

America's Next Chapter

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"Life, liberty, and the pursuit of happiness" is more than a phrase but a promise that has shaped the American conscience through triumphs and trials alike. Now, in a world defined by rapid change, rising inflation and high interest rates, the United States remains more resilient than most. Even over the past decade, as China's rise has seemingly dominated global discourse, American hegemony has continued to defy expectations. This is rooted in its ability to adapt, innovate and lead. Yet challenges persist. Consumer sentiment wavers, and a divisive election cycle points to undercurrents of uncertainty. Yale professor Amy Chua famously warns in her bestseller *Day of Empire* that the precursor to the end of a superpower lies in growing intolerance. But I would challenge these assumptions. Why? Away from the evolving identity of what it means to be American, I see a future of pioneering breakthroughs, of abundance and an American dream that is more alive than ever before. Over the past

four months, from San Francisco to Savannah, D.C. to Dallas, I have explored the people, industries and innovations writing the next chapter of the American story. It is a chapter that many leaders believe will be marked by a transformative inflection point driven by technological advancements. And so, this feature will focus on three key themes. The first and largest section will focus on the huge opportunities being brought on by semiconductors and the AI revolution. The second will focus on how life may change for Americans over the coming years, from how they approach health care to their shopping habits. The third will look at how infrastructure and critical supply chains are being rebuilt and reshored, and how cities are thinking intuitively about sustainable growth. I hope this explorative feature, which takes an apolitical lens, serves to help you understand how the U.S. will change over the coming years and how you can best prepare for the opportunities ahead.



DON GRAVES |
19TH DEPUTY SECRETARY OF
COMMERCE

Quantum is the enabler to solve the 21st century's crucial issues. From Bell Labs to Silicon Valley, U.S. innovation thrives on government investments in infrastructure and equity-focused ecosystems.

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IN THIS REPORT...



BRUCE ANDREWS |
CHIEF GOVERNMENT
AFFAIRS OFFICER,
INTEL

The cost gap between manufacturing in the U.S. and Asia is around 40 percent, which the CHIPS Act is meant to address.



CRAIG VOSBURG |
CHIEF SERVICES OFFICER,
MASTERCARD

Expanding the reach of secure, reliable payment solutions will not only fuel economic growth but also help address the digital risks that come with a rapidly evolving landscape.



JIM KAVANAUGH |
CO-FOUNDER & CEO,
WWT

Our focus is on helping organizations build AI platforms that are purpose-built for their needs. Many companies are still figuring out how to implement AI effectively.

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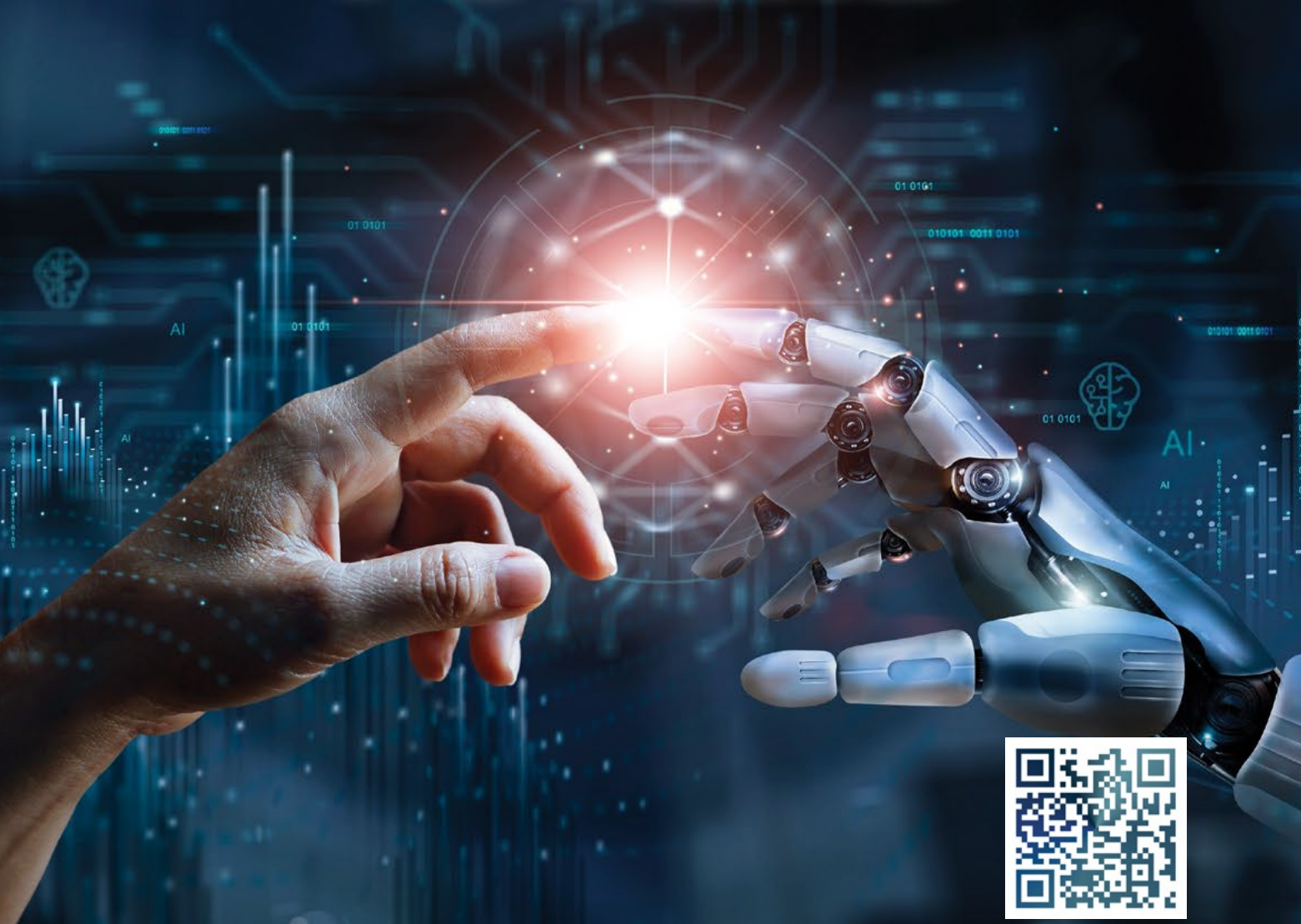
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we enable AI for a

SMARTER FUTURE



How Chips Will Shape America's Future



Reshoring semiconductor manufacturing is vital for a strong and resilient supply chain. Semiconductors are integral to our national security and cross all sectors of our economy. By fostering public-private partnerships and workforce development, we can reestablish U.S. semiconductor leadership.

THOMAS SONDERMAN |
CEO,
SKYWATER
TECHNOLOGY



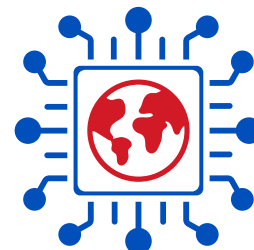
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\$1 trillion

revenue global chip industry by

2030

Source: ASML



Over the past few months, I have frequently heard from tech and chip veterans that this AI revolution is the golden era they have waited decades for. At the core of this revolution is the semiconductor industry, which powers nearly every aspect of modern technology and, according to ASML, will be worth \$1 trillion globally in revenue by 2030. “A single chip can unlock incredible possibilities. Without them, our economy and security are at risk,” highlights Bruce Andrews, chief government affairs officer at Intel.

Chips are indispensable for computational tasks and are likely more ubiquitous than you imagine. “From the moment you wake up, our products are at work,” says Ganesh Moorthy, CEO of Microchip. “Your climate control system, whether it is an air conditioner or a thermostat, likely contains our microcontrollers and analog products. Your alarm clock, home security system and even your electric shaver or toothbrush incorporate our semiconductors. As you make breakfast, our technology is present in your coffee machine, microwave and kitchen appliances,” adds Moorthy. As computational demands grow more complex, especially due to AI, the need for advanced chips increases.

The U.S. holds a key advantage in chips, in that “it has maintained leadership in design, with companies like Apple, NVIDIA and Google leading the way,” says Anirudh Devgan, president and CEO of Cadence. “If we lose our edge in design, no amount of manufacturing can compensate.” The design of these chips is the engine fueling innovation, while the growing convergence of semiconductor and system companies is transforming

the industry. Companies like NVIDIA, once purely semiconductor players, are now regarded as system companies, while major system players like Apple and Google have built large in-house silicon teams. This dynamic means system companies are designing tailored chips for their specific needs, as seen in Tesla’s custom silicon driving its EV innovation. Michael Schmidt, director of the CHIPS Program Office, further adds that “a key advantage is that major buyers of leading-edge chips—companies like Apple, NVIDIA, and Qualcomm—are American, which bolsters the U.S. position.”

Yet, to capitalize on this advantage, the U.S. is now focusing again on manufacturing to create a pipeline from design all the way to production, “despite the prevailing notion that manufacturing was no longer viable in the U.S.,” underlines Thomas Sonderman, CEO of SkyWater Technology. “The push for ‘Made in America,’ which began under the previous administration, has accelerated, and we are at the forefront of bringing semiconductor manufacturing back to the U.S.,” adds Sonderman.

Playing Catch-up

Once producing nearly half of the world’s chips, the U.S. semiconductor industry now produces only 10 percent, relying heavily on East Asian imports, with TSMC—the Taiwanese giant—manufacturing the majority of advanced chips. The COVID-19 pandemic exposed the dangers of this dependency, with supply chain disruptions reverberating across industries. “Semiconductor shortages during the pandemic exposed their critical

U.S. aims to make



20% of world's leading-edge chips by **2030**

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JOHN KIBARIAN |
CEO, PDF SOLUTIONS



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role, rallying bipartisan support for the CHIPS Act to secure national security and economic stability,” underlines John Neuffer, CEO of the Semiconductor Industry Association (SIA).

Indeed, efforts to rebuild domestic production are gaining momentum with the CHIPS and Science Act at the heart of this manufacturing push. It is the U.S. government’s largest-ever investment in semiconductor production, with \$52 billion allocated to strengthen manufacturing, research, and supply chains. This historic funding has catalyzed transformative projects like Intel’s \$100 billion expansion and TSMC’s \$65 billion Arizona facility. But it is not as simple as bringing TSMC to the U.S. Fabrication labs (fabs) take years to build and as Jean-Christophe Eloy, CEO and president of Yole Group, adds: “The entire supply chain involves hundreds of companies with specific skills that are not easily relocated.”

Moreover, this reshoring may be made more difficult in 2025. Speaker Mike Johnson’s suggestions of rescinding CHIPS Act funding highlights the need for consistent bipartisan support. Without it, U.S. companies will struggle to compete with East Asia’s homegrown companies. As Ganesh Moorthy, president and CEO at Microchip, shares: “Over the years, semiconductor manufacturing shifted abroad due to various incentives provided by other countries. Bringing it back requires significant capital, often needing government assistance to reduce risks. Countries like Taiwan, Korea, Japan, Israel and now Europe and India have historically offered such incentives.”

Bruce Andrews of Intel adds: “We do not just compete with companies, but with entire countries.”

TO BE GLOBAL OR NOT TO BE



Laurie Locascio |
UNDER SECRETARY OF COMMERCE FOR
STANDARDS AND TECHNOLOGY AND
DIRECTOR, **NATIONAL INSTITUTE OF
STANDARDS AND TECHNOLOGY (NIST)**

I’m proud of the efforts to bring back high-quality manufacturing jobs and build domestic capabilities. However, this focus on strengthening our production capacity does not mean isolating ourselves.



Ganesh Moorthy |
PRESIDENT & CEO, **MICROCHIP**

The goal is to rebalance manufacturing geographically, enhancing resilience against geopolitical uncertainties and natural disasters. The CHIPS Act, with its thoughtful policy of tax incentives and grants, encourages companies to take risks they otherwise might not.



Zachary Holman |
VICE-DEAN FOR RESEARCH & INNOVATION,
ARIZONA STATE UNIVERSITY (ASU)

The CHIPS Act has been transformative, but I worry about long-term funding; semiconductor research is capital-intensive and progress risks stalling.



Tony Pialis | FOUNDER & CEO,
ALPHAWAVE SEMI

The greatest limitation to AI’s advancement is not in algorithms or software but in the hardware used.



Setsuo Iwashita |
PRESIDENT AND CEO, **ULVAC**

We believe that the semiconductor manufacturing industry will experience a resurgence in the U.S., and we are positioning ourselves to capitalize on this growth.

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TetraMem’s analog in-memory computing engines enable the most advanced, and most energy-efficient AI computation conceivable.

What Will AI do for Industry?

So why do chips matter to America's next chapter? From AI to autonomous vehicles, chips dictate the pace of innovation. Imagine this: from medical breakthroughs to robots managing your dirty laundry, all advancements hinge on these chips. And as Chris Miller says in his book *Chip Wars*, "The rivalry between the United States and China may well be determined by computing power."

THE NEXT CHAPTER FOR INDUSTRY



CHRISTINA CRAWFORD KOSMOWSKI |
CEO, **LOGICMONITOR**

By 2030, the U.S. will be reshaped by a new era of hyper-connected, AI-driven digital ecosystems—fully automated and fueled by real-time data.



STEVE MURPHY | CEO, **EPICOR**

A few years ago, moving to the cloud or using AI was seen as experimental in many of these industries. Today, it is becoming standard practice. The conversation has shifted from 'Why?' to 'How?' Customers want practical use cases that solve real problems.



MARK MOFFAT | CEO, **IFS**

In the coming years, the most profound transformations will occur in industrial sectors through conventional AI, particularly in machine learning and anomaly detection.



RAZAT GAURAV | CEO, **PLANVIEW**

The world spends over \$3 trillion annually on digitalization, but approximately 40 percent of that is wasted due to misalignment between business and technology teams.



AARON LEVIE | CEO & CO-FOUNDER, **BOX**

The biggest opportunity for customers lies in unlocking the value of their unstructured data. ...AI can tap into this data, turning it into actionable insights and helping businesses make better decisions.

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We are living in AI times, and within just a few years, AI will be as invisibly embedded in our lives as the internet, electricity, or cars are. The question "Are you using AI?" will vanish, much like we stopped asking if someone is using the internet.

AI Agents: Your Newest Teammate?

AI is being applied in the workplace at breakneck speeds, and as Dominic Grillo of OpenAI exclaimed at BoxWorks Conference in San Francisco last month, "2025 will be the year of AI agents." AI agents are programs that perform tasks, autonomously or semi-autonomously, and can analyze data, make decisions, and take actions based on specific goals, all while continuously learning and adapting. While some view this as a hype cycle, AI agents are already executing tasks such as sales development, contract management, customer interactions and workflow automation. 11x.ai recently raised a \$50 million Series B, led by Andreessen Horowitz, to scale out their autonomous digital workers. Unlike traditional automation, agents can think, adapt, and even make decisions. Aaron Levie, CEO and co-founder at Box adds: "AI agents could handle tasks like contract edits or customer interactions, saving months of work and completing them in minutes."

Industry.AI

AI is revolutionizing industries. In health care, drug discovery cycles that once took years are now condensed into weeks. In finance, AI-driven fraud detection systems reveal patterns invisible to humans. In manufacturing, predictive maintenance minimizes downtime, saving millions. "We're now in an era of the 'self-healing enterprise', where intelligent automation tackles issues before they emerge, empowering companies to grow and innovate fearlessly," highlights Christina Crawford Kosmowski, CEO of LogicMonitor.

This transformation extends to frontline workers, as Steve Murphy, CEO of Epicor, explains: "Imagine a factory worker resolving defects before they escalate or a warehouse team optimizing workflows in real-time—all without technical expertise. It's about turning good ideas into action at every level of the organization."

So, what can we expect in the near term for AI integration? Charles Sansbury, CEO of Cloudera, expects to see: "Significant progress in industry-specific applications, such as predictive maintenance and analytics-driven optimization. These early successes will lay

Hybrid Observability powered by AI



the groundwork for advanced use cases as organizations refine their data infrastructure and expertise.”

Cloud Reinvented

The cloud is evolving from simple storage to enabling businesses to scale AI solutions once reserved for tech giants. “One of the most significant shifts in the infrastructure market in the last 20 years has been the rise of AI infrastructure,” says J.J. Kardwell, CEO of Vultr. “However, the performance and price of GPUs have improved drastically, enabling infrastructure providers like us to deliver them as a service at competitive rates.”

This accessibility levels the playing field. Startups and mid-sized companies can now leverage AI for data analysis, customer personalization, and workflow optimization without costly systems. Jim Kavanaugh, CEO of World Wide Technology (WWT), explains: “We are focused on creating unified data fabrics that integrate structured and unstructured data—everything from videos and engineering drawings to voice and text.”

The Question of Safety: Can We Trust AI?

For all its promise, AI comes with risks, and ignoring them could have dire consequences. From algorithmic bias to the potential for misuse, ensuring AI systems remain ethical, fair, and secure must be a priority. Yet, achieving this is no small task, particularly given the complex socio-technical nature of AI.

The National Institute of Standards and Technology (NIST) is taking proactive steps by convening experts from diverse disciplines to create frameworks that address biases while grappling with the inherent complexity of AI systems.

As the outgoing under-secretary Laurie Locascio, director of NIST, highlights, “Our goal is to develop methods to measure these characteristics with as much reliability as possible, even though we acknowledge that we’ll never achieve the same precision as we do in purely technical measurements.”

Building trust in AI will require not just technical innovation but collaboration, well-thought-out regulation by those that truly understand AI, and the awareness to address human fallibility in decision-making processes.



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Today, AI deployment is challenged by cost and power limitations of traditional compute architectures. TetraMem's analog in-memory technology overcomes these by delivering the most energy-efficient AI platform, enabling development of AGI and beyond.

DR. GLENN GE |
CO-FOUNDER AND CEO,
TETRAMEM



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The Path to AGI

Over the past four months, I have asked dozens of experts when artificial general intelligence (AGI) might be achieved. AGI, as OpenAI defines it, refers to “AI systems that are generally smarter than humans.” However, Dario Amodei, co-founder and CEO of Anthropic, prefers the term “powerful AI,” given that the definition of AGI is a moving target, in the same way that the definition of a supercomputer has evolved over time. While timelines for achieving AGI differ widely, one consensus is clear: We remain far from this milestone due to the limitations of current digital processors. As Dr. Glenn Ge, CEO of TetraMem, explains: “You can’t send people to the moon with a steam engine.” He believes advancements in analog and neuromorphic computing, inspired by the human brain, are essential steps. Analog in-memory computing could significantly accelerate the path to AGI by mimicking natural neural processes more efficiently than traditional systems, addressing energy inefficiencies and data movement bottlenecks.

So when is AGI likely? Ray Kurzweil, futurist and inventor, has long predicted that AGI will be achieved by 2045, coinciding with his concept of the singularity, a moment when technology surpasses human intelligence and ushers in an era of exponential progress. His vision suggests that advancements in areas like neuromorphic computing could serve as critical stepping stones toward AGI.

And why aim for AGI? Imagine all of the problems we face on our planet, from climate change to neurodegenerative diseases. It is not an exaggeration to believe that AGI can offer a solution to them all. In the relative short term, by 2030, Ben Fielding, co-founder at Gensyn, believes there will be a shared infrastructure for AI models. “One company might have specialized data for a share of a model that can interact seamlessly with other specialized models. This creates a global knowledge base similar to what Wikipedia did for text. However, by 2030, humans will still be the primary curators of these pathways,” says Fielding. By 2035, his co-founder, Harry Grieve, believes this process will be heavily automated. The creation and curation of models will create a parallel machine society. “Machines will autonomously manage complex tasks, optimizing themselves with minimal human intervention. This will lead to a decentralized network of machine intelligence, where individual models or ‘agents’ collaborate to provide solutions,” says Grieve. As you can imagine, achieving AGI will not

NECESSITY IS THE MOTHER OF INVENTION



JOHN KIBARIAN | CO-FOUNDER,
PRESIDENT AND CEO, **PDF SOLUTIONS**

Advanced nodes take 90 days to make a wafer; early issue detection avoids costly material losses, saving millions in semiconductor production.



RODOLFO ROSINI | CO-FOUNDER & CEO, **VAIRE**

Our approach is to recycle that energy within the chip, preventing it from being lost. This architecture could potentially achieve 4,000 times more efficiency than today’s AI chips.



GENE SHERIDAN | FOUNDER & CEO, **NAVITAS**

Gallium nitride allows three times faster charging, smaller electronics, and expands to data centers, EVs and sustainable infrastructure.



BALU BALAKRISHNAN | CEO,
POWER INTEGRATIONS

Gallium nitride offers significant advantages in efficiency and cost, particularly for AI data centers where traditional silicon struggles to meet energy demands.



RAJESH VASHIST | CEO, **SITIME**

Imagine a phone that doesn’t rely on GPS but carries its own atomic clock—while such technology is expensive today, we foresee a time when SiTime could make it more accessible.

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simply be one of humankind’s greatest technical feats but one of its most profound societal and ethical challenges. Guaranteeing safety, managing ethical concerns and preparing for AGI’s potential impact on humanity requires collaboration across the leading AI organizations, whole industries and every major nation. Whether it takes decades or arrives sooner than expected, we are already grappling with what AGI will bring. If it seemingly happens at a specific moment, it will undoubtedly be the most profound human milestone.

RETHINKING CHIPS

The immense potential of AI ultimately rests on hardware, most evident in NVIDIA’s ascent to being the most valuable publicly traded company. However, the industry faces a challenge each day to innovate as Moore’s Law—the prediction that the number of transistors on a chip doubles approximately every two years—is nearing its physical limits. This has pushed the industry to rethink chip design, with a sharp focus on cutting power requirements for AI workloads. But no industry defines Ester Boserup’s famed proverb, “Necessity is the mother of invention”, more than semiconductors.

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TIM OLSON | CEO, **DECA TECHNOLOGIES**

Our 600-millimeter panel-level process has paved the way for more complex AI chips, creating a platform capable of producing the industry's most advanced devices.



RON HUEMOELLER | PRESIDENT & CEO, **SARAS MICRODEVICES**

It takes an enormous amount of power, equivalent to that of a city or a small nuclear power plant, to run these super data centers that drive AI. This approach is unsustainable. Addressing the conundrum of power efficiency is at the heart of what we're doing.



FUMIHIDE ESAKA | CEO, **AMBIQ**

Our groundbreaking technology has the potential to reduce energy consumption in data centers and consumer electronics by five to 10 percent globally.



MICHAEL PLISINSKI | CEO, **ONTO INNOVATION**

Glass offers better thermal properties and stability, reducing strain on interconnects while enabling smaller, tighter connections for AI and high-performance computing.

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Necessity is Always the Mother of Invention

By 2030, the AI revolution is projected to consume 8 percent of the world's electricity supply. The stakes are clear: How do we sustain this revolution without breaking the planet? The first is through novel chip architecture where there is a fundamental change occurring: from general-purpose processors toward tailored solutions that maximize efficiency

RISC-V: AN INDUSTRY OF COLLABORATION



CALISTA REDMOND | CEO, **RISC-V INTERNATIONAL**

RISC-V is democratizing semiconductor design, enabling faster innovation and customization for AI workloads.



PATRICK LITTLE | CEO, **SIFIVE**

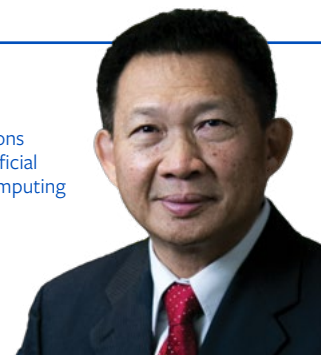
The evolution of technology, particularly in AI and intelligent edge devices, is positioning RISC-V to become the de facto standard.

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We are advancing the industry by delivering fundamentally new semiconductor assembly innovations which are critically required in artificial intelligence, high-performance computing and memory applications.

FUSEN CHEN | PRESIDENT AND CEO, **KULICKE AND SOFFA INDUSTRIES**



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and reduce waste. A key path lies in developing chips designed specifically for AI workloads. Amazon recently announced a supercomputer made of their AI chips, Trainium 2, as an alternative to NVIDIA's GPUs. Given NVIDIA's monopoly of 90 percent, as of December 2024, on the supply of AI chips, it is no surprise that all tech hyperscalers are doubling down on the market. However, innovation does not only lie in the hands of the tech giants. High-growth startups like TetraMem are pioneering analog in-memory computing to overcome efficiency bottlenecks. "Our approach minimizes data movement by integrating memory and computation in the same physical location, achieving brain-level efficiency," highlights Dr. Glenn Ge, TetraMem's CEO.

Amiq has challenged the laws of physics building circuits that operate at just 0.4 volts instead of the standard 1.8 volts. "By drastically reducing the power needed for each operation, we have helped transform what is possible in battery-powered devices. Now, leading smart devices can offer four weeks of battery life, shattering the old limitations of daily charging." In fact, the wearable this reporter is wearing lasts for a week due to the Amiq chip inside it.

Meanwhile, Semtech's ultra-low-power chips are enabling edge AI systems to operate on minimal energy. "Our LoRa technology can enable devices to operate for up to 10 years on a single battery," explains Dr. Hong Hou, Semtech's CEO. "It's a testament to how minimal power consumption can transform not just smart cities but also AI infrastructure".

Advanced Packaging

Advanced packaging is also increasingly becoming a solution to enhance performance without the large investments needed for cutting-edge transistor development. This is not your typical packaging, rather technology as advanced as the chips themselves. As traditional scaling through Moore's Law plateaus, "advanced packaging enhances system-level performance through customization, offering a cost-effective solution as transistor shrinkage becomes less viable," explains Bob Patti, president of NHanced Semiconductors.

Moreover, with transistor density on a single semiconductor die—a small block of semiconducting material on which a given functional circuit is fabricated—becoming harder to achieve, the industry has shifted towards chiplets. "This allows for better functionality at



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a lower cost,” highlights Fusen Chen, CEO of Kulicke and Soffa Industries. “It is exciting because this shift plays to our strengths in advanced packaging, where we are focused on enabling these next-generation solutions.”

BUILDING THE ECOSYSTEM TO DELIVER AI

With the chips processing computational tasks, it is the data centers providing the infrastructure to power and house this computing capability. They are the nerve centers of AI chips, and the AI revolution is driving an unprecedented growth of them. Billions of dollars are pouring into infrastructure to meet surging demand and by 2030, the global data center market is projected to reach \$517 billion, according to Allied Market Research. “Growth requires significant investment, whether in expansive data halls or land and connectivity infrastructure,” says Andrew Power, president and CEO of Digital Realty.

These investments are reshaping the landscape of digital infrastructure, with new clusters emerging in unexpected locations. While traditional hubs like Northern Virginia and Silicon Valley dominate the market, suburban areas and secondary cities are becoming hotspots for data center expansion. “We target cities like Phoenix, Dallas and Chicago, which allow us to stay near major clients while keeping operational costs manageable,” explains Eric Schwartz, CEO of CyrusOne.

Edge data centers—smaller, decentralized facilities located closer to end users—are gaining prominence to support latency-sensitive applications like autonomous vehicles and real-time AI analytics. “Advancements in 6G and distributed compute needs will drive the rise of edge data centers. These hubs will be essential as digital ecosystems evolve,” says Juan Font, CEO of CoreSite.

Meanwhile, the role of connectivity in urban hubs like New York remains critical. “Cities like New York and Chicago are data hubs, and as AI and IoT continue to expand, data generation will only increase,” explains Phillip Koblence, co-founder and COO of New York Internet.

The challenge now for data centers is managing the massive demand, which DataBank’s CEO, Raul Martynak, says has led to bottlenecks particularly in power constraints. “In Ashburn, Dominion Power had to pause new projects due to transmission capacity issues. Similar bottlenecks have occurred in other markets like Santa Clara and Phoenix.”

Reinventing Data Centers

Indeed, overcoming the notorious energy demands of data centers, which will consume 2% of global electricity by 2026 according to the International Energy Agency, is a pressing need. Cooling systems alone can consume as much as 40% of a data center’s electricity. “Today’s racks typically operate at around 10 kilowatts, but we are already preparing



As we look to the future, the United States has a tremendous opportunity to lead the world in this next digital revolution. By investing in cutting-edge data center infrastructure, we can support the rapid growth of AI and cloud technologies, ensure that our businesses remain competitive, our communities stay connected, and our nation continues to innovate.

ANDREW POWER |
PRESIDENT AND CEO,
DIGITAL REALTY



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Edge data centers—smaller, decentralized facilities located closer to end users—are gaining prominence to support latency-sensitive applications like autonomous vehicles and real-time AI analytics. Advancements in 6G and distributed compute needs will drive the rise of edge data centers. These hubs will be essential as digital ecosystems evolve.

JUAN FONT |
CEO, CORESITE



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for racks that exceed 100 kilowatts,” says Giordano Albertazzi, CEO of Vertiv. “Liquid cooling is no longer a luxury; it’s a necessity.” New cooling technologies are rethinking how heat is managed. Chemours are specifically working on a two-phase immersion cooling for data centers. “Today, most data centers rely on air cooling, but we’ve developed a fluid in which entire servers are immersed,” adds Denise Dignam, CEO of Chemours.

However, some innovators see opportunity in the heat itself. “Imagine a data center in Preston providing free heat to local homes—suddenly, people’s heating costs drop, and they’re using cleaner energy,” explains Matt Craggs, co-founder and CTO at Deep Green Technologies. “It’s not just a nice story; we’re talking about saving communities hundreds of thousands of pounds annually, all while decarbonizing their energy systems.”

The rapid growth of data centers is also creating a strain on energy infrastructure. “Data centers are experiencing explosive growth in power demand. With many hyperscalers expecting their energy needs to increase fivefold by 2030, the grid simply cannot keep up,” says Thomas Healy, CEO of Hylilion, which is developing on-site power generators using fuel-agnostic technologies to address the issue.

How Your Life Might Change

Over the past decade, our lives have undergone remarkable change, often so seamlessly that we hardly notice. Think banking apps, one-day deliveries and online doctor appointments. But how we live, work and thrive is going to change even more as this next chapter unravels—from more personalized commerce experiences to increasing prevention and precision in health care. This section dives into how technology is transforming our day-to-day.

THE FUTURE OF AMERICAN COMMERCE

Shopping is seamlessly integrating into our daily life. AI-driven personalization, omnichannel experiences, and automation will transform how consumers interact with brands. Shopping will no longer be confined to a single platform or moment. “Consumers are buying from TikTok, Instagram, Amazon, and still walking into stores for certain purchases,” says Omair Tariq, CEO of Cart.com. “This chaotic blend of online and offline shopping is the new normal, and brands must adapt.”

However, not all online channels are created equal. Mariano Gomide de Faria, co-founder and co-CEO at VTEX describes how “TikTok has revolutionized consumer engagement by integrating social interaction and shopping into one seamless experience through the ‘social loop.’” His fellow co-founder and co-CEO, Geraldo Thomaz, adds: “One example is the rise of conversational commerce, such as live shopping



MARIANO GOMIDE DE FARIA |
CO-FOUNDER & CO-CEO, **VTEX**

You cannot discuss retail evolution without considering the reindustrialization of the United States. The U.S. is losing the trade war with China and will need trillions of dollars and millions of jobs to reindustrialize.

and personal shopper services, which have rapidly gained traction, particularly in Asia.” By 2030, consumers will move seamlessly between digital and physical worlds, watching a TikTok influencer, messaging an AI personal shopper, and completing a purchase in minutes. In fact, live shopping will hit \$600 billion by 2027, fueled by the integration of AI and social media.

The Automated Storefront

Brick-and-mortar stores will transform into high-tech hubs for exploration and engagement. Robots will take over routine tasks like cleaning, inventory scanning and shelf restocking. “When customers walk into a store, they’ll have more meaningful interactions with staff, who can provide personalized assistance,” says David Pinn, CEO of Brain Corp, which creates robotic AI software that powers the largest fleet of autonomous mobile robots (AMRs) operating in commercial public spaces.

By 2030, stores will evolve into spaces designed for discovery, combining the efficiency of AI with the warmth of human interaction. AI-powered systems will eliminate checkout lines, stock shelves, and optimize store layouts, turning physical shopping into a richer, more connected experience. More so, time will become the ultimate currency. Mariano Gomide de Faria called this shift “Concierge Commerce”—in which shoppers state their needs and let technology handle the rest.

THE FUTURE OF AMERICAN FINANCE

AI is changing how Americans manage, spend, and grow their money. From smarter banking to seamless payments and personalized financial coaching, technology is making finance more intuitive, secure, and inclusive. What is most empowering is the democratization of the financial system so individuals can take better control of their money and financial literacy. “Consumers expect financial institutions to meet their needs with ease, offering real-time insights and advice,” says Kirk Coleman, president of Q2.

Tools like Q2’s unified dashboards give users a single view of their finances while offering actionable recommendations tailored to their goals. AI is also transforming payments into frictionless experiences. Mastercard is leading the way, moving beyond traditional cards to enable real-time account-to-account transfers and secure cross-border payments. “This evolution has enabled us to derive and evaluate a trillion data points in real time, improving our ability to help banks



By 2030, we anticipate a financial ecosystem in which technology and human expertise work together seamlessly to enable consumers and businesses to thrive. Innovations in payments, AI and automation are also reshaping the industry and driving growth.

KIRK COLEMAN |
PRESIDENT, **Q2**



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By connecting patients, hospitals, biopharma companies and trial sites, we improve the flow of data in clinical trials and make the experience better for patients.

ANTHONY COSTELLO |
CEO, **MEDIDATA**



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and merchants make smarter decisions,” says Craig Vosburg, chief services officer at Mastercard. And what if AI could also act as your own financial advisor helping you make smarter decisions? The financial systems of tomorrow will not just process transactions, they will guide, protect, and empower. As Vosburg puts it, “By 2030, we expect the pace of digitization to accelerate further, offering consumers more payment choices and personalized experiences.” Mark Steffe, CEO of First Command Financial Services, which offers financial tools for military families, adds: “Through gamification and digital tools, we empower younger members to build stability early.”

THE FUTURE OF AMERICAN HEALTHCARE

By 2030, healthcare in the U.S. may look a lot different due to advancements in AI, neuroscience, and microbiome research. For example, wearable technology integrated with AI will enable personalized health dashboards, providing real-time insights into sleep, diet, and exercise patterns. Jim Kavanaugh, CEO and co-founder of WWV, adds: “I believe that AI, when used thoughtfully and collaboratively, will revolutionize health care and extend into areas like longevity and biohacking. The possibilities are immense, and I am excited to see how these advancements will shape the future.”

Companies like Superpower are pioneering this approach. Co-founder Max Marchione explains, “There is a huge gap between the cutting-edge health care available to the elite, like Jeff Bezos, and what the average person receives. Since then, I’ve believed that everyone, not just a privileged few, should have access to this kind of care, and that’s what we’re building at Superpower.”

Meanwhile, Edge AI will increasingly serve the health care space with devices harnessing its advanced technology to provide continuous, clinical-grade monitoring of vital signs—offering the reliability of hospital equipment with the convenience of everyday accessories. “We’re enabling solutions for an unprecedented demographic shift in global aging. We envision revolutionizing health care through next-generation wearables that transcend simple tracking devices to become sophisticated medical-grade tools,” Amiq’s CEO Fumihide Esaka explains. In clinical research, AI is accelerating drug development through synthetic control arms and virtual twin technology, making trials faster, safer, and more inclusive. Anthony Costello of Medidata highlights, “We are working toward a future where virtual twins of patients can fundamentally transform clinical trials. These models, built from diverse patient data, can help researchers design and simulate outcomes, paving the way for trials that rely less on direct human participation.”

However, systemic challenges persist. Dr. Jordan Shlain, founder of Private Medical, warns that “medicine is slow-moving because safety is critical,” citing outdated regulations and accessibility issues. “To ensure these breakthroughs benefit all Americans, the health care system must transition from reactive, treatment-based models to proactive, prevention-focused care.”

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DAVID WALLS | PRESIDENT AND CEO, AUSTIN INDUSTRIES

Given the current focus on fixing supply chain issues and rebuilding American manufacturing, we believe this wave of development will continue for much longer than most people anticipate.



TOM GIORDANO | EXECUTIVE DIRECTOR, PARTNERSHIP FOR RHODE ISLAND

We could achieve 100% renewable energy within the next five to seven years, making Rhode Island a case study in renewable energy.

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Building America 2.0

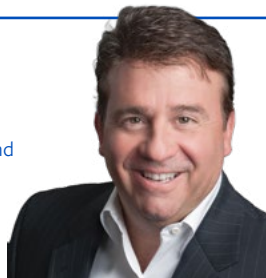
America’s infrastructure is being rebuilt to keep up with the pace of growth from California to Maine. Aging systems, coupled with shifting government priorities and evolving demands, are driving investments. At the same time, global instability has brought supply chain reliability into sharp focus, forcing industries to prioritize resilience and local production. “Building plants in the U.S. ensures security and continuity,” says Joe Cutillo, CEO of Sterling Infrastructure, highlighting the surge in projects spanning manufacturing, data centers, and renewable energy. Federal programs like the Infrastructure Investment and Jobs Act and the CHIPS Act are more than just funding mechanisms, they represent a generational opportunity to modernize the backbone of the economy. “These laws are fueling infrastructure development on a scale we haven’t seen in decades,” adds Richard Kennedy, CEO of Skanska USA. “They are unlocking opportunities that have the potential to transform industries and communities alike.”

Certain regions are emerging as epicenters of infrastructure transformation. The Rocky Mountains and Midwest are drawing attention for their affordable land and logistical advantages while Texas, already a leader in industrial and civil projects, continues to attract major developments. “The state’s growth is driven by its low taxes, expanding population, and strategic location,” says David Walls, president and CEO of Austin Industries. Cutillo notes that “states like Tennessee, Ohio and Georgia are seeing explosive growth in manufacturing and data centers due to access to power, water, and business-friendly policies.” Indeed, data centers, driven by demand for cloud services and AI, are expanding rapidly. “Americans being conditioned for on-demand services is driving the growth of data centers and logistics infrastructure,” says Walls. “For instance, the rapid processing and delivery systems of companies like Amazon and FedEx have revolutionized product distribution. This shift has influenced many facets of our work, requiring us to build infrastructure which supports this demand for speed and efficiency.” The CHIPS Act has also sparked a resurgence in semiconductor manufacturing. “Global instability has made U.S.-based production essential,” adds Walls.



We’ve applied our core capabilities to end markets with long-term sustainable growth drivers, including the data center build-out, onshoring of manufacturing and major U.S. infrastructure investment.

JOE CUTILLO | CEO, STERLING INFRASTRUCTURE



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Cities are the epicenters of opportunity, providing access to education, resources and culture. While cities face post-pandemic challenges, we also see opportunity to improve urban living. Cities are indispensable, and we must ensure they continue to thrive as vibrant, livable spaces.

CLAIRE JOHNSTON | CEO, AMERICAS, LENDLEASE



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“For example, the first U.S. silicon manufacturing plant in 20 years is now under construction. Renewable energy projects, including EV infrastructure and grid modernization, are accelerating as sustainability becomes a core focus. Joseph Sczurko, U.S. region president at WSP, adds, “We are preparing for a more sustainable future by enhancing the grid and decarbonizing infrastructure.”

THE FUTURE OF AMERICAN CITIES

U.S. cities are grappling with a complex landscape of rapid technological advancements, shifting demographics, and pressing environmental challenges. To thrive, urban centers, from the sprawling metropolis of New York to the burgeoning hub of Austin, must redefine their roles. These cities offer compelling case studies in adaptation and growth, demonstrating how urban centers can navigate these challenges and emerge stronger. As Claire Johnston, CEO Americas at Lendlease, underlines, “Cities are indispensable, and as we move forward, we must solve these challenges to ensure they continue to thrive as vibrant, livable spaces.”



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New York City: Reinventing Its Empire

The world's greatest cities are not immune to change, and New York knows it well. Long reliant on Wall Street, the city has spent the past decade rewriting its economic playbook. "Since the financial crisis in 2008, New York has recognized the need to diversify its economy to remain globally competitive," explains Andrew Kimball, president and CEO of NYCEDC. Tech jobs now account for 7 percent of the city's economy, growing from near-zero to 350,000 in just over a decade. Infrastructure, too, is evolving. The Port Authority of New York and New Jersey's \$19 billion airport modernization project has turned LaGuardia and Newark from global punchlines into models of efficiency. "Historically, our airports were ranked among the worst," admits Richard Cotton, executive director of the Port Authority. "Now, LaGuardia's Terminal B and Newark's Terminal A have received awards as the best new airport terminals globally." But challenges persist. Housing affordability remains a millstone around the city's neck, and its success in attracting high-tech jobs has not yet translated into equitable opportunities for all its residents. Whether New York can address these gaps will determine if its reinvention is truly sustainable.

Austin: Weird, Wired, and Growing Fast

Austin's iconic slogan "Keep Austin Weird" could just as easily read "Keep Austin Growing." The Texas capital is a tale of transformation, evolving from a sleepy college town into one of America's most dynamic tech hubs. Carlton Schwab, president and CEO of the Texas Economic Development Council, traces the shift back to the 1970s. "Austin started as a small college town laying the foundation for the region's economic evolution," he says. The arrival of IBM and the rise of local heroes like Michael Dell cemented its status as a tech leader. Today, Austin is both a magnet for startups and a rival to Silicon Valley. It has embraced its role as a cultural and tech powerhouse, with projects like the \$7.1 billion Project Connect light rail system connecting its neighborhoods and reducing car dependency. "Austin's rapid growth necessitates thoughtful urban planning," notes T.C. Broadnax, Austin's city manager. Downtown, over 7.8 million square feet of new construction is redefining the city as a 24-hour urban hub. Yet, Austin faces a moment. As housing costs soar—rents are up 25 percent since 2020—the city risks pricing out the very talent that fuels its growth. Balancing affordability with innovation will determine whether it becomes a self-sustaining innovation hub or repeats some of the pitfalls seen in Silicon Valley over the past few years.

Just south along the I-35 corridor, San Antonio is emerging as a dynamic partner to Austin, forming a mega-region poised to rival the world's most competitive economic zones. "San Antonio represents the future of Texas and the U.S. as a whole, with its 60 percent Latino population reflecting the nation's evolving demographic trends," says Jenna Saucedo-Herrera, president and CEO of Greater SATX.

SUPPLY CHAIN RESILIENCY FRONT OF MIND

The next decade will redefine the U.S. supply chain, driven by lessons from the COVID-19 pandemic, geopolitical tensions, and evolving economic strategies. Reshoring, nearshoring, and "friendshoring" are set to anchor a more resilient logistics ecosystem.

The pandemic revealed vulnerabilities in global supply chains and prompted a reevaluation of logistics strategies. "COVID was a wake-up call," says Denis Reilly, CEO of Kenco. "Nearshoring to Mexico and Canada offers a practical balance, ensuring sustainability and mitigating risks without the high costs of full reshoring." Patrick Kelleher, CEO North America at DHL, adds: "Mexico's proximity, affordable labor and strong logistics infrastructure make it a natural choice for companies rethinking supply chains." However, reshoring within the U.S. faces new challenges. The potential return of Trump-era tariffs on Mexico and Canada could complicate efforts to stabilize North American supply chains. This is particularly



The timely delivery of high-value products around the world, especially in the tech sector, is essential as demand continues to grow. A commitment to precision is part of our strategy, as we support the evolving logistics needs of a global economy.

**SHAWN STEWART | CEO,
FORWARD AIR CORPORATION**



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relevant for Texas, where a corridor stretching from northern Mexico to Austin has become a hub for manufacturing and logistics. “San Antonio’s position within this mega-region, coupled with its connectivity to Mexico, makes it a strategic anchor for nearshoring efforts, but tariffs could disrupt these gains,” says Jenna Saucedo-Herrera, CEO of Greater SATX.

Railroads are positioned to be a backbone for the next generation of supply chains, offering efficient and sustainable freight solutions. “40 percent of U.S. freight already moves by rail, and that number should grow,” explains Patty Long, president of the Railway Supply Institute. “Rail is not only the greenest mode of transport but also critical for supporting the increased freight volumes expected from reshoring and nearshoring.” Union Pacific is investing heavily in infrastructure to meet these demands. “We’re building new intermodal terminals and enhancing connectivity with Mexico to support localized supply chains,” says EVP of Operations Eric Gehringer. These investments align with the broader trend of integrating rail with other modes of transport to create seamless logistics networks. Technological advancements will play a central role in reshaping supply chains. “AI helps businesses predict disruptions and optimize operations, making supply chains more adaptive and resilient,” says Duncan Angove, CEO of Blue Yonder. Shawn Stewart, CEO at Forward Air, further adds “technological advancements will play a central role in reshaping supply chains. AI, robotics, and predictive analytics are driving greater agility and efficiency.” With the rise of Waymo on the streets of San Francisco and beyond, we are also likely to see increasing penetration of autonomous vehicles over the coming years. Autonomous vehicles are known to respond faster than human drivers and are safer, although autonomous trucks will have drivers present for emergencies rather than completely driverless trucks in the near term.

THE FUTURE OF AMERICAN MANUFACTURING

Imagine a factory where 3D printers hum alongside robotic arms and CNC machines, crafting complex, customized parts on demand. This is what the future of U.S. manufacturing could look like. Additive manufacturing is best seen as a tool for solving specific challenges rather than a wholesale replacement for traditional methods. “The



**PHILIP DESIMONE | CO-FOUNDER & CO-CEO,
CARBON**

Unlike conventional factories, which take months to set up, a 3D printing facility can be operational in a day.



**HAMID ZARRINGHALAM | CEO,
NIKON ADVANCED MANUFACTURING**

Industries like defense and aerospace, which rely on critical parts, are increasingly looking to bring production closer to home.



ROBERT BODOR | CEO, PROTOLABS

Traditionally, manufacturing required weeks or even months for processes like mold creation, making the upfront work slow and costly.

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factories of tomorrow will integrate 3D printing where it delivers the most value, like creating intricate geometries or addressing low-volume needs, while maintaining conventional production for large-scale operations,” says Avi Reichental, CEO of Nexa3D. There are already a number of industry examples where this is happening. “We are enabling parts that traditional methods simply cannot produce—whether it is precision components for rocket engines or materials optimized for hypersonics,” notes Brad Kreger, CEO of Velo3D. Philip DeSimone, Co-CEO of Carbon adds “for industries like health care and footwear, 3D printing allows companies to iterate faster, produce smaller batches and adapt quickly to changing demands.” In aerospace, it is transforming maintenance strategies. “With distributed manufacturing, we can print parts locally to keep planes flying, reducing downtime and costs,” says Yoav Zeif, CEO of Stratasys.

One of the key benefits of 3D printing will be addressing the challenges of supply chain resiliency to fill in gaps in an increasingly complex geopolitical world. “A 3D printing site can be operational in a day, producing parts immediately. That kind of flexibility is critical for responding to today’s supply chain challenges,” says DeSimone.

A FINAL NOTE

We often have a way of leaning into pessimism, but I am, at heart, an optimist and I am energized by the direction of the U.S. There should be concern from other economies at the sheer pace of innovation and the thirst for growth in the U.S. Yes, complacency, political polarization, and a lack of infrastructure investment could derail progress. But at its core, the U.S. represents the extraordinary potential of openness, collaboration, and a spirit of friendly competition. To truly flourish, it must lean into these strengths, building a brighter, bolder future, not just for itself, but for the rest of the world as well.

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