FUTURE OF WORK

FROM CUBICLE TO TRIBE

BY PAUL LALOVICH, EMA VUKOVIC, IVAN BJELAJAC AND TESHA TESHANOVICH

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Paul Lalovich
Emilija Vukovic
Ivan Bjelajac
Tesha Teshanovich

Editors
Foreword by Helen White

Agile Dynamics | www.agiledynamics.co | info@agiledynamics.co

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SAMPLE

FORWARD

Dear Reader,

Welcome to the most disruptive period in human history, known as the Fourth Industrial Revolution. It fundamentally changes every aspect of our lives, influencing the way we consume, work, and relate to one another, unlike anything humankind has experienced before.

It will transform every facet of our economy, every industry, every workplace, and all aspects of society on a scale and complexity never seen before.

The Blueprint of Change

You are holding a book that places people at the center of all the changes around us and explores our human ability to adapt to new changes and how we can take advantage of them. The future of work is not a distant horizon; it is unfolding before our eyes. As you read this book, you will realize that it is a compass in uncharted territories.

The Architects of Tomorrow

This book is written by visionary thought leaders and doers who bring fresh thinking to dismantle silos, bridge gaps, and embrace the future with a sense of common wisdom. Embark with the authors on a journey to explore the roadmap ahead to the next era of productivity, collaboration, services, and renewed purpose.

The All-Hands-On-Deck Alert

Whether you are a seasoned executive or an aspiring entrepreneur, these pages hold your survival guide. So, dear reader, embrace the unknown. The future of work awaits, and you are its protagonist.

With anticipation and resolve,

Prof. Henrik von Scheel

Godfather of Industry 4.0 and Digital themes of today

P.S. Turn the page. Adventure awaits.

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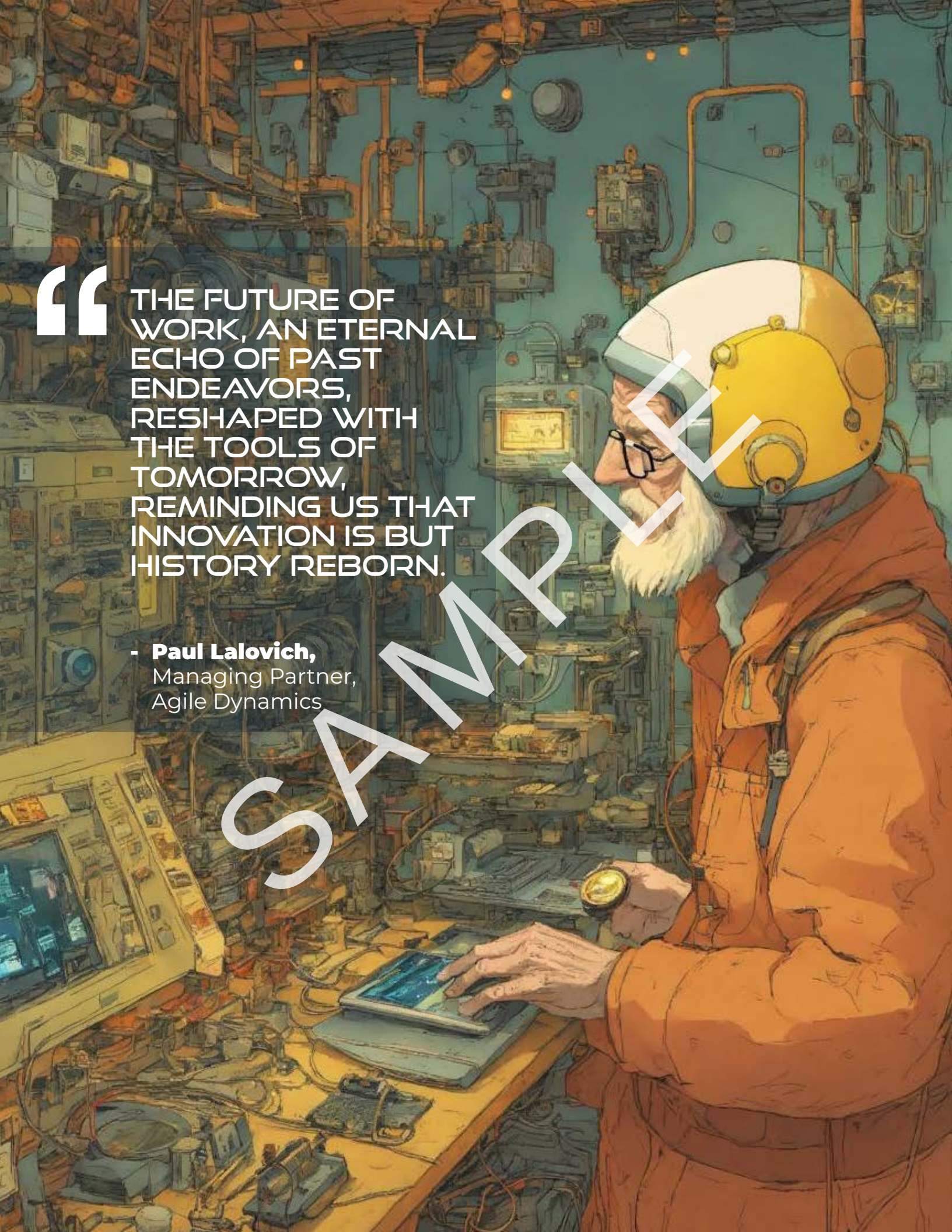

“
THE FUTURE OF WORK, AN ETERNAL ECHO OF PAST ENDEAVORS, RESHAPED WITH THE TOOLS OF TOMORROW, REMINDING US THAT INNOVATION IS BUT HISTORY REBORN.
- **Paul Lalovich,**
Managing Partner,
Agile Dynamics
SAMPLE

TESTIMONIALS

"The Future of Work" is a groundbreaking book that offers pragmatic and visionary insights for organizations and leaders. With a focus on people capabilities and technology, it explores the untapped potential of agile organizations. The author's use of provocative and unconventional examples challenges traditional thinking, making this a must-read for forward-thinking professionals.

— Romano Massimo
Senior Partner Korn Ferry

"Changes and innovations always happen. But with recent massive advances in AI and blockchain, not only will the topics we talk about change but the way we address them will also change drastically. A must-read for anyone eager to stay ahead in the ever-changing world of professional endeavors."

— Dr. Bernhard Kronfellner
Partner & AD
The Boston Consulting Group

"The Future of Work - is a good primer on issues and concerns to consider in the future of work. The concepts are succinctly explained and summarized, and provides food for thought from both an organizational, as well as individual development perspective."

— Puay-Guan GOH,
Associate Professor, NUS Business School,
Department of Analytics and Operations,
Academic Director, MSc Industry 4.0
National University of Singapore

"Having read - The Future of Work, I can confidently say it's a game-changer for anyone who wants to explore the challenges of the modern workplace. This book offers invaluable insights and practical strategies for navigating the complexities of the digital age, from fostering collaboration in decentralized work models to rethinking performance management in the era of synthetic equity. It's a must read for anyone looking to thrive in the rapidly evolving world of work."

— Yilmaz Yadirgi
Head of Computer Science,
North London Collegiate School Dubai

"Future of Work is a must read for any organizational leader to take a peek into facts and trends that are, and will, shape the way in which work is defined, executed and consumed in the very near future. Shining a spotlight onto what the next generation of workers will likely expect in exchange for their labour, it provides strategic insights into how to harness the utmost potential of the worker of the future. A gripping tome, that one will re-read from cover to cover many times over.

— Sui JIn KON
Executive Director
Blockchain Association Singapore

THE FUTURE OF WORK

When you pick up “From Cubicle to Tribe,” you’re entering into the future world of how business gets done. We are at a point in our collective history of great change where the work that used to be done is about to shift forever.

It takes the reader to our not-too-distant economic future, where we will see firsthand the very real possibility of the next stage of our combined workspace moving forward.

This book is the end result of the combined efforts of many passionate people who believe that their talents and insight can build a bridge to tomorrow. These professionals are the living embodiment of the future model of how business will get done, coming from a multitude of backgrounds and finding synergy in a common cause while playing to their respective strengths to be stronger than the sum of their parts. We are journalists. We are researchers. We are writers. We are thinkers and dreamers. Together, we have created this comprehensive guide full of knowledge that forms the basis of the future of the office environment, the foundation of how business will get done. Readers will be introduced to effective strategies encompassing career management, wealth accumulation, maintaining well-being, and leading a fulfilling life.

One of the book’s standout features is its exploration of the current realities and future prospects of work. It provides valuable insights into anticipated trends and key industry sectors, offering a five-year glimpse into how work will be organized, success rewarded, compensation structured, and transformative opportunities created.

The book in front of you is an all-hands-on-deck alert to the changing face of business. It can serve to educate you, enlighten you, and prepare you for the great changes that are coming in the days, weeks, months, and years ahead.

It is a reference book into unknown territory, where humans and machines will be seen as coworkers, united in a common cause to make incredible visions into realities at a speed and efficiency level never before dreamed of.

INTRODUCTION

We're on the verge of a total digital revolution, and everyone wants to know what's next. Between automation, AI, the metaverse, and a hundred other technologies bursting at the seams to join the flow of our daily lives, there is no doubt that change is coming swiftly to the workplace in all facets. The number of tools already available to improve upon our work processes is numerous, but are they all the right choice from a moral standpoint?

As our tools become more and more lifelike, we have to consider more than just the bottom line. What are the moral consequences of turning human work over to machines? Is there a point where we are giving away too much?

Are we writing ourselves out of history as automation and AI rob millions of people of their jobs and force them to live on the streets? The future is unwritten, but we can safely assume how humans work is on the precipice of changing permanently. With new tech comes the opportunity to complete work more quickly, more safely, and more efficiently.

However, no disruptive technology comes without a price, without problems, and without barriers that must be cleared.

The automobile revolutionized travel but required a massive overhaul to our roads, our infrastructure, our fuel industry, and a litany of other related fields. We're already seeing some of the prices to be paid by using highly-intensive computer processing. It takes a huge amount of energy and gives off a huge amount as well. We swung a heavy hammer at industrial resources that were leaving behind huge carbon footprints. Will we do the same for our digital toys? How much are we willing to dive deeper into debt in terms of our reliance on fossil fuels in order to satiate our need for automation and machine learning?

There's no disputing that our advances are almost universally made from a place of a better life to live in and better opportunities for business. Automation allows for heavy-duty, back-breaking work that can lead to injuries and long-term illnesses in humans to be carried out by machines who don't feel pain or get weary. Advanced robotics presents an opportunity to replace hazardous and risky jobs in both the manufacturing and service industries. In emergency situations, such as natural disasters or the inspection and maintenance of hazardous sites where humans face exposure to harmful substances, advanced robots can be deployed without risking human safety. These new technologies utilize algorithmic

One of the challenges of transitioning to AI is that, initially, many low-level jobs will be replaced without significant alternative opportunities for those workers. As new job openings emerge, they may require skills these workers don't possess. Therefore, it's crucial to prioritize workforce training ahead of introducing disruptive technologies.

control and digital sensors, enabling them to perform a wider range of tasks with considerable precision and accuracy.

Beyond the simple business specs of a machine-powered alternative are the regulatory concerns and the issue of social acceptance. A machine could surely be built to take luggage from the airport terminal onto the runway and put it on a plane, and vice versa, but what's to keep a system like that from being hacked to accept extra bags from someone trying to sneak contraband into an airplane bound for foreign shores? What's going to happen when the machine decides that, logically, it could fit in more suitcases by compacting others down to smaller sizes, but in the process, it breaks a valuable gift or spills someone's medicine? What happens when the airline fires all of its runway workers whose entire livelihood revolves around working the luggage carts and completing the plane's pre-flight checklist and replaces them all with a machine? The business saves a ton of money and never has to worry about its employees needing healthcare, lunch breaks, or retirement plans again. The workers are out of luck, so too bad.

The ongoing revolution of emerging technologies is primarily driven by advancements in AI, automation, Big Data analytics, cloud technologies, robotics, machine learning (ML), and distributed ledgers. These technologies are fundamentally reshaping how value is created, as well as eroding traditional boundaries and fundamentally altering the fabric of our society. They also bring with them significant concerns about how they are used, where the lines are drawn legally and morally, and who controls what is created by these "thinking machines."

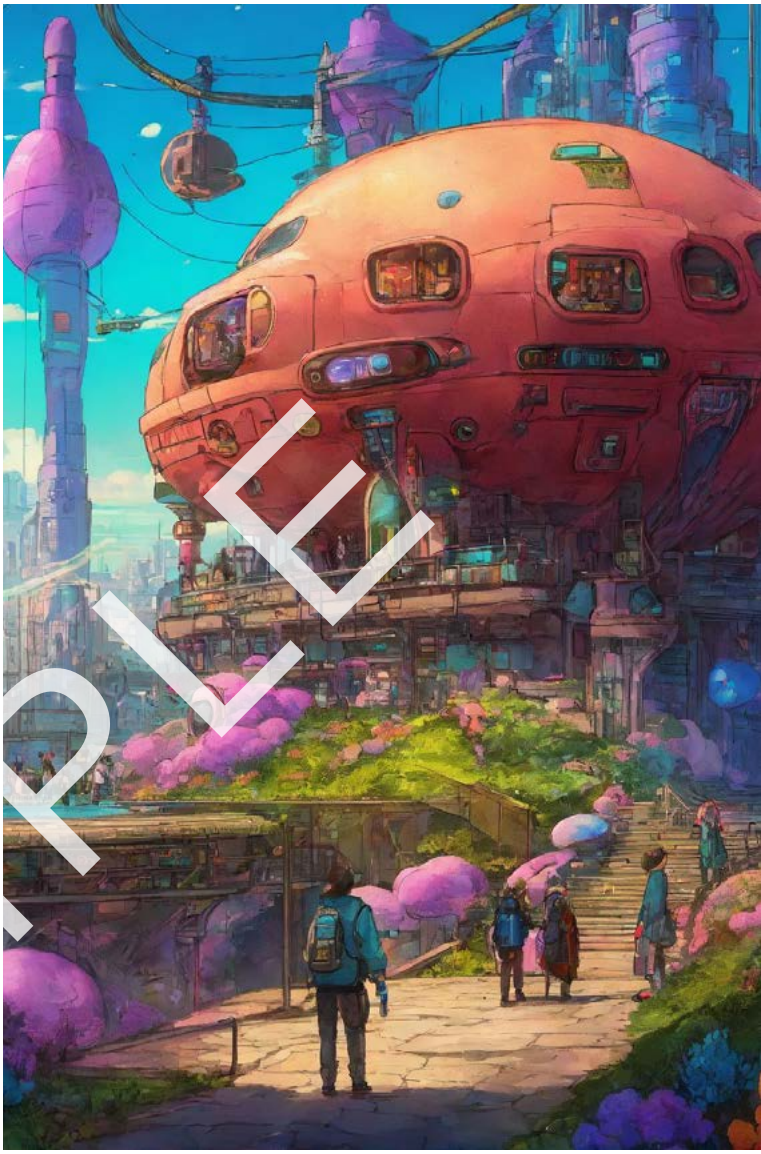
The introduction of AI brings about significant changes for organizations, necessitating simultaneous investments in technology and talent. While there is a shortage of skilled AI talent, commercially available software, and open-source offerings have made successful AI models and training sets more accessible, helping narrow the gap. Nevertheless, an organization's ability to achieve differentiated tools and applications with AI still heavily relies on its in-house, very human talent. This is a moral lesson that organizations have been learning throughout the dawning of the so-called digital age. Technology is a powerful set of tools but should not be thought of as the only necessary component to solve a problem. Humans in the loop will forever remain integral to any scenario that involves a pain point in need of an answer'. A fire hose and a fire hydrant cannot extinguish a five-alarm blaze without the assistance of human hands and minds. AI, ML, and the rest are all tools, not solutions.

As organizations mature in their AI journeys, they tend to prioritize hiring new AI talent from outside the business rather than retraining existing employees. In the early stages, hiring external talent establishes a baseline of expertise that can later be used to train existing personnel and develop more advanced technology. Companies with limited AI experience often rely more on external partners and may eventually acquire smaller companies with skilled workforces as they define their needs more clearly. This is a stop-gap solution at best. A company's employees

must be equipped with the necessary knowledge to work alongside AI, if it is truly going to be the wave of the future for an organization. Think back to how prior technologies have come online in the business place, from computers themselves to the Internet.

The disruptions caused by technology, demographic shifts, and socio-economic factors significantly impact the employment landscape and the skills required. This will pose considerable challenges in terms of recruiting, training, and managing talent. In certain industries, technology is already condensing existing roles with decades-old skillsets, while demand is on the rise for highly specialized and difficult-to-find positions.

The combination of significant reductions in labor costs, the creation of new jobs, and increased productivity for non-displaced workers offers the potential for substantial productivity growth, thereby significantly boosting economic progress. However, accurately predicting the timing of such a boom remains a challenging endeavor.



The notion of jobs completely disappearing is unlikely. Instead, we may observe a transition or evolution of jobs to a more advanced level.

There's no doubt that machines can make certain jobs easier and take over some manual or repetitive jobs entirely, but that has been the case every time new inventions have come into common use. The same was true when man invented the washing machine, the automobile, the forklift, and the drive-through car wash. This doesn't mean that human work will go away, but rather that many workers will have to retrain in different skill sets. There will be some transitions that are unpleasant for some, but it is nothing that has not been seen before with the coming of each industrial revolution and the desire to do work quicker and more efficiently. One of the challenges of transitioning to AI is that, initially, many low-level jobs will be replaced without significant alternative opportunities for those workers. As new job openings emerge, they may require skills these workers don't possess. Therefore, it's crucial to prioritize workforce training ahead of introducing disruptive technologies.

CHAPTER 1

GLOBAL ECONOMY, GROWTH MARKETS, AND TECHNOLOGICAL SOVEREIGNTY

Many companies today are facing a knowledge problem. Older employees are headed for retirement in possession of a wealth of knowledge about how business is done without the time or ability to transfer it to younger workers who are replacing them. Technology can augment the workflow, but it can't transfer knowledge that already exists inside the minds of people. This will be a major concern in the path ahead, regardless of how much technology we bring to bear.

The COVID-19 pandemic and subsequent work-from-home trend demonstrated to many people that their value can be greatly increased by working as a freelancer or consultant rather than at a desk job 40 hours a week. With the flexibility that comes from working remotely as opposed to in the office, they can also work for more than one company at the same time, increasing their own value and their ability to earn more income. This creates significant knowledge gaps between the retiring older workers and the younger workers who will replace them in the traditional sense.

The answer to most questions can be found on the Internet. However, we don't want our employees learning how to do their jobs by watching a YouTube or TikTok video when they could be learning it firsthand from a more experienced coworker. Retirements are already happening at an alarming rate in key industries such as healthcare, energy, and public utilities, places where a knowledge gap can have significant consequence on the smooth functioning of society'. Suddenly, the problem isn't people being unable to find jobs in their fields but rather companies being unable to fill the vital positions required for those industries to function.

Our increased lifespan will impact business models, talent aspirations, and pension expenses. Older workers will have to learn new skills and work for more extended periods, leading to a shift toward a norm of "retooling." In several rapidly aging economies, like Japan or South Korea, there will be a shortage of human workers, which will drive the need for automation and productivity enhancements.

Technological advancements, specifically automation, have a different impact on labor productivity. Rather than increasing it, these technologies are designed to replace human labor with cheaper capital. Consequently, automation consistently decreases the share of labor in overall value created as it enhances productivity to a greater extent than it impacts wages and employment. The effect of automation on employment can vary significantly depending on the occupation and industry. Physical activities in predictable environments, such as operating machinery and preparing fast food, are the most vulnerable to automation. Data collection and processing are also two areas of activity that machines can increasingly perform more efficiently and effectively.

This perspective suggests a different interpretation of the technology's history and a distinct approach to considering the future of work as a competition between automation and novel labor-intensive tasks. The growth in labor demand has not been consistent over the past two centuries due to technologies that increased labor

productivity in all areas. Rather, numerous new technologies aimed to remove labor from tasks that it previously specialized in. Despite this, labor has still benefited from technological advancements because other technologies have enabled the introduction of new labor-intensive tasks. These tasks have not only reinstated labor as a central input in the production process, but they have also been instrumental in productivity growth. It is essential to maintain a focus on the improvement of the customer experience rather than merely preventing issues. Technological advancements allow for decentralized decision-making as more data becomes accessible. Employees with sufficient digital/analytical skills are empowered to take action, leading to a culture of continuous improvement for the customer and a shift in the value proposition.

A comprehensive approach is necessary to increase investment in digital technologies and skills. There can't only be specialists for a certain type of technology; it has to be a company-wide effort, or you'll be betting against your own firm in terms of leverage and making many jobs obsolete. With new technology will come the need for weightier investments into things like high-performance computing, quantum technologies, and shared data spaces that require scalable and efficient data updates.

As AI systems increasingly use opaque processes, known as the black-box problem, to arrive at conclusions, there is a growing need for human experts to explain their behavior to non-experts. These "explainers" are especially useful in fields that rely on evidence, such as law and medicine. 'In these fields, practitioners must provide understandable and transparent explanations for the decisions or outputs generated by AI models or algorithms like sentencing or a medical recommendation. People will be wary of machines making decisions previously

made by humans, as has been the case at every technological juncture, especially in the digital age. There are millions of people who still won't get a smartphone, buy anything online, communicate via email, and so forth because they don't trust their personal information in the "hands" of a machine. How then will they accept having their medical diagnosis or their legal case decided by one? Explainers will also be important in helping insurers and law enforcement understand why an autonomous car caused an accident or did not prevent one. In regulated industries and any consumer-facing industry where a machine's output could be challenged, explainers are becoming integral.

We're already seeing this as a burgeoning industry in the EU, which created the General Data Protection Regulation (GDPR) in 2014. Its purpose is to give EU citizens a very detailed way of protecting their data privacy online. There are distinct terms about how and for how long data can be collected and used by a website, and the government hires human explainers to pass that knowledge along to the general public.

Since the AI is only programmed to make the decision, not explain it, that leads to people being hired to interpret the decision, such as if a person is approved for a mortgage, but the sheer amount of human hands that go into making that happen seems to outweigh the value of having it done by AI at all.

Industries and business models are being transformed by the rapidly accelerating pace of technological, demographic, and socio-economic disruptions, which are changing the skills that employers require and reducing the lifespan of existing employee skill sets. For instance, robotics and ML are likely to substitute specific tasks previously performed as part of existing jobs and free up workers to focus on new tasks. This will lead to rapid changes in the core skill sets required in these occupations.

AI AND AUTOMATION AS A STRONG INFLUENCE ON THE WORKPLACE

The effects of AI and automation are already apparent. Every day, we open our browsers to read about how another company is trying out delivery drones, self-driving cars, chatbots in place of customer service departments, and other features such as AI-powered accounting services and more. Jobs that were once the sole vision of the human race are slowly migrating to a machine-dominated workforce.

ChatGPT and several other AI text generators are breaking new barriers in what is possible, with interest from around the globe and a sudden uplifting of interested investors. These apps have shown the ability to craft images, graphics, speech patterns, writing samples, and even GIFs and videos that approach human-level standards. They aren't just for data engineers or computer experts either but are being integrated into popular apps that are easy to use, share, and learn from. While some jobs are ending with this technology, surely it is the case that many more are being created to replace them.

We've seen this time and again, from our earliest days as agrarian workers who discovered that a mule could pull a plow better than a farmer, to centuries of inventing machines to replace human power in washing our clothes, heating our homes, transporting us to our destination, and entertaining ourselves and our families. As AI succeeds, it will create new avenues for change that will perhaps push more workers out of their positions, an inevitability that we must eventually be prepared for. The extinction of professions is not meant to be cruel or seen as a conviction. The man who once reset the pins at the bowling alley has been replaced by a machine. The street sweeper now drives a truck that does the same work in a fraction of the time. Things change, and we change with them. AI will be used to the point where human interaction is still superior, and then it will recede until the next burst of talent arises and lets it surge forward once more.

Even as they do less repetitive, manual work, humans will still be needed for some of the higher-level decision-making tasks, along with planning, procurement, and everything that falls outside of the strictly algorithm-based function set.

Rising income and consumption levels, particularly in developing nations, growing healthcare requirements for aging populations, and investments in energy and infrastructure are factors driving employment demand that could potentially offset any workforce displacement caused by automation. Furthermore, additional investments in areas like infrastructure and construction may be necessary to mitigate the risk of job shortages in certain advanced economies.

AI, including ML concepts, can be highly productive tools that enhance efficiency without necessarily leading to job reductions. They often result in increased productivity for companies, reducing the need for workforce downsizing. While certain manual jobs may become obsolete, there will be an increasing demand for roles that prioritize complex problem-solving, creative thinking, and technology literacy. As businesses emphasize the significance of cognitive skills, positions requiring systems thinking, AI and big data expertise, and service orientation will become more prevalent. Furthermore, individuals who exhibit strong self-efficacy, resilience, flexibility, and a dedication to lifelong learning will be sought after, underscoring the growing need for workers who are not only technically adept but also possess strong socio-emotional attitudes like curiosity, motivation, and self-awareness. We can take heart in the precedent already set thirty years ago when automation became a trend in large factories, particularly the US auto industry based in Detroit, Michigan. Rather than seeing a huge number of workers sent packing, there was a brief dip followed by most of those former factory workers using their accrued skills to find work in other industries or different positions in the same company. They still had plenty of value, even if the jobs they performed had been turned over to a machine.

In summary, AI and productivity tools have the potential to greatly benefit humankind

by boosting productivity. While there may be concerns about the nature of new jobs and the social implications of increased leisure time, the overall impact on employment is expected to be a transformation rather than a loss of jobs. Investments in AI will come with their own inherent advantages.

TURBULENT TIMES

We are currently experiencing a period of significant contradictions and changes in the 21st century. The advancements in science, technology, and socio-economic progress, particularly in Asia, will shape a vastly different global landscape. Three key aspects highlight these differences.

The first involves the increase in advanced technology outside of the Western World. As Asian countries catch up with and/or surpass the West in tech ability, they will begin taking a much more involved place in being able to influence global events. This has been the case throughout history, from the Age of Exploration when Europe held power, to England and the US during the Industrial Revolution, and finally to the US and the Soviet Union post-World War II.'

A second factor will be the rising economic strength of India and China, the world's two largest populations, which are experiencing a renaissance of their impressive histories when their influence reached far and wide beyond their natural borders. The third factor will be a narrowing of global differences as more and more countries begin to rely on one another for economic and political success without the previously built-in barriers of rivalry and conflict. Some of these factors may have already begun to

become apparent. The tech-driven abilities to collaborate, communicate, and connect more easily are powering the drive toward a united global front.

Megatrends are powerful forces that are reshaping society and impacting the world of work. These trends include global economic shifts that redistribute power, wealth, competition, and opportunities, as well as disruptive innovations, radical thinking, new business models, and resource scarcity affecting all sectors. While COVID-19 cast a dark cloud over the entire world for more than a year, it also revealed lots of truths that had previously been hidden about the way businesses can be run, breaking through cultural standards that had been in place for decades, if not centuries. Costly time and money spent on flying across oceans for conferences were replaced by video calls that could be set up in less than an hour. Using augmented reality (AR) and virtual reality (VR) made inspecting far-off vehicles and equipment a reality, and it started to take the place of customer service representatives who were away from the office.

To attract and retain employees, customers, and partners in the coming decade, businesses must have a clear and meaningful purpose. Linear models are no longer going to guide the way forward. Companies can't make next year's strategy based simply on the last five years' results. They must be nimble and lean and able to pivot away from one plan when circumstances call for it or when an opportunity suddenly presents itself.

Being agile in your company isn't just a fad; it's the result of years of research in response to both megatrends that last for years and current trends, which keep their ears to the ground on how things are progressing in real-time. Perhaps the only certainty about the future is that it will be unpredictable, emphasizing the importance of agility.

Megatrends aren't just forward-facing either. Many of them show that lots of G-20 countries continue to see long-term

ramifications from the global financial crisis that occurred in 2008 and beyond. The realistic view is that the crisis didn't just end, and everything was fine after that point in time. Economic uncertainty breeds a lot of ill content from the stock market, from buyer interest, and from people not wanting to invest their money but rather keeping it close to home.

The power of AI and automation are megatrend technologies that encompass nearly every industry on Earth. Over the last 10-15 years, we've seen a rapid rise in the use of machine learning (ML) to analyze data and draw actionable conclusions for better business predictions. However, the capabilities of this type of technology go much deeper. Why aren't we seeing more adaptation? We have a few ideas:

1. **No one wants to be first:** First to succeed or first to fail? For some, the difference between one and the other is catastrophic. Unleashing the full power of AI and other tech makes many leaders trepidatious if the tech comes undone in their hands. They also fear putting technology ahead of their own human employees, either from a branding or an optics standpoint. Reducing the workforce by replacing humans with machines might sound good to the board of directors, but it's a public relations nightmare waiting to happen.

2. **The infrastructure isn't there:** Asia is fast-tracking its way to total electric vehicles in a lot of major cities, and the problem isn't the number of vehicles they have available but the number of charging stations and buildings equipped to run them is painfully small. The same analogy can be made for cutting-edge technologies. Businesses have to keep upgrading their hardware and capabilities in order to keep up one wave after another. The first was getting everyone on the internet, then dumping modems for digital, moving everyone from the server to the cloud, and so on. Clearly, some companies are wondering, "Where does it all end?" The infrastructure simply does not exist in less-developed countries to support the needs of cloud technology, big data analysis, and AI-powered customer support. The new tech might be more efficient, but that doesn't make it more affordable.

3. **Aging population of workforce:** As mentioned earlier, the aging population is also a potential hamstring for new tech immersion. When people are working later in life, they're occupying senior positions in companies for a lot longer as well. That means being in key stakeholder roles for a lot longer, as well. Not every older person is resistant to tech or resistant to change, but it's hard to envision C-suite level executives in their 60s and 70s suddenly deciding to shift away from existing business models to something relatively new and unproven as they head for their golden years. The longer that older employees stay employed, the more wages go up to keep them employed. Companies have to respond to that by raising prices, which forces the hand of inflation.

There are more dynamics at work than just technology issues. Migration policies are playing a key factor in labor shortages. Many populations are limited by immigration laws as to where they can move to on a long-term basis, even if a job is waiting for them there.

That means companies have to draw from a dwindling domestic pool rather than truly open the job to the best talent in the world.

SOCIO-ECONOMIC FACTORS SHAPING THE MODERN WORKPLACE

Like the dawn of the digital era, companies that will thrive in the forthcoming wave of technological disruption are those that swiftly adapt to impending changes. Enterprises must commence making definitive technology investments today. Only by possessing a sophisticated and well-functioning digital engine can enterprises be prepared to engage in or create new business environments and landscapes that will become essential. As personal computers began popping up in the 1980s and 1990s, the idea of AI was still a long way off. Even though internally, it felt like a lot of progress was being made, the forward-facing reality was that the moves were incremental and tiny, with nothing that would make anyone but another scientist sit up and go, “Wow, that’s it!” When computer chess programs were matched against the greatest champions in the world, they never achieved dominance. The only things we were getting about AI’s abilities were from the movie screen, and all of those were bad. “The Terminator,” “Battlestar Galactica,” “The Matrix,” and more all warned us of a sinister potential future where machines would rise up and decide humans were the planet’s biggest problem, and seek to eliminate us. Not exactly the kind of investment any firm wants to be first to market with, right?

When automation started happening in factories like the mighty auto industry of Detroit, some alarmists feared and wrote that there would be inescapable unemployment issues as a result. It appears that a different throughline is being told, however.

Despite the labor-saving potential of technologies like assembly lines and microchips, the number of employed individuals in the US has actually increased since Rifkin’s prediction. This trend is not limited to the US alone, as Switzerland and China have also witnessed growth in total work performed In last 50 years.

Like the early days of the Internet, businesses are swiftly heading toward a future that starkly diverges from their initial designs. Within the next decade, almost every business environment in which enterprises currently operate will undergo a comprehensive revolution. The way we utilize the Internet and interact with the digital world, the integration of technology into the physical realm, the level of control we exert over our surroundings, the degree of human-like collaboration and productivity in our interactions with machines, and even the limits of computers’ capabilities are all undergoing a complete overhaul.

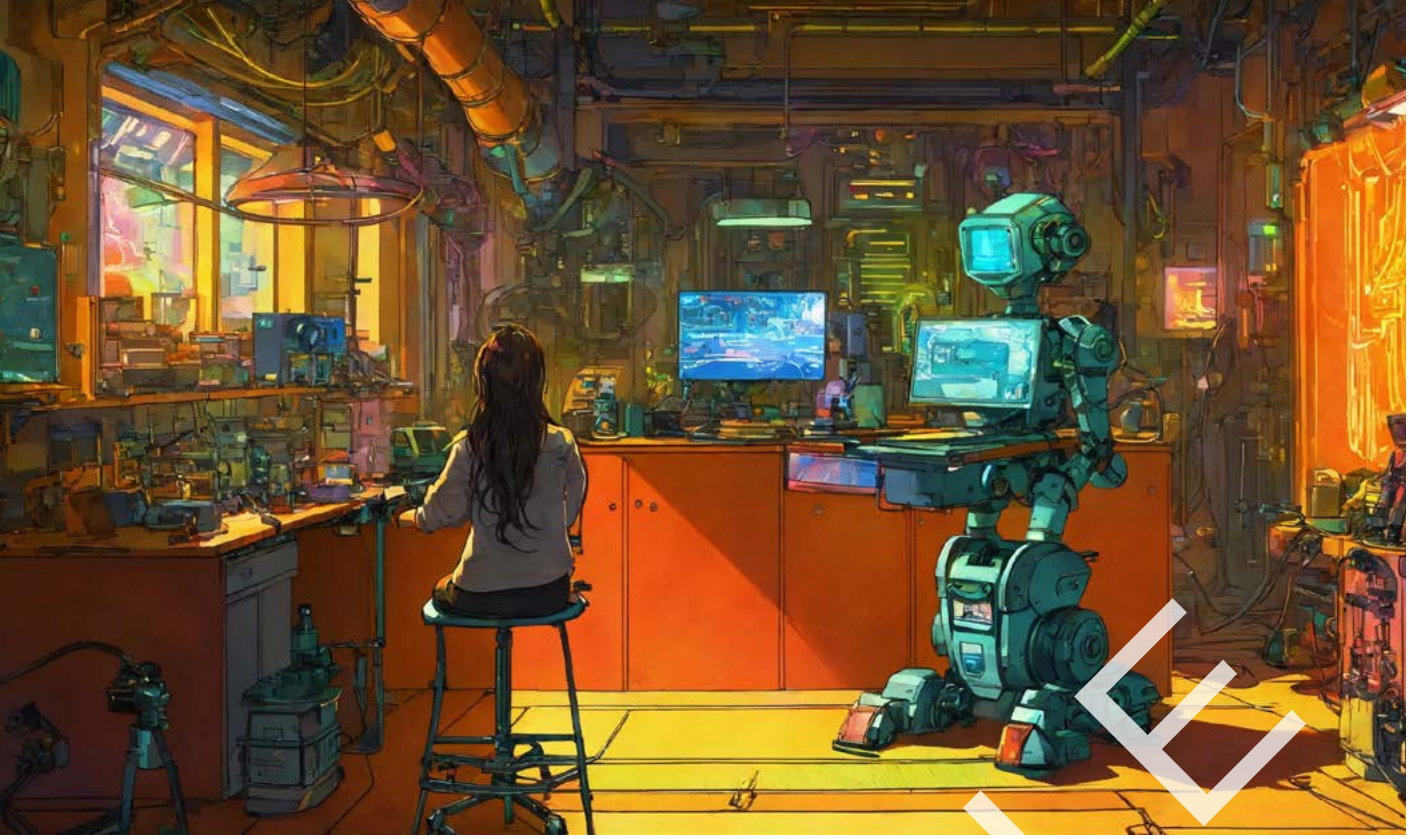
GLOBAL LABOR MARKETS ARE CHANGING

Everywhere you look, markets are transforming as a result of the fast-approaching moves to AI capabilities, robots, and automation. If AI is unleashed on the entire world, it has the potential to replace 300 million full-time jobs. That amounts to 25% of all jobs in the United States and Europe.

As impressive as the early forays into AI text and image creation have been, the real heavyweight in this prize fight appears to be the upcoming generative AI (GenAI), which will turn innovation on their head and give machines the power to generate content on par with that of original human creatives, leading to unprecedented creativity but also significantly blurring the lines on ownership and copyrighting. As it enters everyday use, there will be many hoops to jump through and legal frameworks to forge, but there is little doubt that GenAI will break down many barriers to how business is done.

However, the public debate surrounding these technologies reflects a nuanced view. While there is excitement about the potential benefits, concerns about the impact on employment often overshadow the optimism. The tendency of many executives and boards to have short-term perspectives can make them more reactive than proactive, especially during periods of rapid change. This can lead to a focus on short-term strategies, cost reduction, and transitional planning.

Nonetheless, the ongoing forces at play could have long-term effects. To summarize, the world is evolving into a realm that can be shaped as broadly, personally, and dynamically as our experiences on the



Internet, fundamentally altering the way we live. Given the emergence of AI and digital transformation, leaders must prioritize thought leadership, research, and innovative models to drive progress and mitigate risks.

THE DRAWBACKS OF AI AND JOB AUTOMATION

It is crucial to consider the potential drawbacks alongside the significant benefits of AI and automation. As these technologies assume more tasks, certain jobs are at risk of becoming obsolete. What will businesses do when faced with the prospect of streamlining workflows with more advanced machines versus eradicating entire classes of labor? Big businesses and mega-corporations don't exactly have the best track record when it comes to thinking about the comfort of their employees versus the bottom line. This could result in widespread unemployment and necessitate retraining for new roles. Moreover, AI and automation have the potential to worsen existing inequalities, leaving certain groups behind as the job market evolves.

Job positions most susceptible to replacement in the coming years include data entry clerks, administrative and executive secretaries, payroll and bookkeeping clerks, assembly and factory workers, accountants, auditing professionals, as well as business services and administrative managers. Conversely, roles expected to emerge include data analysts and scientists, AI and ML specialists, robotics engineers, digital transformation experts, and software and application developers. Other emerging positions include process automation experts, information security analysts, and Internet of Things (IoT) specialists.

What we're seeing here is a dissolution of jobs that require some level of education

but not something like an advanced degree. The secretary who answers the phone to reroute calls and take messages for the boss is already being replaced by an automated chatbot answering machine service that can provide the same level of efficiency and professionalism at 4 a.m. as it does at 4 p.m. and never requires a coffee break, a raise, or parental leave.

Successful integration and expansion of these emerging technologies require not only proficiency and maturity to generate business value but also a strong focus on AI decision transparency and regulatory compliance. Privacy and proper handling of personal data are prioritized by most technology providers and safeguarded by evolving regulations and associated legal actions across many countries. The challenge is amplified by the rapid growth of corporate and personal data collection, which fuels real-time decision-making or intelligence for various AI models. Addressing this issue requires technology providers to adopt ethical and accountable practices with AI-powered systems, starting from the design phase, to mitigate AI risks, ensure fair outcomes, respect privacy, and facilitate explanations of AI-based outcomes. We're already seeing enormous potential for danger and harm in the initial offerings of new technology, especially ChatGPT and other AI generation tools, which can make new stories, images, videos, and even audio recordings that manipulate an audience's perception of what is real and what is not. Combined with social media's ability to make something "go viral", and we're seeing a dangerous precedent being set with no guardrails in place. If we don't get a framework in place soon, it will be too late to reel it in later.

Furthermore, business processes that are not already conducted in digital formats will increasingly be pushed in that direction, primarily to gather valuable data. This includes tracking physical movements and interactions within the office, starting subtly with measures like key fob tracking and later becoming more overt as the value of such data becomes evident. While this level of surveillance may seem intrusive, it can actually yield important benefits for workers themselves. Will workers see it this way, though? They are already being tracked for where they go online during the day and when they enter and exit the building and the parking garage.

For instance, machines could use algorithms to detect patterns such as overwork or excessive sitting, which may negatively impact productivity. These algorithms could also identify risk factors for harassment, abuse, and biases in hiring and promotion practices. Through systematic analysis of performance, workers who rely on others or are promoted beyond their competence, known as the "Peter Principle," can be identified and addressed. AI analysis can also encourage companies to abandon bureaucratic practices that do not genuinely enhance workers' performance.

However, emerging nations face significant challenges as technology widens the gap with developed countries. Without substantial and sustained investment in technological sovereignty, emerging

nations will continue to experience high unemployment rates and migration.

These nations find themselves looking to bigger players like China for help getting up to speed from a technological point of view. China has the means and the capabilities to guide other countries along to technological stability and is a powerful trade partner. The Chinese have made technology a priority during their rise to global power over the last few decades and can be a powerful trade and political ally.

Finally, some aspects of trending technology are still not applicable to many real-life scenarios. Currently, the necessity for blockchain and Web3 technologies is limited, especially in the absence of advancements in technologies like the Internet of Things (IoT) and faster Internet, such as 5G and 6G, that are crucial for their success. Countries that are still trying to build roads for their suddenly massive mass transit populations, stabilize national healthcare systems, balance their currency against a more stable one, secure their borders, or settle thousand-year-old conflicts in their regions aren't going to have the time or the money to invest in upgrading to 6G and such.

LARGE LANGUAGE MODELS (LLMS) AI

There are certain factors that contribute to a more cautious view regarding the transformative potential of large language model (LLM) AI. The recent developments with ChatGPT and OpenAI have essentially provided improved access to this existing technology rather than achieved a groundbreaking breakthrough. It is important to recognize that LLMs have inherent limitations.

While LLMs have access to vast amounts of data and resources, enabling them to deliver results, there are concerns about the sustainability of the business model behind their current usage. Additionally, the notion that LLMs are evolving into general-purpose artificial intelligence is not entirely accurate. LLMs excel in predictive

modeling and can provide answers based on large amounts of text data.

However, they have limitations in terms of generating new value or creating new data, which is a key aspect of general-purpose intelligence. This restricts the applicability of LLMs to specific use cases where they can summarize and analyze existing content effectively. They are highly proficient productivity tools in scenarios involving text and words but should be approached with caution beyond those contexts.

There are also conceptual limitations of LLMs that need to be acknowledged by the general public. LLMs rely on vast amounts of data to provide predictive answers, which means they inherit biases present in the data they process. They are unable to challenge or question the assumptions embedded in the data, preventing them from offering original thoughts. LLMs are primarily capable of providing an average opinion on a specific subject based on the data they analyze.

While they excel in this regard, there are instances where they may misinterpret data, resulting in low-quality responses. In such cases, the average opinion provided by LLMs can be perceived as the prevailing viewpoint. Consequently, LLMs face two main challenges: the inability to fact-check answers and the reliance on generating responses based on a collection of existing opinions. This may shut down critical thinking, and it's a potential issue humans will need to address.

THE EFFECTS OF AI AND AUTOMATION ON LEADERSHIP

The availability of affordable AI technology has leveled the playing field for entrepreneurs, reducing entry barriers in various industries. Where once small businesses and startups had no chance to compete against powerful firms, now they are on a much more level playing field. **They can market their wares wisely online at virtually no cost and use AI to create business plans and sales strategies, as well as graphics and logos, which were previously done in-house or at exorbitant prices.** The result is a win-win for the consumer — more competition means more selection and lower prices.

Historically, job creation relied on strong aggregate demand and economic growth. With the introduction of new technologies, productivity has improved, enabling companies to lower prices for consumers, offer higher wages to employees, or distribute profits to shareholders. These actions stimulate demand across the economy, ultimately promoting job creation.

When Adam Smith published "The Wealth of Nations" in 1776, the same year as the American Revolution, he postulated that productivity and wealth are driven by a division of labor. Rather than have everyone be somewhat good at everything, it made more sense for people to be trained in specific crafts so that they might excel at them and become experts. The entire conceit of the apprenticeship style of learning follows

Workforce innovation involves practices that enable individuals at all levels of an organization to be agile, leveraging their skills, knowledge, and creativity to the fullest extent. Agile organizations prioritize the customer and strive to fulfill various needs throughout the customer journey.

this idea. This leads to overall economic growth and prosperity. Smith's insights into the benefits of specialization remain relevant today, especially as very specific technologies are needed to perform certain tasks, which cannot typically be learned on the job without an advanced degree.

Austrian economist Joseph Schumpeter doubled down on Smith's prediction in the first half of the 20th century when he declared that entrepreneurs are vital to an economy because they disrupt markets and drive innovation cycles. Similarly, Adam Smith's earlier insights highlighted how productivity improvements arise from specialization and the development of specialized machinery by firms and entrepreneurs. These advancements, achieved through mechanization and time-saving innovations, formed the foundation of innovation economics.

Schumpeter posited that entrepreneurs are the first line of defense against a stagnant economy, as they make waves in existing ones by creating new revenue streams. Any market that has the ability to make money will be flooded by entrepreneurs who are determined to make a profit without too much conflict, leading to lots of innovation. This process, known as creative destruction, drives innovation and economic growth. Schumpeter's ideas accurately predicted the future trajectory of work, often citing the railroad as an example of a revolutionary force in the economy that brought new opportunities while displacing outdated practices. He emphasized the entrepreneurial mindset and recognized that economic innovation arises from entrepreneurs who innovate and improve processes — the creative aspect — leading to the decline of outdated companies and methods — the destructive aspect.

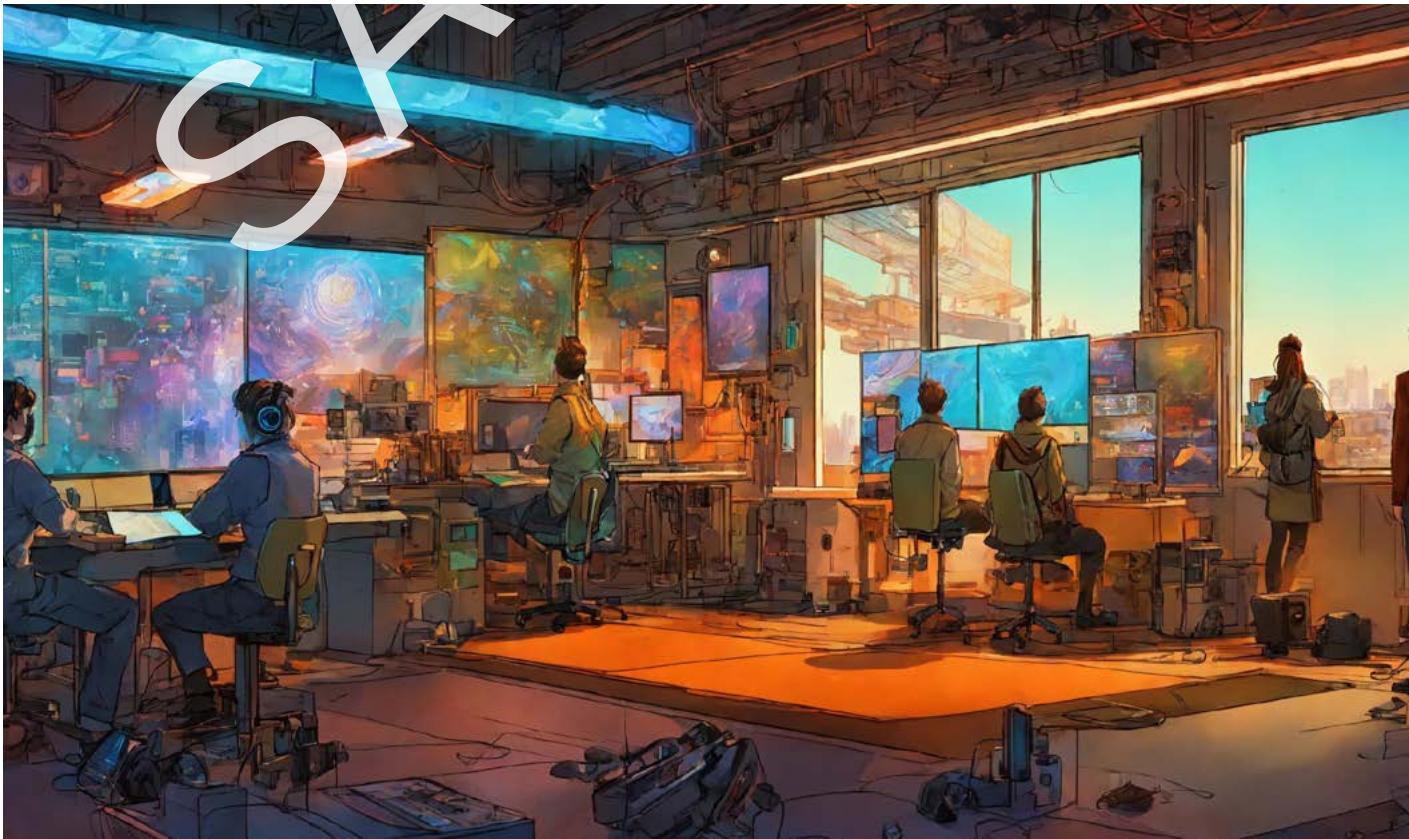
Karl Marx, another well-known economist, made the initial overtures on the theme of the disadvantages of being the first mover in an industry because the costs for the pioneer will be higher than for everyone who comes after and can learn from the pioneer's mistakes.

In the realm of AI, large companies like Google and Meta have been the first movers in developing deep learning technologies. Fostering a culture of innovation within organizations requires collaborative work and empowering employees. This enables anyone to propose ideas and ensures support through well-structured processes.

Workforce innovation involves practices that enable individuals at all levels of an organization to be agile, leveraging their skills, knowledge, and creativity to the fullest extent. Agile organizations prioritize the customer and strive to fulfill various needs throughout the customer journey. They also aim to create value for multiple stakeholders, including employees, investors, partners, and communities. To adapt to evolving stakeholder requirements, agile organizations establish versatile and decentralized strategies for value creation, often involving direct collaboration with external partners.

Furthermore, AI has leveled the playing field for entrepreneurs by reducing entry barriers in many industries. With some AI generators completely free and others taking the shape of cloud services and adopting monthly, yearly, or usage price packages, this incredible power is remarkably affordable for anyone from the startup in its day all the way up to the pinnacle of companies on the “Dow Jones” average.

Either way it has its potential repercussions. Is the entrepreneur, three months into his business, suddenly capable of taking on the company with three decades of experience under its belt? Entrepreneurs like to use terms like “failing fast” when they are in start-up mode, taking time to work out the kinks as they begin expansion plans. But if AI allows a fledgling video studio with three employees the chance to compete head to head with one that has been around with three hundred, does that put startups on a track of being destined to fail, unable to handle the pressure and the competition?



CHAPTER 2

FUSION TEAMS AND TRIBES