinary but because the American national strategy for AI is flawed.

There are many books on AI. There are many books on China's rise. But there is no book that explains why America is lagging in AI. Developing that perspective requires taking a bold stand and applying critical thinking.

We observed an overwhelming concern about China's rise in AI. From Congress to various government agencies, the threat of China's advancement in AI has led to rapid and hasty reactions and policies. But none of those reactions have taken a critical approach to uncover what are the root causes of falling behind.

The American Institute of Artificial Intelligence captures the adoption of AI across economies, industries, governments, companies, and agencies. Professor Naqvi is the CEO of AIAI and has authored several books on industrialization of AI. He is an AI industrialization expert. Dr. Janakiram offers a unique understanding of the semiconductor value chain. Bringing both ends of the spectrum—the AI software and the AI hardware—the authors take a critical approach to analyze the descent of American AI.

In our discussions with many Americans knowledgeable about the AI competitive dynamics, we observed

tremendous unease about the Chinese AI advantage and the damage it will cause to American competitiveness in the long run.

We do not believe that ignoring what has transpired in the past will restore the future. Unless corrected, the mistakes of the past will shape the future. America will struggle to rise back up to the leadership position and that will impact every other aspect of nation building. From political turmoil to economic decline and from social meltdown to national security collapse, AI has the power to impact all aspects of human life and institutions. Loss of leadership in AI implies a loss in everything else. Despite the importance of this technology, little planning went into how AI should be launched and socialized in America at a national level.

In America, the AI technology was launched with a narrative that repels rather than attracts interest, an R&D plan that constrains national adoption rather than encourage it, a national strategy that destroys value instead of increasing it. The result is a technology development model that favors monopolies and elite universities at the expense of American innovation and the American public. This creates social and economic inequality, wealth disparity, poverty, and plutocracy—and it weakens democracy.

The plan to restrict access to AI and to limit its nationwide growth has fallen on its face. Adversaries who may not have been liberal democracies have both liberated and democratized AI and solidified the future of their countries. America remains mired in its problems, uninterested, and uninspired about the greatest change ever in human civilization.

We also argue that the fundamental R&D system is due for a change in America. America has already experienced three R&D systems in the twentieth century. The R&D

system includes both its processes and the funding model, and AI is changing both. Despite that, the investment model and approach of the Office of Science and Technology Policy (OSTP) remain antiquated. The OSTP appears as the greatest barrier to success in American AI. The office has overstepped its responsibility and has trodden into areas where it does not have any expertise: strategy development. In the end, the failed policies of OSTP are harming American national interests and giving China an easy victory.

We conclude the book by recommending an alternative path. Our tone in this book is critical and at times harsh. But that is intentional. We want the audience to recognize the importance of getting this right. America must move at the superspeed of relevance. Time is running out.

# Acknowledgments

WE WOULD LIKE TO thank the Wiley team, our publisher, for being extremely helpful, understanding, and efficient with our project. Specifically, we would like to thank Sheck Cho and Susan Cerra. For topics like AI, there are many choices to partner with reputable publishers. We partnered with Wiley because of the excellent support we receive in all steps of the publishing process. One of the authors has published two other books on AI with Wiley and his experience has been excellent.

We would like to thank many of our colleagues for their valuable inputs and comments related to the American AI: Dale Rogers, Arizona State University, Bob Bruck, Applied Materials, Tom Maher, Dell, Jamie Butcher, Chemonics, Tom Derry, Institute of Supply Management, Paul Dillahay (CEO of NCI), Bridget Medeiros, (Bubba) Carlton Fox, Dr. Allen Badeau, Major General (Retired) Dale Meyerrose, Tom Albert, Dr. Hassan Abbas, Terry Wolff, Ron Raczkowski, Russ Malz, TK Gonsalves, Kirit Amin, Neil Callahan, Tiffany Parker, Aaron Morales (Senator Heinrich's office), Senator Martin Heinrich, and Dr. Mark Munoz. Many thanks to the American Institute of Artificial Intelligence team for assisting with the research.

In addition, many thanks to all those authors whose work we have quoted.

Dr. Al Naqvi and Dr. Mani Janakiram

## **About the Authors**

### **DR. AL (ALI) NAQVI**

Dr. Naqvi is the founder and CEO of the American Institute of Artificial Intelligence. His work in artificial intelligence industrialization is globally recognized by scientific and professional societies, companies, agencies, and governments. He is the author of several books on artificial intelligence industrialization. With hands-on experience in machine learning product development and AI research, Dr. Naqvi leads a team of researchers who monitor and analyze the AI absorption and adoption across companies, industries, agencies, and countries. Dr. Naqvi sits on the boards of several AI companies, and he advises C-level executives, agency heads, and senior government executives on AI strategic industrialization planning. His doctorate research was on Discovering the Process for New Product Development (NPD) in Machine Learning Software. Dr. Naqvi presents at leading global conferences. He teaches at the American Institute of Artificial Intelligence.

### **DR. MANI JANAKIRAM**

Dr. Janakiram is a Mfg. Supply Chain and Analytics executive and also an academician. His 25+ years of professional experience includes semiconductor/hitech, automotive and aerospace industries at Intel, Honeywell, and Motorola in supply chain, strategy, systems, analytics, manufacturing, and research, planning. He is on the adjunct faculty at Arizona State University and also taught at various schools, including MIT, and Thunderbird School



of Global Management. Mani has two patents and has published over 100 papers on supply chain, statistical modeling, capacity modeling, data mining, Lean Six Sigma, factory operations research and process control. He is an accomplished speaker and serves on several committees to advance practical application of AI and analytics in manufacturing and supply chain. Mani holds a PhD in Industrial and Systems Engineering from Arizona State University and an MBA from Thunderbird School of Global Management. He is a recognized Six Sigma Master Black Belt and an APICS certified supply chain professional. He was recognized by Drexel University and [CIO.com](http://CIO.com) as one of the Top 50 Analytics Executives and is also an ASCM Fellow.

The views and opinions expressed in this publication are solely those of the authors. They do not purport to reflect the opinions or views of any current or former employer of either author.

# CHAPTER 1

## The Dawn of Irrelevance

FOR THE OUTSIDERS IT was an uneventful cloudy October Sunday in Washington, DC. Over the weekend, the Washington football team had lost to the New Orleans Saints. Baltimore, another local team from the DMV area, was supposed to play on Monday. No earth-shattering news was making the headlines. Ten months after what some media outlets termed the “insurrection,” American media was still obsessed with the domestic ideological wars. Sound bites from politicians were making rounds. Fights over *to mask* or *not to mask* were erupting all over the country. Despite a new wave of Covid claiming thousands of lives daily, traffic in restaurants and shopping areas was increasing. Amazon had started its Black Friday sales early. America had adjusted to a new normal. But unknown to most Americans, a fateful event had transpired that weekend. In contrast with the obliviousness of the American media, foreign media had a field day with the news about that story. As the history of this event will be written half a century from now, it would go down as probably the most solemn and depressing weekend for America. That was when Nicolas Chaillan, former chief software officer for the US Air Force and who oversaw the Pentagon's cybersecurity efforts, announced, in no uncertain words, the surrender of the United States in the artificial intelligence (AI) war against China. He gave an interview to the *Financial Times*—his first after his sudden resignation in September of 2021—and stated, “We have no competing fighting chance against China in 15 to 20 years. Right now, it's already a done deal; it is already over in my opinion” (Manson [2021](#)). Chaillan's statement did not

appear as a warning, or a battle cry, or some inspirational slogan to rise and claim back America's AI leadership. It was a cold, matter-of-fact, and outright acknowledgment that it was already too late to have any hope for sustained American leadership in AI.

Chaillan's capitulating comment came after he had expressed his frustration about the inertia in the government and had resigned by submitting a fierce resignation letter. His tenure with the government had lasted barely three years. Chaillan is a naturalized citizen and had become a US citizen in 2016. That didn't stop him from getting a top position with the government. Upon joining, Chaillan was shocked over the state of technology and saw that as an opportunity to bring about a cultural change. Strong-willed and inspired by a vision of transformation, he began acting as a change agent. But he recognized that the problems were far deeper than what he had thought. AI was being approached as any regular technology. Chaillan gave an account of what was transpiring. The organizational dynamics represented a bureaucratic nightmare. Unskilled people were made in charge, and while money was being spent, the procurement costs were high and funds were being allocated in the wrong areas. Most importantly, AI was not being viewed as a national priority. Before resigning from his position with the government and during a CyberSatGov conference, he had claimed that American national security satellite providers were unable to develop “at the speed of relevance” as they were stuck in the Pentagon's ecosystem. In other words, getting unstuck from the Pentagon's ecosystem implied achieving the speed of relevance.

On Monday morning after the Chaillan news hit the international press, Tom Albert, a friend of the American Institute of Artificial Intelligence and an AI entrepreneur (founder and CEO of MeasuredRisk), video called Al Naqvi

(one of the authors), and expressed his frustration. Tom is passionate about creating and mobilizing American intellects to rise and fight back against the Chinese dominance in AI. He is putting together a major initiative to inspire American investors and entrepreneurs to develop more advanced AI capabilities. Tom carries a genuine smile and has a great sense of humor. He jokes frequently and laughs loudly. But his voice changes and his face turns red when he starts talking about the lack of visionary leadership for AI at the helms in America. With his fists clenched and teeth gritting, he complains about how America is self-inflicting this catastrophe upon itself. Several minutes into the conversation, he asked Al Naqvi the name of the book that Naqvi was coauthoring. Al Naqvi responded that the name of the book was *At the Speed of Irrelevance*, and that made Tom smile and he said, "It would have been immensely funny if it wasn't so tragic." Tom and Al talked for over an hour, and Tom felt this book will be critical to drive hope and to inspire the nation. Tom is among a small number of Americans who understood what the term "speed of relevance" meant and its profound significance for AI and for the United States of America. America's last hope to maintain its global leadership position—the American AI—was in jeopardy. The great experiment was at risk.

## **AT THE SPEED OF RELEVANCE**

Four years before Chaillan threw in the towel, then secretary of defense General James Norman Mattis issued a document in January 2018. This document was the first open and clear expression of a strategy to confront China's growing power. Titled "The National Defense Strategy" (NDS), it refers to the delivery of performance at the *speed of relevance*. That was the time when General Mattis and

President Trump were still on good terms and President Trump bragged about his secretary of defense. The honeymoon didn't last, as a year later General Mattis resigned and gave a two-month notice. Feeling rejected and ignoring the notice, President Trump ended General Mattis's tenure immediately. Shortly after that, President Trump said that he “essentially fired him” and then in June of 2019 went after General Mattis again and said that he felt great about asking General Mattis to resign and that he didn't like General Mattis's leadership style and was happy that General Mattis was gone (Shane III 2019).

Regardless of President Trump's view about him, what is generally acknowledged about General Mattis is that he was trying to change the culture of DoD. The report signed by him said:

**Deliver performance at the speed of relevance.**

Success no longer goes to the country that develops a new technology first, but rather to the one that better integrates it and adapts its way of fighting. Current processes are not responsive to need; the Department is over-optimized for exceptional performance at the expense of providing timely decisions, policies, and capabilities to the warfighter. Our response will be to prioritize speed of delivery, continuous adaptation, and frequent modular upgrades. We must not accept cumbersome approval chains, wasteful applications of resources in uncompetitive space, or overly risk-averse thinking that impedes change. Delivering performance means we will shed outdated management practices and structures while integrating insights from business innovation. (Mattis [2018](#))

While work on the American AI had begun before 2016, it was General Mattis's recognition that developing a technology first is not what will lead to America's victory;

rather, what is critical is adapting and integrating new technologies. General Mattis was trying to evangelize the term “speed of relevance” to imply a more responsive way of delivering results and eliminating red tape and the typical government inefficiencies. Joe Dransfield analyzed the use of the term in an article that appeared on “The Bridge,” an online publication of The Strategy Bridge, a nonprofit organization focused on the development of people in strategy, national security, and military affairs. Dransfield pointed out that Mattis had also used the term in his written statement to the House Armed Services Committee on February 6, 2018, and described it as his aspiration to move the Department of Defense to a “culture of performance and affordability that operates at the speed of relevance.” In another document, Dransfield explains, Joint Chiefs of Staff General Joseph Dunford also used the term, but his usage seemed to imply improving the decision cycle, prioritizing and allocating optimal resources, and enabling better decision-making. Both Mattis and Dunford, Dransfield contends, used the term “as being an adaptation and an aspiration that is fundamental to gaining competitive advantage” (Dransfield [2020](#)).

The term was instantaneously picked up by other agencies, the DC analysts, and supplier communities and quickly became a buzzword. Dransfield (and Chaillan's later statement) clarified that the US Air Force used it to signify technological transformation. The US Army interpreted it as human aspects of the speed of relevance. “The US Navy,” Dransfield claimed, “tended to use former Chief of Naval Operations Admiral John Richardson's preferred nomenclature of ‘high-velocity outcomes’ to cover similar aspirations regarding the speed of relevance” (Dransfield [2020](#)). The Department of Defense referred to their cloud-based computing as an example of speed of relevance. Raytheon placed it in an ad. Government contractors

included it in their RFPs. And as often happens with buzzwords, they get talked about so much that they lose their higher meaning.

General Mattis is not an AI expert. Neither is General Dunford. But what was profound in their vision is the power of mission relevant and integrated automation, higher prediction power, faster and more effective decision-making, and highly efficient execution speed—all of these improvements are made possible by AI, and all are necessary to advance AI. They were defining and describing what the American AI needed to be. They were setting a challenge for the nation.

## **The American AI Initiative Was Born**

The “American AI Initiative” is America's strategy and plan to maintain and expand America's lead in AI. It was supposed to be the game changer. It was America's response to a rising threat from adversaries and competitors. It was the need of the hour. It could have been a vision truly based on an unpoliticized *America First* thinking.

But speed of relevance cannot result from pursuing sporadic AI projects and pushing buzzwords in one or two organizations (for example, the DoD). It cannot materialize by fanning out mindless R&D and blindly pumping money into research without having a corresponding industrialization and economic strategy. In addition to focusing on science and technology, it requires approaching the transformation from an industrialization mindset. It needs building an ecosystem of interdependent technologies and capabilities, a meticulously developed national strategy that is articulated to inspire and mobilize the nation, a favorable economic structure, and an entire economy based on AI. It needs an economy-wide change in

all areas of commerce and industry. It requires AI to emerge as a social force that gives energy to the nation.

Three and a half years after General Mattis presented his strategy, a new US secretary of defense under a new administration, General Lloyd Austin, proudly claimed that 600 AI efforts were already underway in the Pentagon and that would accelerate the Pentagon's adoption of AI.

General Austin saw AI as somehow related to projects, initiatives, and use cases. And this is where America is continuing to fail in architecting its national AI strategy. America is not thinking big enough. AI is not just a technology—it is paradigm change in the economy, science, society, politics, and human civilization. A change of that magnitude cannot be managed by pushing “projects” and “initiatives.” As any other revolutionary technology, AI also requires developing industrialization plans, supporting infrastructure, processes for social and business acceptance, maps of value creation across sectors and industries, social sensemaking and meaning construction, leadership that inspires the nation, and designs that help with diffusing the technology. But the American AI Initiative had none of that. It was growing up in an orphaned state—and even worse, as a hated and undesirable technology.

Chaillan is right. Retired military professionals with no background or experience may not be able to do it. But neither can software experts, Big Tech firms, opportunistic professors, or leading AI technology experts from top universities. AI planning requires a strategic perspective, and that in turn needs a national-level all-inclusive, sector-by-sector industrialization planning with the singular focus on building American capabilities. Above all, it requires a patriotic positioning.



General Mattis's dream of moving American technology forward at the *speed of relevance* will stay as an unaccomplished goal until an America-focused comprehensive and integrated AI national industrialization strategy is outlined and deployed. Even if General Mattis had been able to fix the culture of his organization and create efficiencies within the DoD, what about the legacy technology cultures of the government suppliers? What about the influence of Big Tech over policy? What about the inability of the political leadership to inspire the nation and mobilize resources? What about the ongoing meltdown of civility and the rise of the ideological wars in America? What about the daily bot and cyber-attacks where enemies and adversaries are constantly bombarding the US to further divide and weaken the nation? What about the opportunistic and commercialized academia where professors place their own selfish interests above national interests? What about the consulting firms whose bread and butter are long, slow-moving, use case-focused, systems (dis)integration projects? What about the rampant influx of foreign money and influence to distract American attention? And what about the troubled supply chains and an old rotten infrastructure in dire need of replacement? The American AI Initiative needed the right breathing space and a healthy environment to grow—but the nation's ecosystem was not conducive for the spark to happen.

In the absence of becoming a national force and a social phenomenon, the entire focus of the American AI Initiative strategy remained on two things—research and investment in research. As General Mattis said in his report, developing the technology first is not an advantage. America needed to build the industrial capacity, social and business adoption, diffusion, and absorption of the technological revolution at a social sensemaking level. But none of that happened.

If *speed of relevance* implied competitive advantage, then Chaillan had declared that China has already acquired that over the United States. In 2019, ITIF (Information Technology and Innovation Foundation) conducted a study that concluded that China has already surpassed the U.S. in AI adoption and data, and that China's trend of steady progress could eventually destroy the U.S. lead (Castro and McLaughlin [2021](#)). If the term meant overcoming bureaucratic inertia, Chaillan enlightened us with the incompetence and bureaucracy that still exists in the government. If the term signified capabilities, Chaillan called the cyber defenses of several government agencies being at a "kindergarten level." So much for the speed of relevance!

The fact is that four years after General Mattis evangelized the term, Chaillan acknowledged that the reality was much different. Clearly, America was working at the speed of irrelevance—and that was nothing short of suicidal. In the age of AI, comparative and competitive advantages of countries will be determined by their AI technologies. America was already at a disadvantage. The American AI Initiative was already in trouble.

## **OUR JOURNEY IN THIS BOOK**

This book captures the tragic story of American slide to irrelevance. It shows the disaster that engulfed and continues to haunt America today. It is a story of failure of leadership at all levels—and of the flawed execution that came with it. This story is being told with the recognition that America can still bounce back from the clutches of defeat, that America performs best when the nation finds its motivation, and that this will not be the first time that America has risen after being cornered and pinned down. Although we do claim that this will be America's toughest

and greatest fight ever, we believe (with Churchill's spirit) this could be America's finest moment ever. With that in mind, we begin the story of how America ended up in this dilemma. We have made two simple arguments in this book.

First, we argue that many problems in America are worsening due to one and one reason only: the failure to adopt AI strategically. Ironically, both the identification of and the solutions to such problems are dependent on AI. Consider the following:

**Supply chains:** There are now cracks emerging in the American supply chains. The infusion of automation technology at some levels in the value chain and not at others is creating problems. These problems will likely become out of control. Haphazard deployment of AI is not strategic. The problems are exacerbated by the technological rivalry with China—another problem rooted in the lack of strategic adoption of AI.

**AI deployment is not real:** We observe a stark difference in how China is adopting AI and how many US companies, agencies, and industries are approaching AI. What many companies, agencies, and industries are calling AI is neither intelligent automation nor what AI means today. It is very basic automation, and calling it AI is a stretch. This misconception of what AI capabilities are will lead to a decline in competitive advantage and performance potential of US companies and agencies.

**The competitive structure is not favorable:** The economic structure and environment should be favorable for strategic adoption of AI. But the American economic structure—which is dominated by a small number of very large firms and individuals with tremendous concentration of power and wealth—is not

ripe for strategic diffusion of technology. The dominant investment style in AI is creating a negative innovation environment, waste, and increasing the cost of capital. Ironically, AI is contributing to further concentration of power and wealth.

**The national narrative:** Nation-inspiring narratives are the harbingers of fantastic news. They mobilize and inspire nations to do great things. The American AI Initiative is suffering from anemic and conflicting messaging. The social construct and narrative behind the technology are weak. On the other hand, AI ideology-centric narratives are dividing the nation and creating domestic conflict.

**External force:** Unlike during the Internet revolution, where America stood as the clear and uncontested leader in the world, today's geopolitical situation is different. The technological leadership is being redefined by global players such as China. With AI, the power of such rivals will increase exponentially.

**The productivity growth:** Despite significant investment in AI and years of so-called planning and execution, the productivity growth in America has stayed low. The capital being poured into the technology is not showing results—indicating it is misdirected and misallocated. AI must lead to productivity growth, but that is not happening.

**Knowledge economy:** As explained later in the book, AI is not just any technology. It is a technology that creates new knowledge, new science, and new technology. It finds scientific breakthroughs for which theory does not exist. It releases science from the linear model of hypothesis-test-results-theory to the paradigm of test-results-hypothesis-theory. Without

strategic AI, the industries will remain malnourished to produce new knowledge and discoveries.

The risks for the entire economy and for the country are increasing. So much so that now it is recognized that China has surpassed America in AI. This means America has failed to strategically embrace the AI paradigm. AI is the key to unlock the potential of the national economy. It is the elixir to understand, solve, and identify almost all types of problems.

The AI magic has already begun. Some economies are performing great, while others are struggling. Schumpeter's creative destruction and the related disruption have already started. The loss of AI leadership to China is now becoming far more visible, and it is showing up in numerous ways.

Our second argument is that we hold the White House's Office of Science and Technology Policy (OSTP) as primarily responsible for America's decline and fall in AI. Throughout this book we cover the story of OSTP's continued failure to provide the true leadership that America needed. The problem was not that the OSTP did not do what it was supposed to do. The OSTP did give America a powerful R&D and federal investment plan. The real problem—which led to America's failure on the AI front—was that the OSTP could not distinguish between a national strategy of AI and the R&D-centric federal investment strategy of AI. The OSTP overplayed its hand, assumed the role of a strategic economic advisor, acted in the capacity of an industrialization expert, created a massive deception about its role and plans, intentionally or unintentionally (we do not know) covered up hugely relevant information, and completely ignored the process of how strategy (national or business) is developed. In doing so the OSTP forgot its core mission: first, to provide the president and his [her] senior

staff with accurate, relevant, and timely scientific and technical advice on all matters of consequence; second, to ensure that the policies of the executive branch are informed by sound science; and third, to ensure that the scientific and technical work of the executive branch is properly coordinated so as to provide the greatest benefit to society. Overstepping its mission, report after report, the OSTP made the national investment plan in R&D appear like a national strategic plan. They are not the same.

A legitimate national AI strategy cannot materialize without following a proper strategy development process. It is not a product of one or two brainstorming sessions by a group of scientists, academics, agency heads, and Big Tech VPs. It requires an elaborate process to understand the economic and business environment, study national priorities and understand national goals, analyze relative strengths and weaknesses, identify the stakeholders, assess the mood of the nation, develop narratives and communications strategy, and many other such process steps. Strategy development process, whether for a business or a country, requires following a methodical approach. Strategy and plan development are, of course, well-developed specialty areas with hundreds of years of research, history, practices, and well-established knowledge domains. But the OSTP engaged in none of that. With the groupthink that led to seven (eight, as one was added later) strategies, the OSTP somehow turned what was the R&D plan into a national strategy. This would be analogous to an aeronautical engineer who knows about planes but is not a pilot, trying to fly a commercial flight full of passengers. Three presidents and Congress relied on the strategy and the positioning coming from the OSTP. Legislation was thrust based on those priorities. Money was allocated. Executive orders were signed. Agendas were pushed. And America was led through a national strategy for AI that was nothing