Radical changes are underway as society struggles to strike the right balance between the requirements of digital business and workers’ human needs. Enterprise leaders must plan for strategic issues as workers adapt to the digital era. (Maverick research exposes unconventional thinking and advice.)

Opportunities and Challenges

- CIOs and other digital business executives face the challenge of ensuring current operations succeed, while planning for dramatic shifts in the availability, skills and interests of the emerging digital workforce.
- The growth of a digital society is disrupting every aspect of life, but especially how human labor is imagined and valued.
- Success with digital business requires new ways of working because traditional practices are losing relevance and value.

What You Need to Know

- As “digital-native” children mature into working adults, enterprise leaders will face workers with very different perspectives on work styles, human augmentation and the ethics of technology use than prevail today.
- The transition to “future work” will require a renegotiation of fundamental social contract terms in order to reconcile new ways of working with human values.
- The future of digital business operations requires a shift in power structures that makes people raised within conventional authority structures uncomfortable. The associated power struggles typically concern changes in humans’ decision-making powers and the role and value of humans in new processes.
Insight From the Analysts

Workforce Disruption Is Here

Jamie Popkin, distinguished VP analyst
Frank Buytendijk, distinguished VP analyst

The goal of this Maverick* Special Report is to uncover the complexities of the human workforce’s adaptation to the new realities of what amounts to a digital society increasingly supported by digital business. We explore unconventional data points and nascent trends by envisioning a series of potential paths, some of which may at present seem too expensive or simply farfetched.

Gartner’s Maverick* research program is designed to spark new, unconventional insights. It is unconstrained by our typically broad consensus-formation process, so that it can deliver breakthrough, innovative and disruptive ideas from our research incubator. Among other things, it allows Gartner analysts to explore the less obvious implications of mainstream Gartner research.

There is growing awareness that the concept of human work is in transition. This set of Maverick* research delves into how work — a fundamental aspect of people’s life experience — is changing. Small cracks in conventional wisdom are making space for unconventional ideas that could spark innovation. There is an opportunity for management executives to address workforce transition issues that go beyond traditional cycles of technology-driven reskilling and process reengineering.

Advances create possibilities, yet progress occurs only when humans are ready. The rise of digital society and digital business serves as both a stimulus of economic activity and a disrupting force that raises profound questions about the role of humans at work. Where do tradition and innovation meet? How can we redefine human work to strike the right balance between the needs of people and those of digital society and digital business?

We group contributions to this Special Report into three sections by theme:

- The Humans in Transition section analyzes issues ranging from the personal (human augmentation) to the societal (the health risks of artificial intelligence [AI]).
The **Future of Work** section discusses how the very definition of work (and art) is being challenged, and the human impacts that may change the future of education and career planning.

The **Future of Business** section sheds light on the areas of greatest risk and opportunity for new digital business models that are currently experimental but that we will live (and hopefully prosper) under in some form.

Kind regards,

Jamie Popkin and Frank Buytendijk

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**Executive Overview**

*Maverick Research*

This is “Maverick” research, designed to spark new, unconventional insights. Maverick research is unconstrained by Gartner’s typically broad consensus-forming process in order to deliver breakthrough, innovative and disruptive ideas from our research incubator. We are publishing a collection of several Maverick research lines this year, all designed for maximum value and impact. We’ll explore each of these lines of research to help you get ahead of the mainstream and take advantage of trends and insights that could impact your IT strategy and your organization (see Note 1).

**Definition**

This Maverick* Special Report analyzes how human work is changing and will change. The future will transform how capital and human labor combine to perform work. The challenge for enterprise leaders is to establish new ideals for how to apply people’s skills, and meet their human requirements, in support of emerging digital business models.

Work — its nature, purpose and value — is a fundamental aspect of the human experience. Individuals, families and enterprises commonly make long-term decisions about education and training. To a great extent, people build their families and life styles around work.

The growing anxiety evident among Gartner clients about workforce transition issues is a leading indicator that we are entering an extraordinary cycle of technology-driven reskilling, one that may redefine the meaning and value of human labor. In fact, that change is already underway, and associated anxiety might even have led, for example, to the recent college admission scandal in the U.S., which reveals how some people feel the need to trade integrity for achievement.

The transition to a digital workforce will take more than one generation and will not be straightforward. For one thing, every generation debates what is the “right” balance between preserving its heritage and enabling progress. For another, access to education is a perennial competition in which early advantages can greatly increase the chances of children achieving...
certain types of success. This imbalance is resulting in exploration of nontraditional education and career combinations.

Workforce transition will be a persistent characteristic of the digital society. Many of the global disruptions created by economic strife, climate change and resurgent nationalism will contribute to a state of chronic and unbalanced transition.

The concept of a “digital workforce in transition” describes the sociological phenomenon of how society is wrestling with the impacts of digitalization on human work and value.

Figure 1 highlights the inevitability that this transition will change how we work and conduct business.

**Figure 1. Implications of a Digital Workforce in Transition**

**Implications of a Digital Workforce in Transition**

- **The workforce is changing ...**
- **The way we work is changing ...**
- **Therefore, business is changing**

Source: Gartner
ID: 458363
Research Highlights

Humans in Transition

The rise of digital society is disrupting every aspect of life, but especially how human labor is conceived and valued. Our latest Maverick* research process has yielded “humans in transition” as a dominant theme. Technological advancements create possibilities, but progress occurs only when humans are ready. It is the case with the application of many technologies that the physical and emotional impacts on humans are often subtle or dismissed as transient by executives.

Digital business executives in enterprises of all types should pay attention to the trends identified in this Special Report because they affect humans on a deep emotional level. As further generations of digital-native children mature into working adults, enterprise leaders will face a workforce with very different perspectives on work styles, human augmentation and the ethics of technology use than prevail today.

Our Maverick* research examines fundamental questions relating to our work and personal lives as we navigate the emerging changes to society. For example, what will “AI natives” create? And how can enterprises prepare for a generational shift in the workforce’s characteristics, expectations and motivations? We are living through what is effectively a real-time experiment with our children. Our early findings may offer some guidance on how to make better families and enterprises.

The transition to a digital society will not necessarily resolve the gender gap, which may manifest itself in surprising ways. For every action, there is a reaction. Although the full impact of the MeToo movement remains to be seen, there is evidence that it is having unintended negative consequences, as one document in this section shows.

At the heart of every society lies the care, education, training and life style of children, and their employment opportunities. This raises the question of how children born into a digital society will become adults in that society? How will transformational technologies like AI change them? How acceptable will human augmentation become? Will human augmentation create a new socioeconomic divide? Or will purists resist augmentation, however affluent they are? Human health, wellness and longevity are likely to be improved by a wide range of medicines and technologies, but what needs closer examination is the question of how life-extending and labor-saving technologies will affect our fundamental cultures. As in many fields of technology, progress in the healthcare sector is driven by a desire to do good, yet there are always those who will exploit opportunities for evil or self-interest at the expense of others. Since health and life expectancy are fundamental human concerns, the healthcare industry faces important questions about whether and how to extend life expectancy.

We can already predict some unintended consequences of technological progress for humans. Life extension is likely to be coupled with human augmentation, but we challenge the belief that either — let alone both in combination — will help solve large societal problems or even be a force for good.
From an enterprise perspective, the theme of “humans in transition” lies at the heart of many cross-industry digital initiatives. Humans in transition are driving advances in the “state of the art” in many industries.

**Maverick* Research on This Theme**

“Maverick* Research: How the MeToo Movement Hurts Gender Diversity” by Carol Rozwell argues that an unintended consequence of the MeToo movement is a male backlash that is harming women in the workplace as some men pull back from being supportive allies.

“Maverick* Research: Generation AI Must Be Protected From a Dystopian Future” by Pete Basiliere, Robert Hetu and Kelly Calhoun Williams introduces the idea that the next generation will catalyze extraordinary societal and economic change through unprecedented use and acceptance of AI.

“Maverick* Research: Are You Risking Your Workforce’s Health With Automation and Artificial Intelligence Technologies?” by Amresh Nandan and Natalya Gorina argues that the rush to automate with AI ignores potential cognitive and functional health disorders in humans. The authors caution against unchecked business investment in automation and AI. Unbridled human-machine collaboration might have deep and undesirable effects on humans and businesses.

“Maverick* Research: Mass Adoption of Brain-Monitoring and -Altering Wearables Creates Risk of Mind Control” by Sylvain Fabre contradicts the prevailing view that user monitoring by brain-machine interface devices will transform people’s health and well-being for the better. If unchecked, the applications used (rather than the technological fundamentals) may have adverse effects on vulnerable individuals and societies.

“Maverick* Research: Coming Soon — Radical Disruption to Life Expectancy, or Not?” by Laura Craft breaks new ground in discussing how life extension already affects the investments that healthcare organizations make, and what health and healthcare will look like in future.

“Maverick* Research: Architecting Humans for Digital Transformation” by Marty Resnick, Jamie Popkin and Mark Driver argues that the disruption associated with this practice could result in unintended vulnerabilities for augmented humans and the enterprises for which they work.

“Maverick* Research: Millennial Government Will Correct Unemployment Bane With Automation, AI and Bot Tax” by Jim Scheibmeir and Saikat Ray argues that public revenue dependent on income tax is vulnerable in a digital economy. This research assumes that bot and AI implementations can flatten or reduce head count — a pivotal catalyst for a “digital rust belt.” This research contradicts prevailing wisdom by suggesting that IT and other operational departments should replace automation with humans as an ethical approach to employment and a means of avoiding bot taxes.

**Forthcoming on This Theme**

We will publish a report by Gareth Herschel, provisionally titled “Maverick* Research: Think Differently by Using Foreign Languages.” It will argue that learning foreign languages — or even just words and phrases — exposes us to different ways of thinking and potentially fresh perspectives on how to solve business problems.
Also forthcoming is a report by Gavin Tay, Bern Elliot and Annette Zimmermann, provisionally titled “Maverick* Research: Emotion AI Could Manipulate You Without Your Knowledge.” The authors examine the need for new laws to address AI’s growing ability to read human emotions, and potential to emulate them and to manipulate people.

The Future of Work

What is work? How is value delivered? What is the connection between work and value? What is the value of art and other forms of human creative expression? The answers to these big questions, examined in this section of Maverick* research, are up in the air when it comes to the most complex and chaotic of the world’s transformational situations.

The business models that emerge successfully will undoubtedly feature surprising ways of solving the age-old problem of where value and human satisfaction reside on the continuum between labor and capital. The challenge to CIOs and other digital business executives is to maintain current operations while planning for dramatic shifts in the sourcing of technologies and services and for a radical redesign of application architectures.

Collaborative human work requires a set of consistent and mutually reinforcing social contracts to ensure productivity and value while maintaining fairness. The transition to “the future of work” will require a renegotiation of fundamental social contract terms to align new ways of working with human values.

Preparation for the emerging, changing, digital society involves a reimagining of work. Work will be performed with new tools by humans with new cognitive and physical skills. The changing nature of work, and how humans choose to perform it, will prompt new cycles of operational redesign and renewal.

Maverick* Research on This Theme

“Maverick* Research: Optimizing Business Processes by Eliminating the Most Expensive Elements — Humans” by Tim Zimmerman and Thara Murali assesses how automation and robots will cause workforce disruption by eliminating many job opportunities. Computers will automate and robots will eliminate the human element of an increasing number of jobs. This will happen faster than expected, due to the cost of having humans do the work, as compared with the ability of robots or other means of automation to complete the same tasks better or faster. Business and IT leaders must evaluate the impact of technology with a view to guiding employees toward the opportunities offered by human augmentation and by areas of skill in which humans have an advantage in terms of innovativeness.

“Maverick* Research: Video Intelligence Will Save the World, Your Life and Your Job” by Adam Preset challenges the status quo of video, a powerful influence in consumer life but a medium often given short shrift in the workplace. Enterprises that continue to neglect video will be unable to exploit a new, video-literate talent pool for competitive advantage.
“Maverick Research*: Creativity Is Dead, Long Live AI Creativity!” by Ranadip Chandra, Shubhangi Vashisth and Jamie Popkin examines the impact of AI on creative art forms, and offers insights and recommendations at the enterprise and societal level. As an enterprise leader, if you neglect how AI can inspire and boost human creativity, you will fail to tap much of its potential to transform life in a digital society.

Forthcoming on This Theme

We will publish a report by Daniel Bowers and Irving Tyler, provisionally titled “Maverick* Research: How Iron Man Will Rip Your Organization Apart,” challenging the assumption that organizational leaders will roll out AI technologies to knowledge workers using a top-down approach. Instead, the authors suggest that the democratization of AI capabilities will result in significant disparity across workers, which will result in forms of organizational disruption.

The Future of Business

Every aspect of the roles and workloads of humans in business operations and management is undergoing transformation. This section of Maverick* research explores a broad range of crucial business topics related to the digital workforce transition.

A key question for every senior leader is whether the executive team is ready to lead in the era of digital business. Future digital business operations require a shift in power structures that makes people raised within conventional authority structures uncomfortable. The associated power struggles typically concern changes in humans’ decision-making powers and the role and value of humans in new processes.

Preparing for digital business success requires new ways of working as traditional practices fade in relevance and value. CIOs must get better at generating and inspiring innovative ideas and building support for change at a time when, for example, the “gig” economy is preparing for its own digital optimization. Additionally, freed from the constraints of national boundaries, a pool of “invisible” talent has emerged. This pool optimizes its time and fees based on the sum of its individual participants, each living and working in a variety of physical and virtual environments.

The role of the human in possible digital business futures is ripe for exploration, which will enable transformation in surprising ways. Enterprise leaders will have a crucial part to play in defining and implementing new social contracts. Those contracts will govern how fast the world can and should change. Key features of new social contracts will dictate how information use and technology are governed.

Richard Hunter’s book World Without Secrets (Wiley, New York, 2002), which stemmed from an early Maverick* research project, has proved remarkably prescient in its warnings about the battles over privacy that we are now witnessing. The tension between organizations’ desire to access people’s personal information for business analysis and individuals’ need for privacy (including the “right to be forgotten”) will be at the heart of social conflict and contract renegotiations in the emerging digital society.
Where will your human workers work? Whichever vision of new work modes and social contracts emerges, humans will always need space, physical or virtual, in which to operate. The question of how humanity will change its views about the need for, and purpose of, physical space is crucial to the future of IT departments, facilities management departments and the real-estate sector. We first addressed this topic in September 2018’s “Maverick* Research: Throw Out Your Keyboards, Close Your Physical Workplace and Come to Your Senses.” That research broke new ground by challenging the assumptions that the corporate real-estate sector will avoid a “bubble burst” in the near future. It argued that a crash will occur, partly due to economic forces but also as a natural outcome of the adoption of strategic emerging technologies by consumers and enterprises alike. We continue to explore this area in this Maverick* Special Report.

Maverick* Research on This Theme

“Maverick Research*: The World Needs Dropchains — Ignorance and Forgetting as a Service” by Dave Aron and Rajesh Kandaswamy argues that the ability to forget is vital to society and commerce. Forgetting is not a flaw of human brains, but an important feature that improves our ability to “declutter,” identify patterns and generalize experiences. More broadly, society could not function if everyone knew everything. The authors propose that blockchain-related technologies could create “dropchains” to deliver “forgetting as a service.”

“Maverick* Research: Harness Chaos Magic to Enable Digital Leadership Success” by Roger Williams offers new insights into digital leadership, based on bodies of knowledge not tapped by mainstream business wisdom.

“Maverick* Research: CIOs Must Tap Into the Invisible Talent Pool” by Yuko Adachi urges CIOs to tap the pool of “invisible” talent, which represents a key staffing resource for the digital business era. This research uncovers an emerging digital workforce trend with the potential to alter the global perception of IT talent markets.

“Maverick* Research: The End of Office Space” by Christopher Trueman and Carol Rozwell challenges the conventional assumption that as organizations gain more employees, they need to expand their real-estate footprint.

Forthcoming on This Theme

We will publish a document by Christie Struckman and Erik Van Ommermen, provisionally titled “Maverick* Research: Culture Isn’t the Disease — Personal Biases and Malpractice Are.” The authors will disagree with the many CIOs who believe that their organization’s corporate culture is what prevents it from achieving its digital ambitions. Instead, the authors suggest that CIOs and other leaders should assess whether their own biases and actions that might be a reason for that culture. (This document will represent a sneak preview into a set of planned Maverick* research examining the use of “culture” as an excuse for slow strategic progress. The Maverick* research we plan for the second quarter of 2020 will expose the flawed assumptions of executives about culture and the role of leadership in enabling digital business changes.)
Related Priorities

Table 1. Related Priorities

<table>
<thead>
<tr>
<th>Priority</th>
<th>Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>Building and Expanding a Digital Business</td>
<td>The “building and expanding a digital business” initiative shows how to take digital business through the cycle, from strategy to development, to full-scale operation, to re-envisioning.</td>
</tr>
<tr>
<td>CIO Excellence in I&amp;T Operating Model Design and Strategy Execution</td>
<td>Enterprise focus on digital transformation increased markedly this past year. CIOs must lay the digital foundation and transform the I&amp;T operating model to enable strategic execution at digital speed.</td>
</tr>
<tr>
<td>CIO Innovation and Strategic Business Change Leadership</td>
<td>In the digital era, the CIO serves as both business leader and IT leader. This initiative focuses on the first job, showing how the CIO can contribute to an enterprisewide business strategy.</td>
</tr>
</tbody>
</table>

Source: Gartner

Gartner Analysts Supporting This Trend

Jamie Popkin

Frank Buytendijk

Tina Nunno

Related Resources

Webinars

“How Digital Business Is Changing the Job of IT Leaders”

“Are You Ready for the Future of Work: Gartner Talks With Futurist Tamara McCleary”

“What the Digital Workplace Will Look Like in 2028”

“How AI Will Impact Jobs and Your Workforce”

“The Looming Impact of the Emerging Digital Society? A Panel Discussion”
Articles

“Leading the Digital Society”

“Look Beyond Hiring and Development to Close Digital Talent Gaps”

“5 Places You Didn’t Think to Look for Digital Talent”

“Build Your Digital Workforce for Success”

Gartner Recommended Reading

Some documents may not be available as part of your current Gartner subscription.

“Last Call for #DigitalSociety … All Aboard!”


“Maverick* Insights Reveal Agility as the Prime Source of Power: A Gartner Trend Insight Report”

Note 1 Roots of the Word “Maverick”

Derived from the name of Texas rancher Samuel Maverick and his steadfast refusal to brand his cattle, “maverick” connotes someone who willfully takes an independent — and frequently disruptive or unorthodox — stand against prevailing modes of thought and action.
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