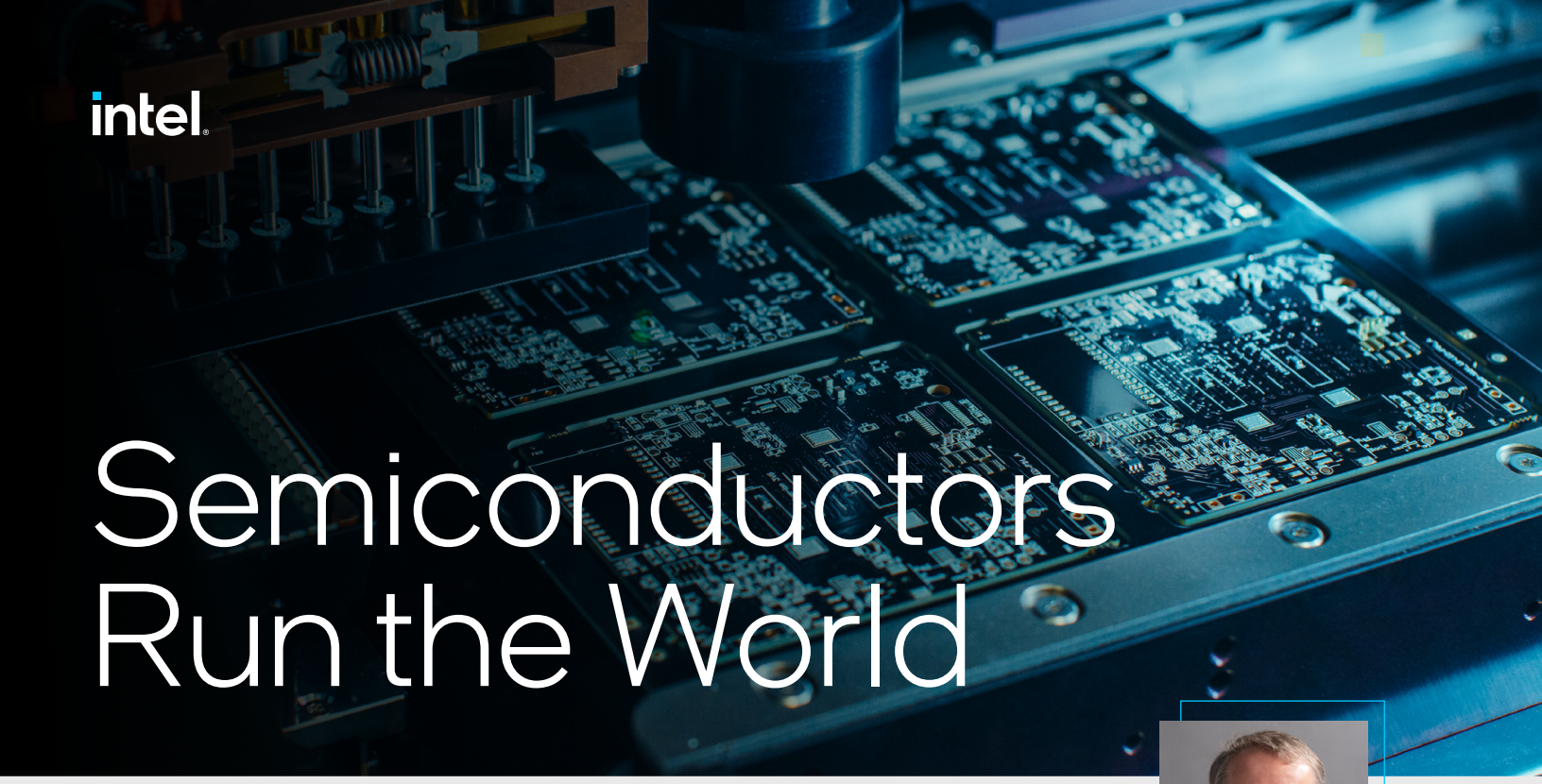
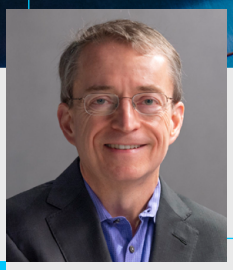


Semiconductors Run the World

Executive summary:

- We are entering a new golden age of semiconductors as insatiable demand for compute power grows.
- Intel is among the few companies able to provide leading-edge silicon, where demand is strongest.
- The world's reliance on semiconductors requires a more geographically balanced and resilient supply chain, which Intel is working hard to help correct.
- Open ecosystems unleash innovation, democratize computing and, ultimately, win over closed, proprietary solutions.



Pat Gelsinger
Chief Executive Officer

The world runs on semiconductors.

More than a decade after Marc Andreessen declared that "software is eating the world," we have entered an era where the confluence of software and hardware guides the path of how humanity operates. The entire world is becoming digital, as technology is increasingly central to every aspect of human existence.

The rapid evolution of cloud, data networks and smartphones transformed industries and societies around the globe. Foundational to all these evolutions is semiconductor technology — developed and deployed cost-effectively at a massive scale.

The pandemic lit a fire under this digital transformation. Timelines and plans of record were obliterated; necessity compelled digital product innovation. Semiconductors powered society's ability to work remotely, stay connected with friends and family, offer virtual schooling, and provide enhanced healthcare. They enabled fast-tracking of scientific research, including the intricate and molecular mapping of the novel SARS COVID-19 virus.

Critical industries, including education, finance, manufacturing, medicine, transportation and defense are being transformed by the power of semiconductors, which continue to advance at a torrid pace. All this has led to unprecedented demand for chips, made more acute by the disruption in our global supply chain.

We stand at the precipice of a digital renaissance

It's clear that semiconductors are the backbone of the global economy, essential to maintaining our lives in the "new normal." What does this mean for the semiconductor industry?

The market for this technology that is now powering almost every industry's transformation surpassed $500 billion for the first time in 2021, according to Gartner. It's predicted to double to $1 trillion by the end of this decade as the insatiable demand for compute power grows. We believe that revenue at the leading edge — for the most advanced silicon process nodes, where I see the greatest need — will grow much faster. In fact, I see trailing nodes grow at one-fifth the rate of the growth of leading nodes.

Ahead of us is a once-in-a-generation opportunity — both for Intel and the semiconductor industry — to fuel the transformation as every company becomes a technology company. In a landscape of tremendous change, I am confident that Intel can be the world's leading semiconductor company and set a course for a new era of innovation and technological leadership.

Technology Superpowers

Advanced semiconductors are enabling new levels of human achievement thanks to what I call the "technology superpowers," which in turn are triggering an explosion in demand for semiconductors.

Ubiquitous compute allows humans to interact with the ever-changing faces of technology everywhere.

Pervasive connectivity allows technology to communicate with everyone and everything.

Cloud-to-edge infrastructure provides a scalable solution to process the plethora of data while addressing applications' demands for lower latency and higher bandwidth.

AI brings intelligence to it all and will continue to infuse all forms of computing through standards-based, developer-friendly scalable tools and technologies.

Ushering in the era of Super Moore's Law

Since our founding, Intel has thrived on the relentless pursuit of semiconductor invention and innovation as described by Moore's Law. It has provided the technological backbone behind the greatest period of human innovation and wealth creation in history — and we are still right in the thick of it.

These "superpowers" exponentially increase the world's need for compute at an inverse ratio of size to power. That's Moore's Law in a nutshell.

The demand is for lower latency, higher density, more power-efficient and zetta-scale solutions. This will require significant R&D investment in new transistor designs, extreme ultraviolet (EUV) tools, advanced packaging and precision manufacturing for the Angstrom Era of semiconductors. As stewards of Moore's Law, we expect to bend the curve at a torrid pace.

I am proud of the progress the Intel team is making in delivering next-generation silicon technologies. We have an abundance of inventions and solutions in materials, transistor structures and circuit topologies to allow us to continue to deliver on the performance, power and cost imperatives for generations of semiconductor advancement at scale.

On top of that, advanced packaging technologies like Intel's EMIB and Foveros usher in a new era in chipmaking, expanding from what you can design on a single chip to what you can mix and match together in flexible system-in-packages.

A select few drive the leading edge — Including Intel

The imperatives for entire industries to move from lagging to leading nodes remain in place. Look at the automotive industry, for instance, which is currently undergoing a profound and visible transformation. As vehicles become smarter, more efficient, and safer than ever — enabled by silicon — the industry must move away from its extreme dependence on lagging nodes, to more modern technology where supply chain issues can be addressed through capacity expansions. By the end of the decade, we expect semiconductor content in premium vehicles to increase five-fold, with automotive silicon revenue nearly doubling to $115 billion. We see similar dynamics in healthcare, retail, banking, travel and others — where the forces of digitization are driving radical change and disruption.

Applications used throughout all industries — such as graphics and gaming, net-working and data processing — will need increased performance, better efficiency and lower power. These improvements require innovation that only exists at the leading edge. A future where we can provide a petaflop of compute power and a petabyte of data within a millisecond of every human on the planet is within reach.

As we enter the second half of the decade, the number of advanced lithography wafers produced every year is expected to double and continue to grow. As we exit the decade, over 40% of semiconductor revenue will come from leading nodes. Few companies will be able to make the leap to EUV lithography and deliver on successive leading nodes. Intel is one of them.

Capacity is 'make or break'

The unprecedented industrywide chip shortage highlights the need for more semiconductor manufacturing capacity and a more diversified, secure and geographically balanced supply chain. When our industry can deliver at a global scale, we reduce the risk of additional silicon supply chain failures and increase the resiliency of our global tech infrastructure.

Even as our industry works relentlessly to ensure sufficient semiconductor wafer capacity to meet projected demand, we anticipate supply tightness to remain at least through 2023 with greater near-term intensity for older technology nodes and fab equipment. The situation will improve as more fabs begin to come online from Intel and others in the industry in the second half of this decade, fulfilling the expected doubling of demand and the need to migrate to more modern nodes.

But it's not just wafers that are constrained. The digital renaissance has placed tremendous strain on supply chains around the world, whether it's Wi-Fi modules, substrates, panels or other critical components. The entire supply ecosystem needs to step up to ensure no individual bottlenecks limit growth for the industry. That's why we are driving a collaborative approach up and down our supply chain, not just with our suppliers but also with their suppliers – and with our customers.

As we look to the future, our investments in leading-edge capacity in the U.S. and Europe as part of our IDM 2.0 strategy are aimed squarely at the next wave of innovations enabled by the four superpowers. Last month we announced the investment of more than $20 billion in the construction of two new leading-edge chip factories in Ohio, the new Silicon Heartland of the U.S. The investment opens an entire region to help boost production to meet the surging demand for advanced semiconductors, powering a new generation of innovative products from Intel. This will help build a more resilient supply chain and ensure reliable access to advanced semiconductors for years to come.

Only together can we usher in a new era of innovation

It has been a little over half a century since semiconductors began shipping commercially. Today, they are the foundation for most of the world's innovation and the market for the technology is expected to grow to $650 billion this year. Yet, we are only at the beginning of what we believe will be a "Golden Age of Semiconductors." Just as was true at its inception, Intel will continue to play a leading role in this next epoch of semiconductors and in creating a global interconnected industry.

We will do that, as we have pledged, through an open ecosystem, which I believe unleashes power bigger than any one entity. Only together can we ensure technology, which is inherently neutral, is ultimately used as a force for good. Intel is redoubling on our deep legacy in open platforms, with the specific intention of enabling innovation and accelerating our shared future.

We have the depth and breadth of intelligent silicon, platform, software, architecture, design, manufacturing and scale that our customers need to capitalize on these opportunities and fuel their next-generation innovations. We are resolute in our commitment to continue to provide the technology foundation needed to advance this digital renaissance.

We push forward at a torrid pace with our purpose at the heart of everything we do — creating world-changing technology that improves the life of every person on the planet.

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Forward-Looking Statements

Statements in this document that refer to future plans or expectations are forward-looking statements. Statements that refer to or are based on estimates, forecasts, projections, uncertain events or assumptions, including statements relating to future products and technology and the availability and benefits of such products and technology, market opportunity, and anticipated trends in our businesses or the markets relevant to them, also identify forward-looking statements. These statements are based on current expectations and involve many risks and uncertainties that could cause actual results to differ materially from those expressed or implied in such statements. For more information on the factors that could cause actual results to differ materially, see our most recent earnings release and our SEC filings at www.intc.com. Intel does not undertake, and expressly disclaims any duty, to update any statement made in this document, except to the extent that disclosure may be required by law.