



Coleman
Parkes

AI as the Disruptive Force Transforming the Semiconductor Industry

US Semiconductor Industry Survey Findings 2025

Executive Summary

The semiconductor industry faces its most significant transformation in decades. Driven by geopolitical tensions, talent constraints, and the extraordinary pace of AI advancement, the industry is innovating faster than ever to keep pace with seismic changes.

Our new research reveals the pace of this change and provides granular insights into how US semiconductor producers are responding. Every organization we surveyed is investing in regional manufacturing, modernizing operations, and fundamentally rethinking how chips are designed, manufactured, and delivered.

Why this research matters

This study represents the full breadth of the US semiconductor ecosystem, from integrated device manufacturers (IDMs) and fabless companies to foundries, equipment makers, EDA providers, and assembly and test firms. Respondents span every major function, including engineering, IT, operations, finance, and HR, and all are senior decision-makers at VP level or above. Together, they represent organizations averaging 10,500 employees and \$2.6 billion in annual revenue.



Key Findings

AI is the defining force of industry transformation.

Companies are using AI to cut R&D costs by 26%, shorten time-to-market by 28%, and improve Bill of Materials (BOM) efficiency by 32%.

Operational modernization is accelerating.

Supply chain forecasting accuracy now exceeds 90% among AI adopters, while infrastructure automation and cybersecurity modernization are delivering significant cost and performance gains.

Transformation is no longer just an engineering agenda.

AI adoption in IT (28%), operations (24%), and finance (12%) demonstrates growing momentum across the wider business.

Geopolitical and talent pressures are driving localization.

Every company is investing in regional manufacturing, and 90% are already implementing supply chain localization plans.

Partnerships are replacing self-reliance.

Sixty-eight percent of firms are now working with strategic partners, including Wipro, to accelerate transformation across multiple CXO domains.

AI investment has two dimensions.

Firms are both building products for AI (to capture revenue growth) and using AI internally (to drive efficiency and margin expansion). Industry leaders are doing both.

Wipro Connection

Wipro enables semiconductor firms to move at the speed of disruption. Drawing on deep expertise across engineering, IT, operations, finance, and HR, and supported by a delivery network operating in more than 80 countries, Wipro helps organizations strengthen regional resilience, modernize their digital foundations and realize the value of AI in practical, measurable ways.

Central to this is **Wipro Intelligence™**, which brings together advanced AI, automation and analytics to enhance how semiconductor firms design, plan and operate. Whether accelerating chip design automation, supporting more autonomous and data-driven supply-chain systems, or enabling smarter enterprise functions, Wipro's integrated capabilities help leaders scale effectively and maintain a competitive edge in an era of continual transformation.



About Wipro

Wipro Limited is a leading technology services and consulting company focused on building innovative solutions that address clients' most complex digital transformation needs. Leveraging our holistic portfolio of capabilities in consulting, design, engineering, and operations, we help clients realize their boldest ambitions and build future-ready, sustainable businesses. With about 230,000 employees and business partners across more than 60 countries, we deliver on the promise of helping our clients, colleagues, and communities thrive in an ever-changing world.

Chapter 1

AI as the Disruptive Force Reshaping Semiconductors

Artificial intelligence has moved far beyond the chip design lab—it is now the most disruptive force in the industry and is transforming the entire semiconductor value chain. The pace of change is unprecedented: every three to six months, new AI advances reset the benchmarks of what is possible across engineering, supply chain operations, IT infrastructure, finance, and operational functions.



Chapter 1 - AI as the Disruptive Force Reshaping Semiconductors

With rising R&D costs, talent shortages across technical and operational domains, and geopolitical risk, semiconductor leaders are deploying AI to reimagine the entire silicon product lifecycle.

And the impact is already being realized. Across advanced design environments, autonomous supply chain control towers, cloud-modernized IT estates, and finance operations, AI is delivering breakthrough gains in speed, efficiency, and decision-making.

Engineering & Design

AI-enabled design flows are cutting development cycles and costs, including:



Supply Chain

AI-driven planning and optimisation are transforming resilience and efficiency, with:



Chapter 1 - AI as the Disruptive Force Reshaping Semiconductors

IT & Operations

The highest levels of AI/ML benefit realisation are emerging in:



Supply Chain Operations



Infrastructure Operations



Cybersecurity

These are not marginal gains; they are reshaping the economics of the industry across its entire operational footprint. AI enables semiconductor firms to adapt to new realities—to localize manufacturing, modernize IT and operational infrastructure, transform finance and HR functions, sustain innovation intensity, and protect profitability across every CXO domain.

HR Transformation

Agentic AI is reshaping the HR function and unlocking:



efficiency gains



fewer policy violations



payroll accuracy



faster training cycles



improvement in time-to-offer



Notable improvements in candidate experience



Notable improvements in employee experience

Procurement Transformation

AI-enabled procurement functions are achieving:



higher productivity



more preferred-supplier usage



buy-channel compliance



lower cost-to-serve



first-time-right performance

Key Survey Insights:

- AI-enabled design flows are cutting R&D costs by 26% and time-to-market by 28%
- AI-driven BOM optimization is improving cost structures by 32%
- While Design & Development leads AI efficiency realization at 36%, significant untapped potential exists in IT Transformation (28%), Operations (24%), and Finance & Accounting (12%)—indicating substantial opportunity for expansion
- IT transformation priorities align closely with AI/ML benefit areas: Supply Chain Operations (32%/30%), Infrastructure (28%/27%), and Cybersecurity (24%/22%)

Wipro Connection

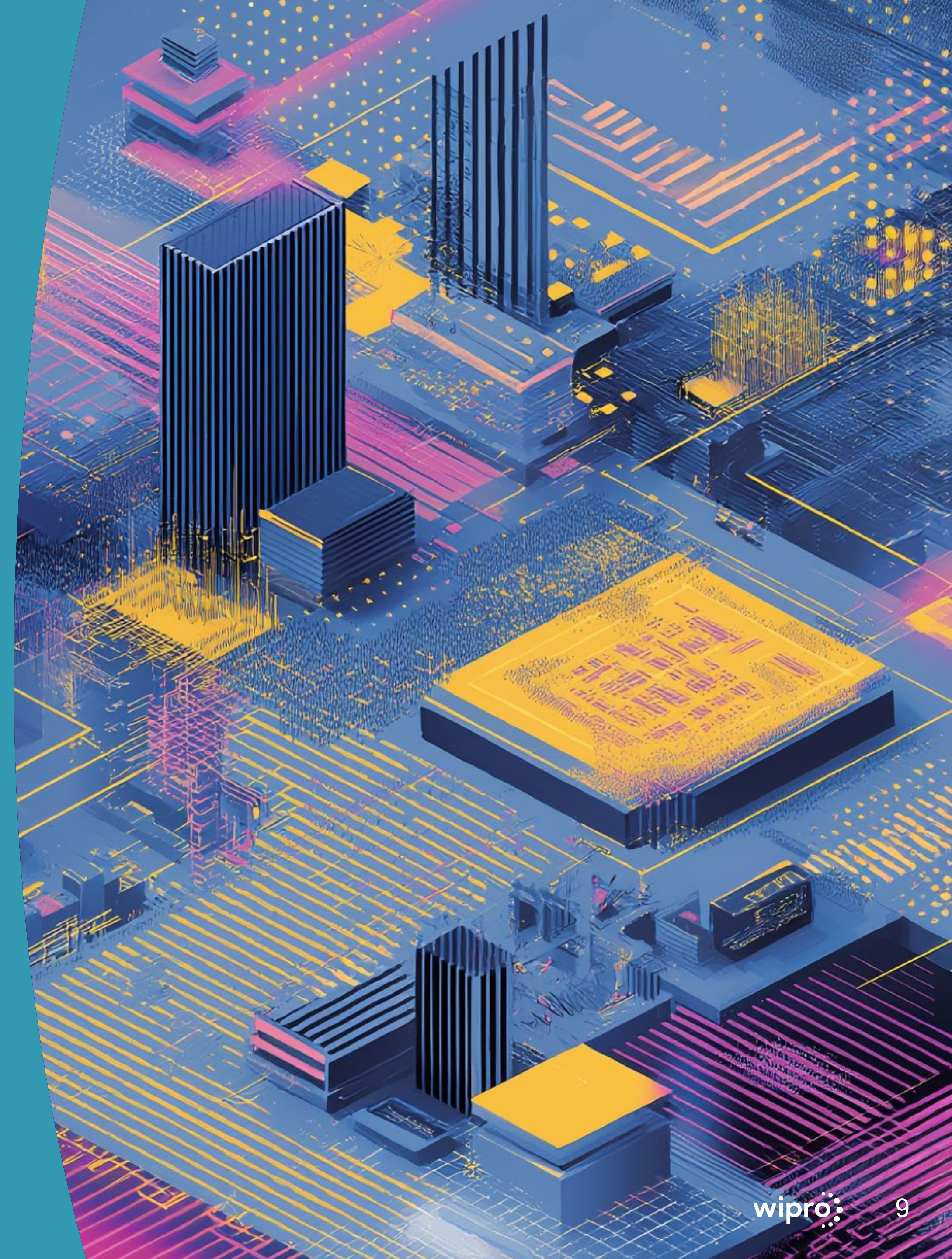
Wipro's Turnkey Silicon Solution, powered by **Wipro Intelligence™**, enables firms to reduce semiconductor design and development costs by 25-30% and cut time to silicon production release cycle times by up to 50%. By leveraging Wipro's proprietary Eaglevision silicon engineering flow with AI-assisted RTL code generation, design verification, bug remediation, and automated layout fixes and optimization, Wipro's Turnkey Silicon Solution delivers high-quality, first-time-right silicon design to production.



Chapter 2

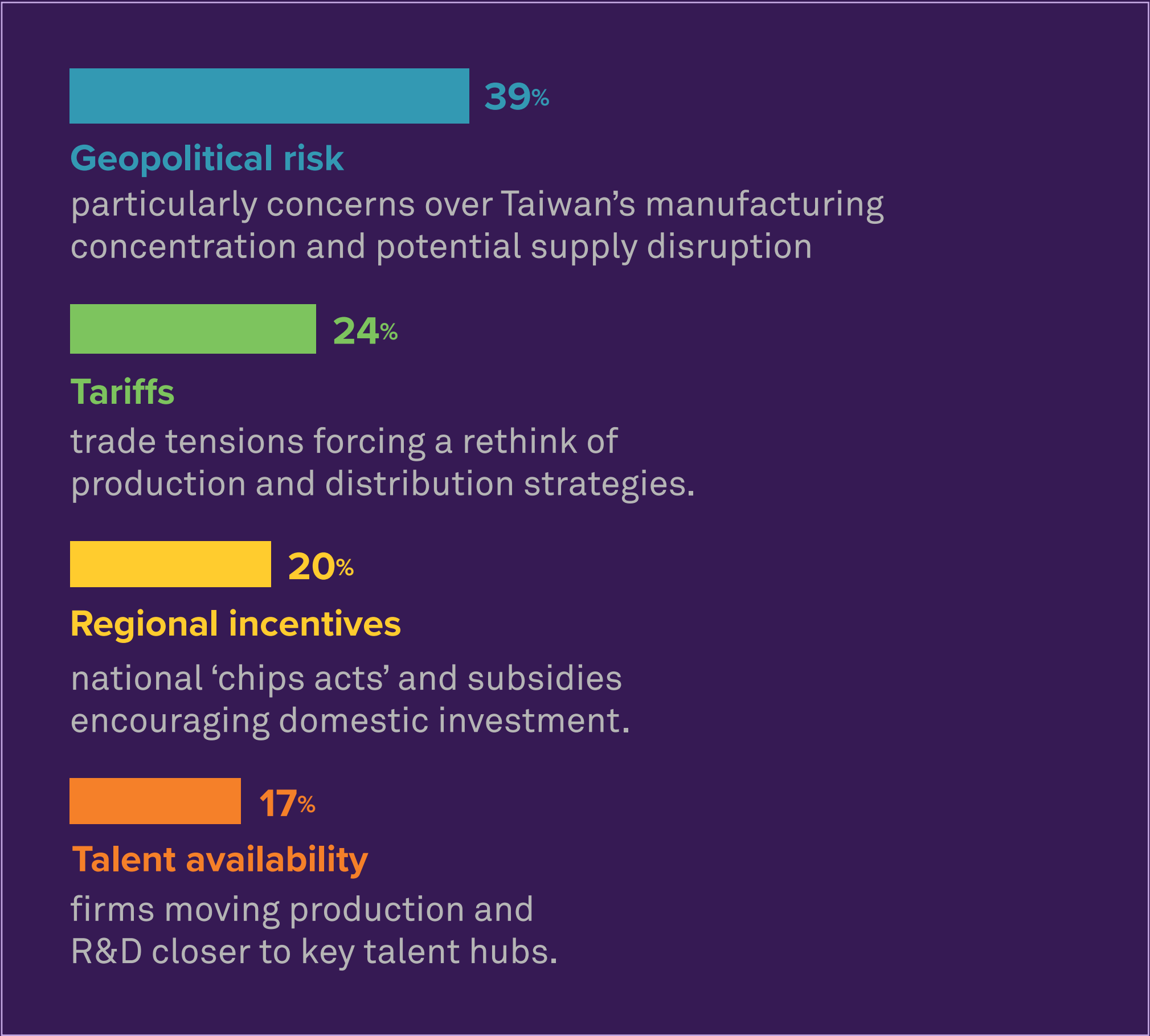
The Forces Driving Change: Geopolitics, Tariffs, and Talent Pressures

The semiconductor industry's transformation is being driven by necessity as much as opportunity. Global and economic pressures are converging —geopolitical tensions threaten supply security, tariffs are reshaping cost structures, and a global talent shortage is constraining growth across engineering, IT, and operations.



Chapter 2: The Forces Driving Change: Geopolitics, Tariffs, and Talent Pressures

Every company surveyed is investing in regional manufacturing to reduce risk and build resilience. Their top motivators include:



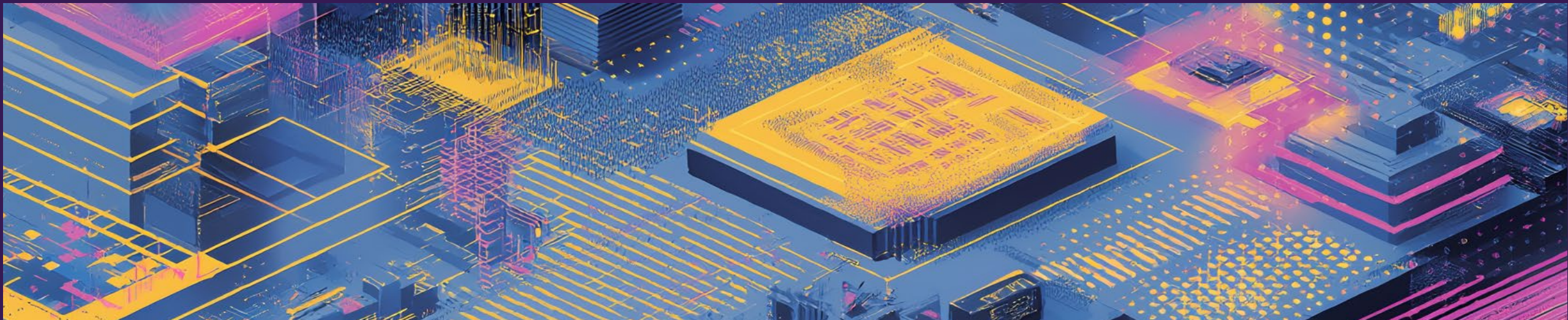
Despite these pressures, the industry is not slowing down. Instead, companies are combining AI-driven automation, operational modernization, and new partnership models to balance cost, speed, and innovation.

Building Local Innovation Capacity

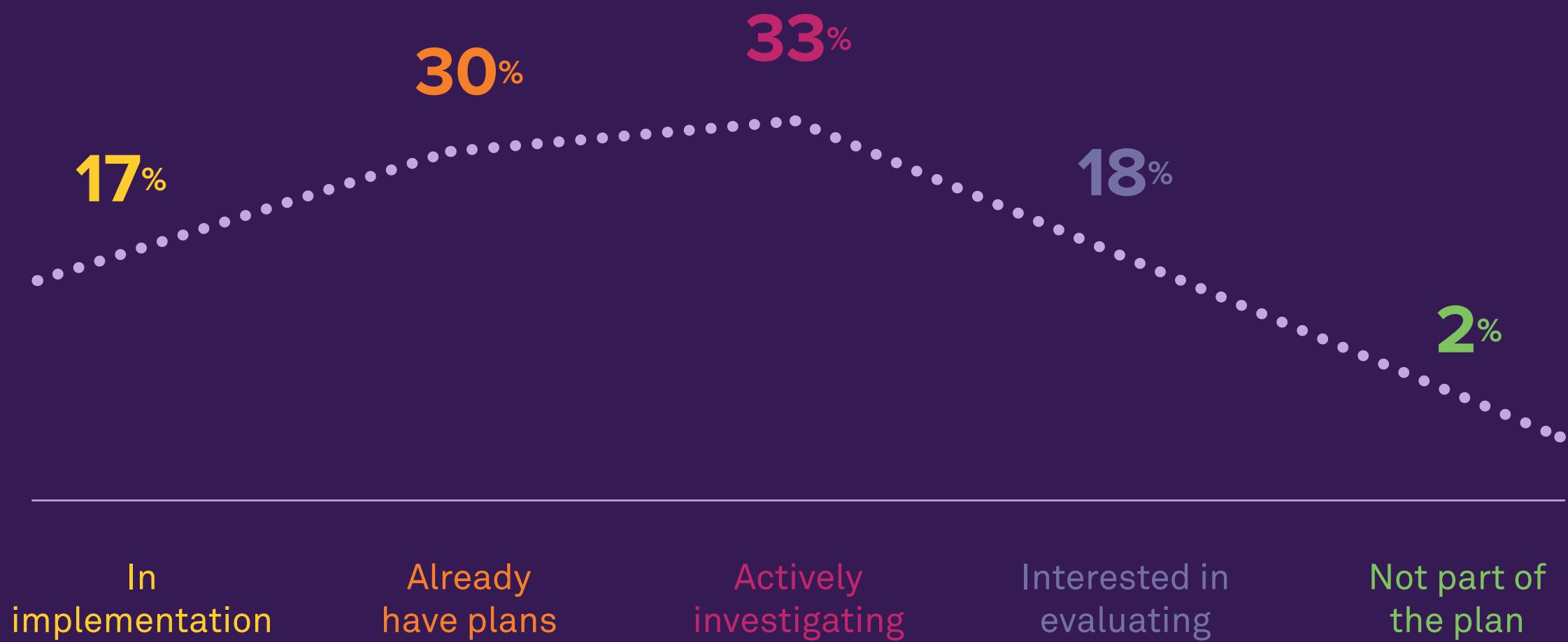
With regionalization now a strategic imperative, semiconductor firms are focusing on how to sustain innovation and competitiveness within this new operating model. Nearly nine in ten (88%) are increasing local R&D and engineering investment—primarily in the United States, but also across Europe and Asia—to bring design and development closer to production.

Policy incentives and national ‘Chips Acts’ have accelerated this shift, but the fundamental driver is economic: to compete in the AI era, firms must sustain high R&D intensity without eroding margins. Many are turning to shared-risk partnership models, such as outcome-based R&D projects and co-investment structures, which shift costs from capital budgets to operating models.

To manage talent cost-effectively, firms are also expanding Global Capability Centers (GCCs) and nearshore hubs, giving access to engineering, IT, and business expertise in adjacent time zones. These centers enable continuous collaboration and reduce the overhead of fully localized teams. Strategic partners play a key role in establishing and running these centers, combining infrastructure, talent, and domain expertise.



Nearly eight in ten semiconductor firms are planning or actively pursuing local R&D and talent investments

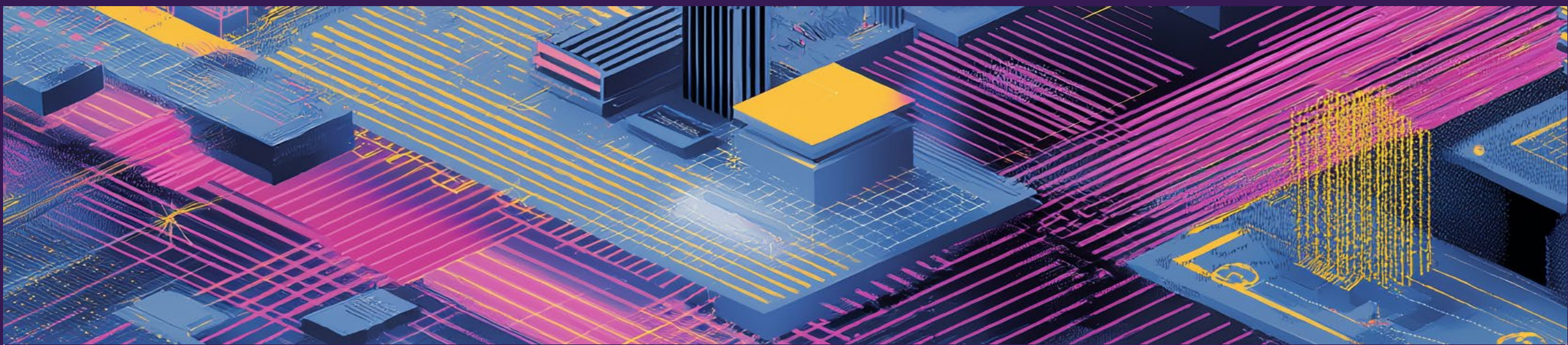


Key Survey Insights:

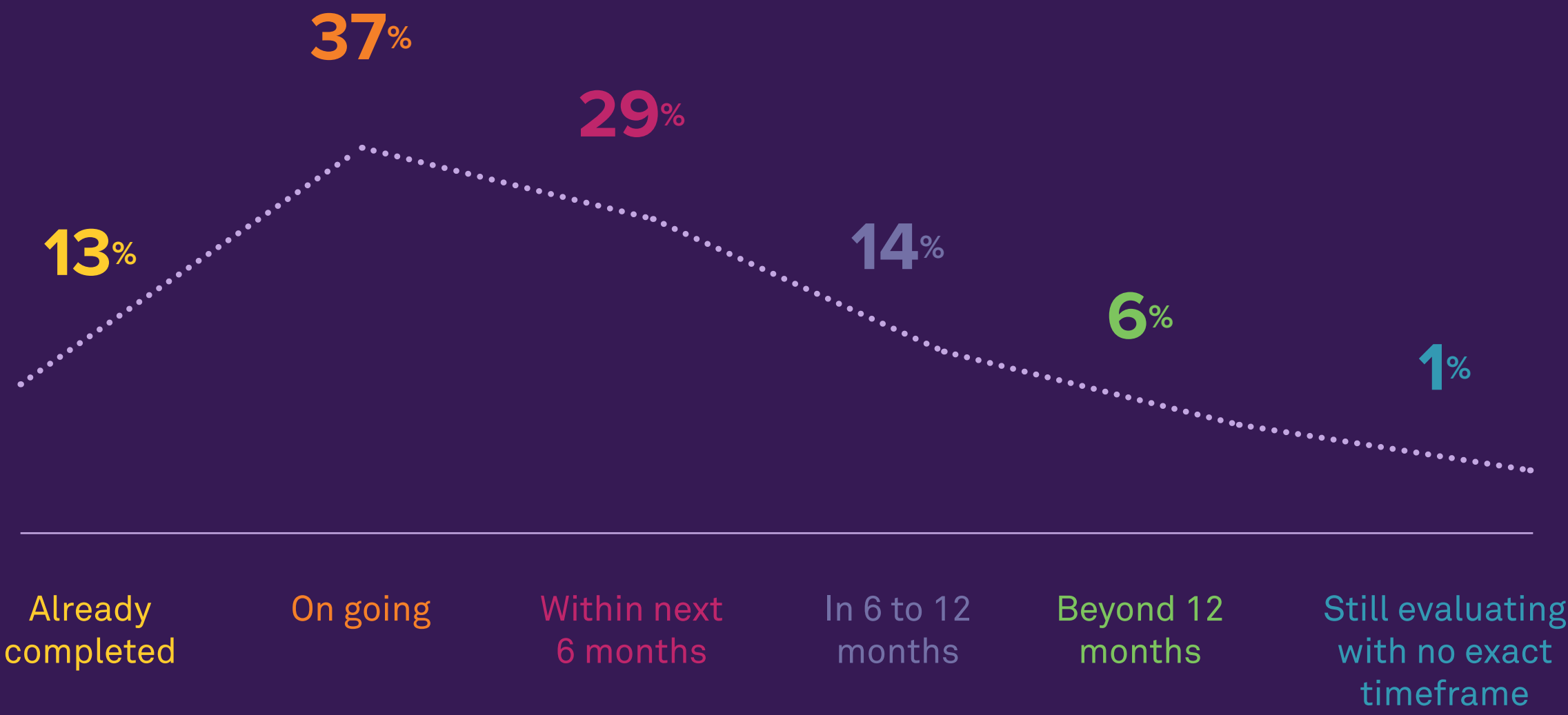
- 100% of firms are investing in regional manufacturing; top motivators are:



- Partnership models are helping maintain innovation despite profitability pressures
- GCC and nearshore models are enabling scalable, cost-efficient access to specialized skills



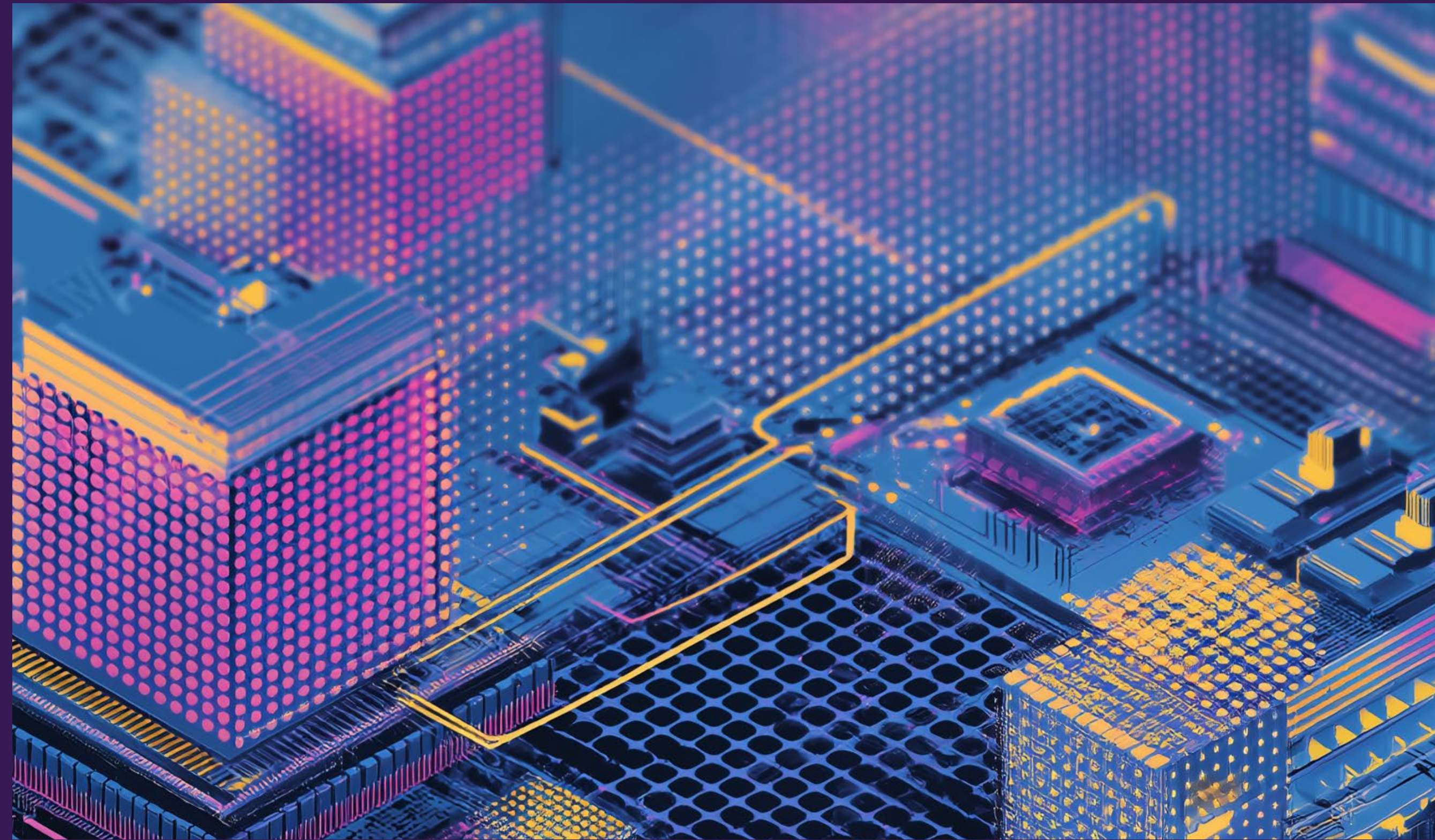
9 in 10 semiconductor firms expect to localise supply chains by the end of 2026



Wipro Connection:

Wipro supports semiconductor localization by combining scalable engineering talent, GCC enablement, and co-investment models that maintain innovation velocity while protecting margins. Our global delivery network spans 70+ delivery centers, supports 50+ languages, and operates across 50+ countries, providing the reach, multilingual talent, and regional flexibility required to build and scale local innovation hubs efficiently.

Through this footprint, semiconductor firms can tap into specialized engineering, IT, operations, finance and HR expertise within adjacent time zones and at competitive cost structures —accelerating regionalization and reinforcing long-term resilience. **Wipro Intelligence™** enhances this model by embedding analytics, automation and AI-driven decision support into localized operations, meaning these hubs run more effectively and can respond rapidly to shifting market and supply-chain conditions.



Chapter 3

Modernizing IT and Operations to Enable Regional Manufacturing

Building regional resilience demands more than new factories—it requires a modern digital backbone capable of supporting distributed operations, ensuring supply chain transparency, and protecting critical intellectual property. Semiconductor leaders are therefore transforming IT and operations to ensure agility, security, and operational excellence across increasingly complex global networks. This transformation spans the full spectrum of IT and operational capabilities, from supply chain visibility and infrastructure resilience to cyber threat protection.

Our survey reveals a striking alignment between IT transformation priorities and AI/ML benefit realization. This shows that AI is not being pursued as an abstract initiative, but as a practical tool to solve the industry's most pressing operational challenges.



The Autonomous Supply Chain: Reimagining End-to-End Visibility and Control

In an era of geopolitical disruption and regionalization, supply chain operations emerge as the top priority for both IT transformation (32%) and AI/ML adoption (30%). Semiconductor companies are moving beyond traditional supply chain management to pursue an autonomous supply chain vision—an intelligent, self-optimizing network built on four foundational capabilities:

- **Real-time visibility:**
End-to-end tracking of materials, components, and finished goods across global networks
- **Predictive analytics:**
AI-driven demand forecasting and risk identification that anticipate disruptions before they occur
- **Intelligent optimization:**
Automated decision-making for routing, inventory positioning, and capacity allocation
- **Continuous adaptation:**
Self-healing capabilities that respond to supply disruptions, demand shifts, and quality issues in real-time



Early adopters of autonomous supply chain capabilities are achieving measurable impact:

- 1) **Procure & Source** – reducing procurement costs by 15%
- 2) **Forecast & Plan** – improving forecast accuracy to 90+%, enable faster NPI ramp up
- 3) **Make & Move** – 25% Shipment cost reduction
- 4) **Distribute & Deliver** – 90+% fill rate achievement

Supply chain transformation is relevant across all semiconductor segments, from equipment manufacturers managing complex component supply chains, and IDMs coordinating wafer fabrication and assembly operations, to fabless companies orchestrating foundry capacity and logistics networks. The shift toward regionalized manufacturing makes autonomous supply chain capabilities not just beneficial, but essential for maintaining service levels and cost competitiveness.

Cloud and Infrastructure Operations: The Foundation for Distributed Excellence

Infrastructure operations rank as the second-highest priority for both IT transformation (28%) and AI/ML benefit realization (27%). As semiconductor companies conduct their manufacturing and R&D footprint across multiple locations, whether regional or international, they require cloud and infrastructure capabilities that can deliver consistent performance, reliability, and cost efficiency in every area of the enterprise.

The transformation centers on three key initiatives:

- **Hybrid cloud architectures:**
Balancing on-premises infrastructure for sensitive workloads (chip design, process control) with public cloud for scalable compute (simulation, AI training, collaboration)
- **AI-driven infrastructure management:**
Predictive capacity planning, automated workload optimization, and intelligent resource allocation that reduces manual intervention and improves uptime
- **Edge computing integration:**
Deploying processing capabilities closer to manufacturing facilities and design centers to reduce latency for real-time applications like yield optimization and quality control



The infrastructure modernization agenda is particularly critical for enabling collaboration across distributed R&D teams. It helps ensure consistent access to high-performance computing resources for simulation and verification, and to provide the scalable platform needed to operationalize AI across the organization.

Cybersecurity and Threat Management: Protecting Critical IP in a Distributed World

Cybersecurity and threat management rank third in both IT transformation priorities (24%) and AI/ML benefit areas (22%), reflecting the existential importance of protecting intellectual property in an industry where a single chip design can represent billions of dollars in investment and competitive advantage.

Advanced cybersecurity capabilities are non-negotiable, and AI-powered systems deliver multiple advantages:

- **Intelligent threat detection:**
Machine learning models identify anomalous behavior patterns indicative of security breaches or IP theft attempts
- **Automated response:**
Real-time containment and remediation limits damage from successful attacks
- **Predictive risk management:**
Proactive identification of vulnerabilities across distributed networks, cloud environments, and operational technology systems
- **Zero-trust architecture:**
Identity-based access controls that assume breach and verify every access request, regardless of location



For semiconductor companies, cybersecurity is not just about preventing data breaches—it's about safeguarding the crown jewels of chip designs, process technologies, and customer relationships that define a competitive position. The combination of geopolitical tensions, state-sponsored cyber threats, and the value of semiconductor IP makes this a board-level concern requiring sustained investment.

IT ServiceDesk and End User Experience: Enabling Workforce Productivity

IT service desk and end-user experience represent a critical fourth priority area, capturing 21% for AI/ML adoption and 16% for transformation investment. As semiconductor firms expand their regional footprint and onboard new talent across multiple locations, providing seamless, AI-powered IT support becomes essential for maintaining productivity and employee satisfaction.

AI transforms the employees IT experience through:

- **Intelligent virtual assistants:**
24/7 self-service support that resolves common issues without human intervention
- **Predictive issue resolution:**
Proactive identification and remediation of IT problems before they impact users
- **Automated ticketing and routing:**
Smart assignment of support requests, directing users to the right resources based on issue type, urgency, and expertise
- **Personalized user experience:**
Adaptive interfaces and recommendations based on role, location, and usage patterns



For a distributed semiconductor workforce—with engineers, operations staff, and business professionals spread across locations—AI-powered IT support reduces friction, accelerates onboarding, and ensures consistent service quality across the organization.

Beyond Engineering: Expanding AI Impact Across CXO Functions

While Design & Development currently leads in AI efficiency gains (36%), the survey data shows significant untapped opportunity across other CXO domains. IT Transformation accounts for 28% of realized efficiencies, Operations 24%, and Finance & Accounting just 12%.

With the lowest efficiency gains today, Finance & Accounting and Operations stand out as particularly high-potential, under-developed fields for AI adoption:

Finance & Accounting

AI-enabled finance transformation can redefine the role of the CFO, from reporting to real-time value creation, by activating fully autonomous finance workflows across Financial Planning, Record-to-Report, and Source-to-Pay. This unlocks:

- 40–50% productivity gains
- 30%+ improvement in planning accuracy
- 50%+ efficiency gains across corporate and operational finance over five years

These improvements are powered by accounting intelligence, revenue and cost-shaping ML models, CFO simulation tools, and automated compliance and audit intelligence.

Operations

AI adoption in operational functions extends far beyond manufacturing. Intelligent optimization can deliver:

- Higher operational reliability through 80% first-time-right performance
- Tighter cost and resource control supported by 85%+ buy-channel compliance
- Reduced supply risk with 40% improvement in preferred supplier usage
- Greater operational transparency through 60%+ catalogue penetration

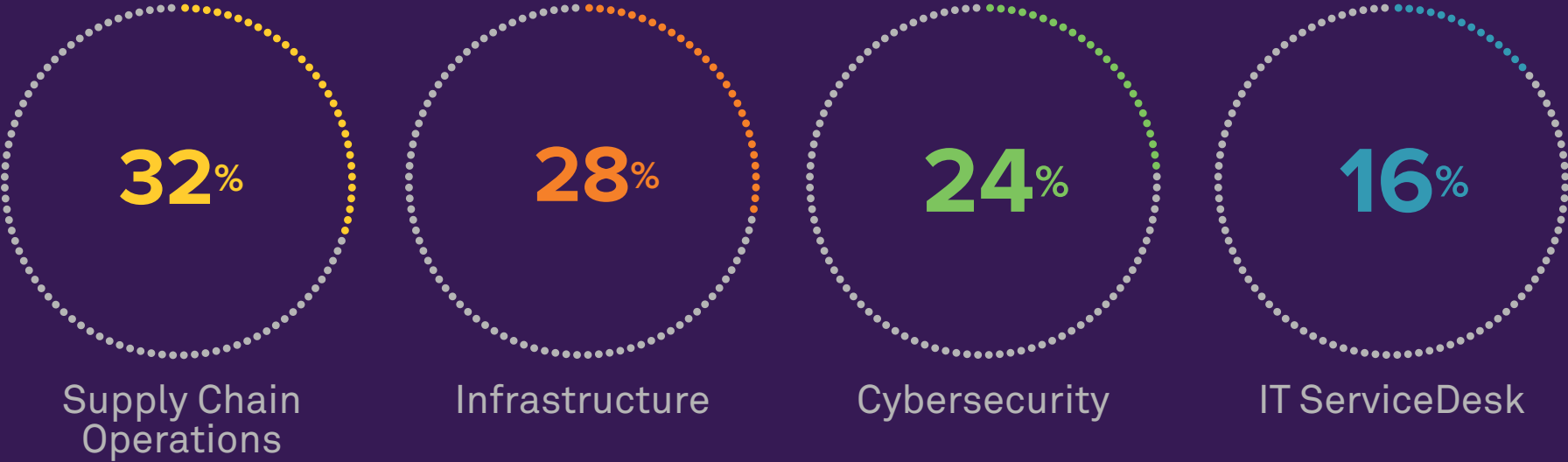
HR

AI and Agentic AI models are transforming workforce management and the end-to-end HR lifecycle. Semiconductor firms can realize improvements including:

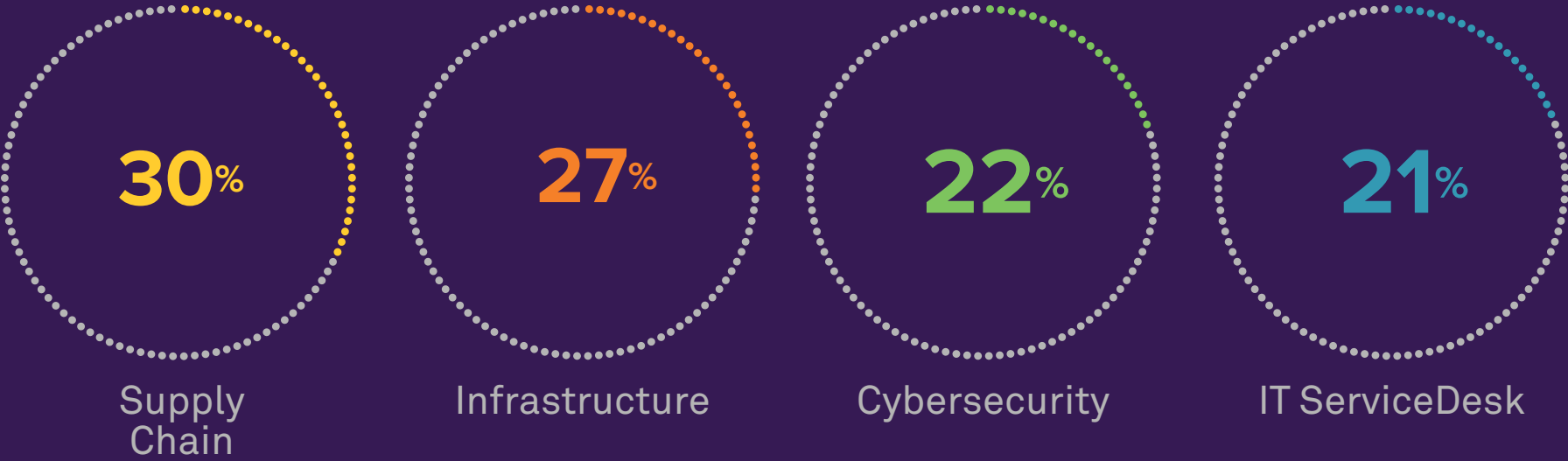
- Stronger governance with 30%+ reduction in compliance and policy violations
- Faster skills development via 50% reduction in training time
- Improved talent attraction through 30%+ better candidate experience
- Higher workforce satisfaction with a 10% uplift in employee experience

Key Survey Insights:

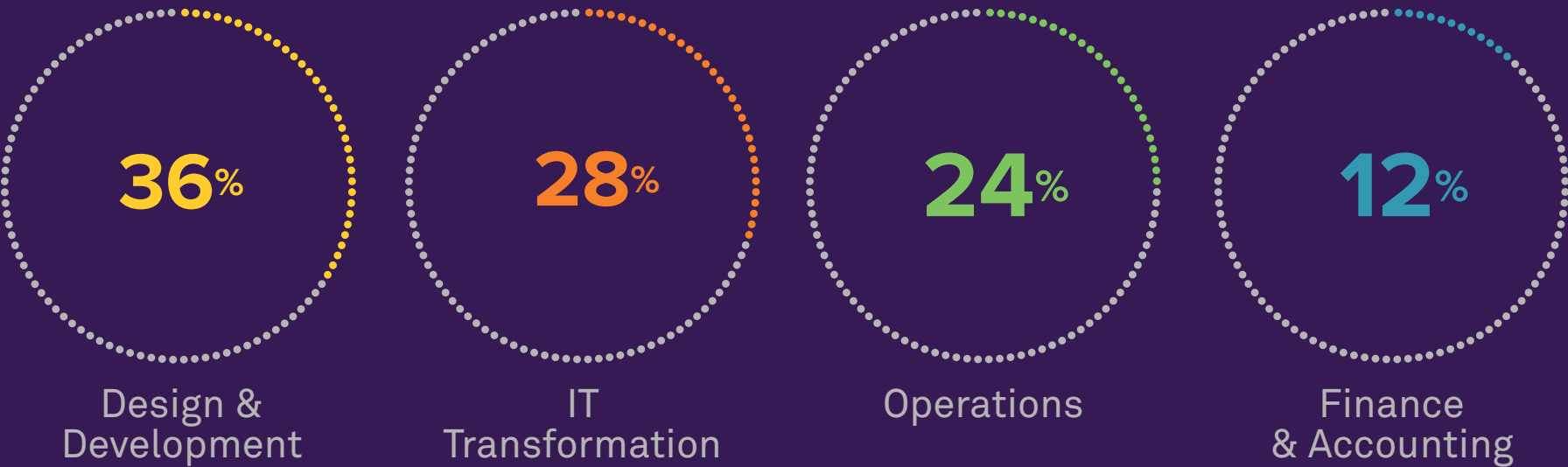
Top IT transformation priorities:



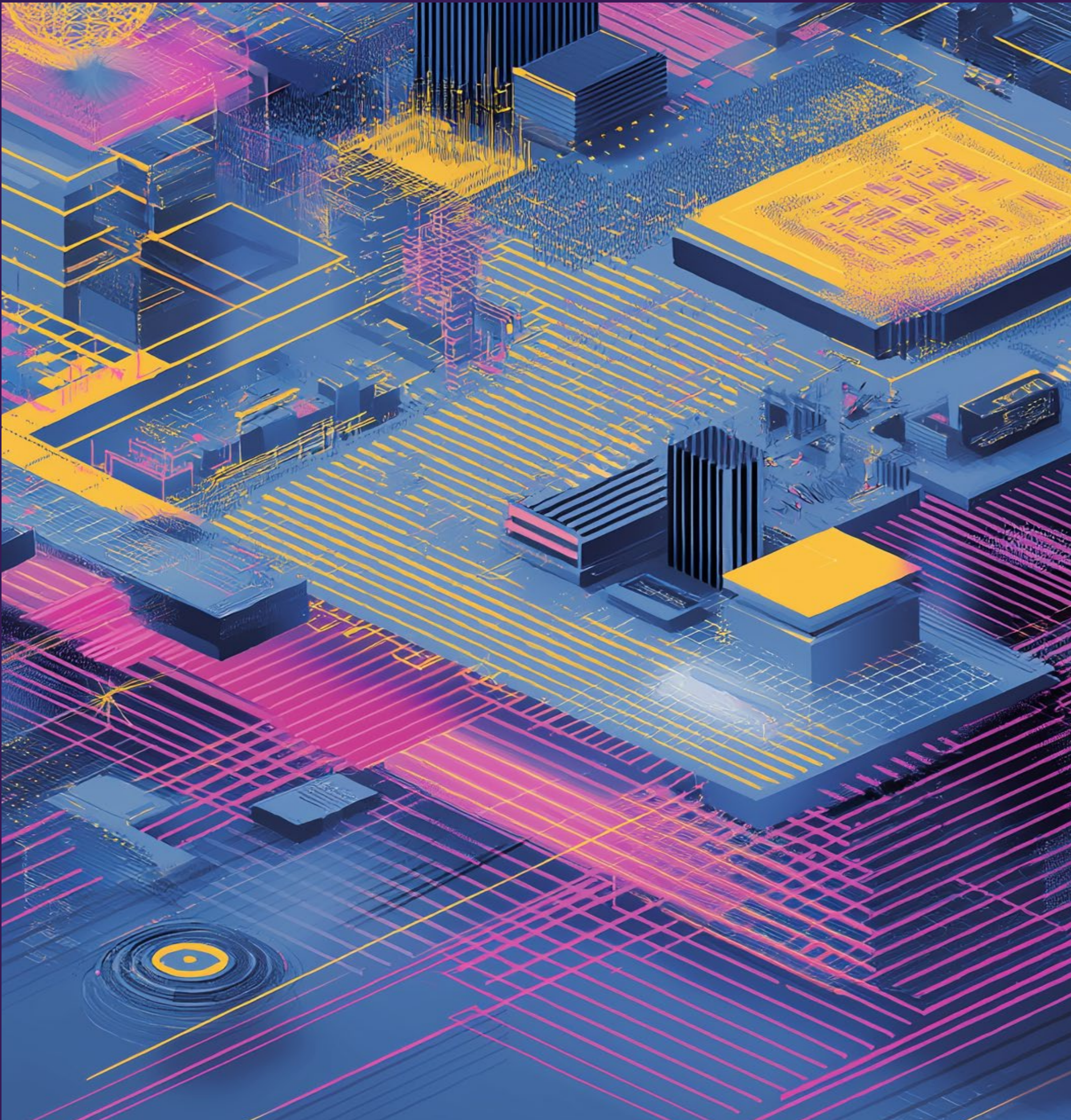
AI/ML benefits closely align:



Current AI efficiency leaders by function:



Underpenetrated opportunity areas with high potential:
Finance & Accounting (12%), Operations (24%), and HR



Wipro Connection:

Through its comprehensive portfolio—which includes infrastructure operations, AI-led autonomous supply-chain solutions, intelligent cybersecurity platforms, and advanced automation frameworks—Wipro supports semiconductor firms as they modernize core systems and strengthen resilience across the enterprise.

Wipro Intelligence™ underpins this, applying AI, automation and analytics across the value chain to improve decision-making, optimize processes and accelerate time to value. Wipro's cybersecurity capabilities are anchored in consulting-led, AI-powered solutions, which provide a structured, end-to-end approach to safeguarding complex semiconductor operations. These include:

- **Cyber Strategy & Risk:** Aligning security with business priorities and strengthening risk management foundations.
- **Cyber Defense:** Delivering next-generation threat detection and response to protect critical assets and maintain operational continuity.
- **Identity & Access Management (IAM):** Ensuring secure, frictionless access across expanding digital and engineering ecosystems.
- **Cloud & Application Security:** Embedding security into cloud environments, platforms and workloads from design through to deployment.
- **OT & IoT Security:** Protecting interconnected manufacturing, test, and engineering environments with specialized controls and monitoring.

Together, these capabilities allow semiconductor firms to take a holistic approach to resilience—modernizing infrastructure, securing digital and physical operations, and driving measurable transformation outcomes across engineering, supply chain, finance, HR and every CXO function.



Chapter 4

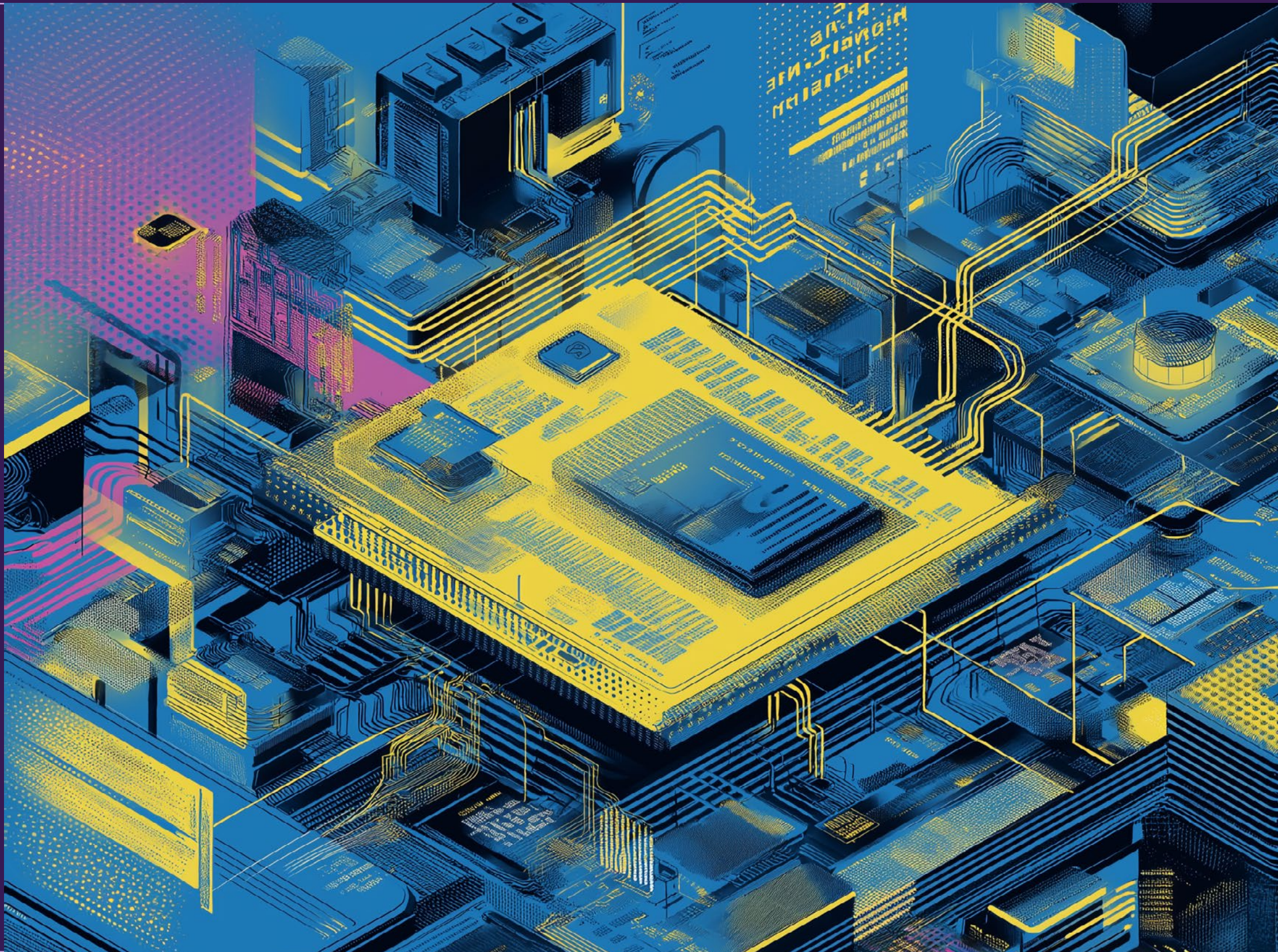
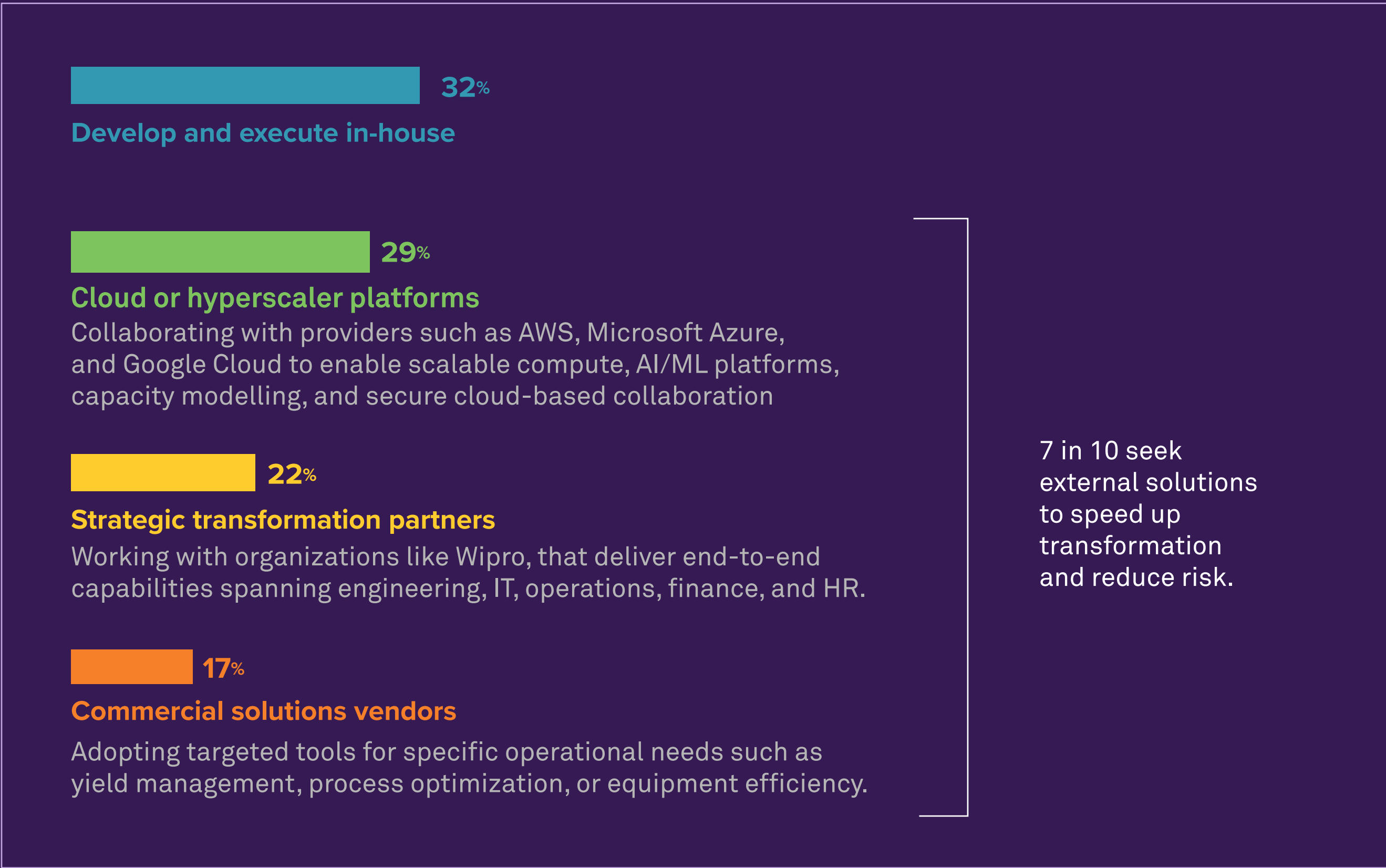
The Partnership Imperative: Moving Beyond “Not Invented Here”

To keep pace with the speed of disruption, the semiconductor industry is leaving behind its long-standing “Not Invented Here” mindset. Only three in ten companies plan to continue developing and executing transformation entirely in-house (32%), typically those focused on proprietary R&D or design. Seven in ten are now looking to collaborate externally to help them accelerate change, manage complexity, and scale innovation across the enterprise (68%).



How Semiconductor Firms Are Partnering

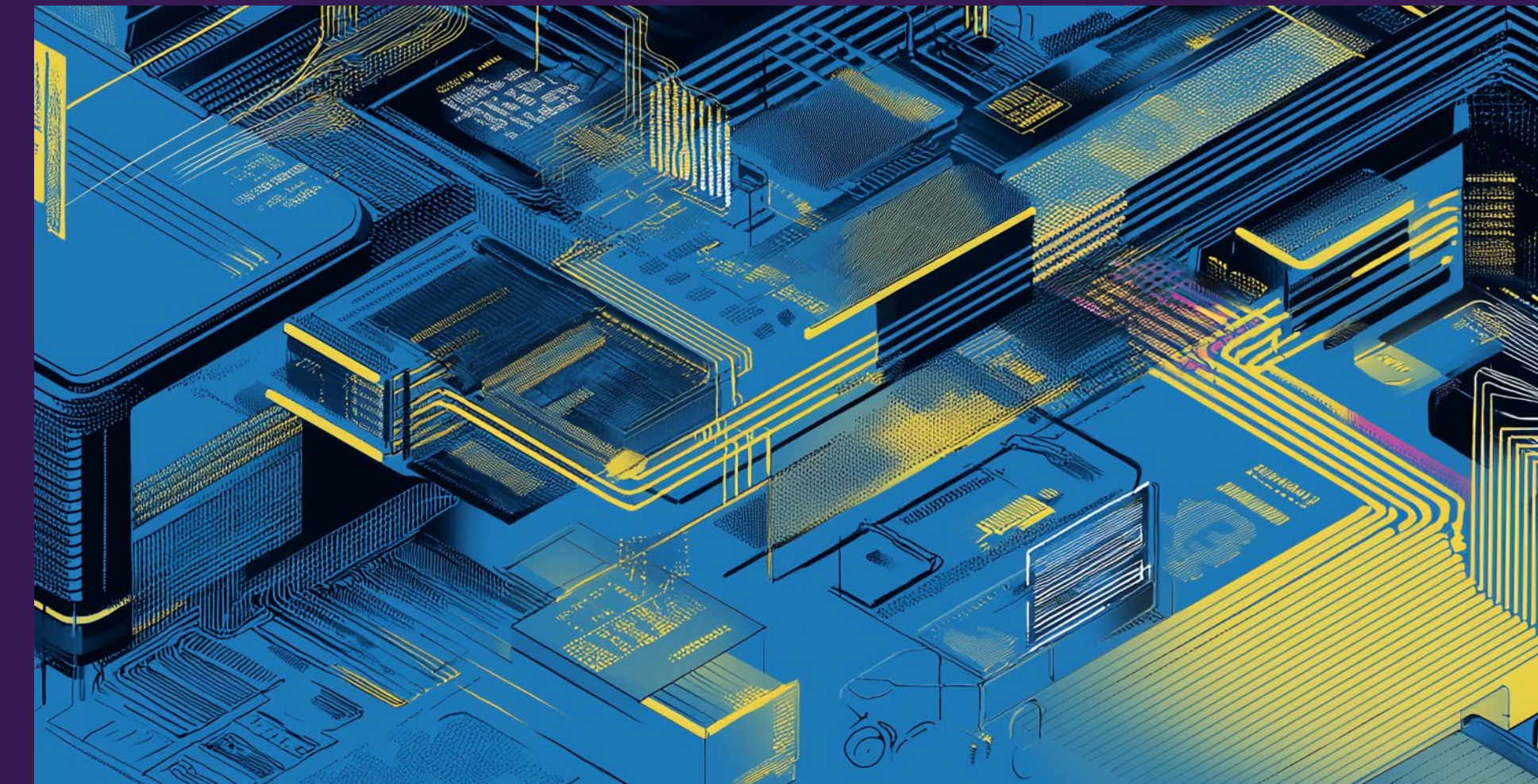
To achieve transformation at speed and scale, firms are engaging a range of partners:



How Partnerships Drive Enterprise-Wide Impact

Partnerships now reach well beyond engineering. Semiconductor leaders are leveraging external expertise to transform every major business function:

- **Engineering and R&D:**
Co-development, design services, and outcome-based innovation models that share risk and accelerate time-to-market, delivering 25–30% reductions in design and development costs and up to 50% shorter R&D cycle times.
- **Operations and Supply Chain:**
AI-enabled planning, yield optimization, and logistics analytics that reinforce regional resilience and reduce operating costs—achieving 40–60% improvements in productivity and cost-to-serve.
- **IT and Infrastructure:**
Hybrid cloud, edge computing, and AI-driven cybersecurity partnerships that support distributed global operations, delivering 50–60% improvements in IT productivity, service efficiency, and first-time-right performance through autonomous, AI-enabled operations.
- **Finance:**
Automation of FP&A, procurement, and cost analytics driving 40–50% efficiency improvements and enabling faster, more accurate planning and decision-making.
- **HR and Talent:**
Workforce planning, AI-enabled recruitment, and GCCs that tackle skills shortages and enhance delivery capacity—providing 50%+ efficiency gains and around 15% faster time-to-hire, supported by automation across key HR processes.



These partnerships deliver tangible benefits across every business function—lower costs, accelerated delivery, greater agility, and stronger organizational resilience.

At the same time, they give semiconductor companies access to specialized expertise in areas such as AI, cloud architecture, cybersecurity, supply chain optimization, and business process transformation—without the time and cost of building these capabilities in-house. In a world where technology evolves every few months, ecosystem collaboration has become a competitive imperative, enabling firms to stay ahead of disruption and continuously innovate.

The Rise of Strategic Transformation Partners

A growing number of semiconductor firms, around 1 in 5 (22%), are turning to strategic transformation partners capable of integrating multiple capabilities into a single, cohesive program. This approach replaces fragmented solutions with unified transformation that spans every CXO domain.

It is a trend set to accelerate as partners like Wipro continue to expand their solutions and expertise to meet the industry’s evolving needs—from engineering and IT modernization to finance, HR, and operational excellence.

Wipro Connection:

Wipro Intelligence™—our unified suite of AI-powered platforms, solutions and transformative offerings—combines advanced AI capabilities with deep semiconductor domain expertise and cross-functional transformation experience.

Building on this foundation, Wipro takes a consulting-led approach to help semiconductor firms accelerate R&D, modernize IT and infrastructure, optimize finance and HR functions, and strengthen operational performance through a blend of AI frameworks, global delivery and co-innovation models.

Our integrated approach enables clients to achieve measurable improvements across the value chain and keep pace with the industry’s rapid cycles of disruption and innovation.



Chapter 5

The Road Ahead: AI Investment and Competitive Growth

AI is now shaping the semiconductor industry on two crucial fronts: it is powering industry growth by driving huge new demand for semiconductors, while also transforming internal processes to drive operational excellence. Sixty-three percent of firms plan to increase AI investment over the next two years, driven by both new revenue opportunities and the need to improve efficiency, profitability, and resilience.

Dimension 1: Building Products FOR AI – The Revenue Engine

The global surge in AI adoption is fueling record demand for advanced semiconductors. Companies are rapidly expanding their portfolios to power AI across a wide range of markets and applications. Beyond developing AI accelerators and GPUs, semiconductor firms are also building:

- Edge and embedded processors that enable intelligence across connected devices, industrial systems, and vehicles
- High-performance data center and networking chips that support AI workloads, cloud computing, and storage optimization
- Next-generation materials and architectures that increase energy efficiency and computing performance across industries

This is transforming semiconductor firms into strategic enablers of the global AI economy, which is fueling the industry's growth, opening new vertical markets, and commanding premium pricing through innovation leadership.



Dimension 2: Using AI Internally – The Efficiency and Margin Engine

Semiconductor companies are embedding AI into their own operations to streamline workflows and reduce costs, which is driving measurable gains across the entire value chain:

- **Design and Engineering:**
AI-enabled design flows are cutting R&D costs by 26% and reducing time-to-market by 28%
- **Manufacturing and Operations:**
Predictive maintenance, yield optimization, and process automation are improving quality and throughput
- **Supply Chain:**
Autonomous supply chain capabilities are achieving 90% forecast accuracy and cutting shipment and procurement costs by up to 25%
- **Finance, IT, and HR:**
AI is transforming business functions through predictive analytics, intelligent automation, and smarter decision-making—delivering efficiency improvements of 50–70%

By applying AI to internal processes, firms are becoming more resilient, protecting their margins and creating capacity for innovation—enabling them to reinvest the savings into future growth.



The Strategic Advantage: Combining Both Dimensions

The most successful semiconductor companies are investing across both dimensions: simultaneously building AI-powered products for the market while also applying AI within their own organizations. This creates a self-reinforcing virtuous cycle:

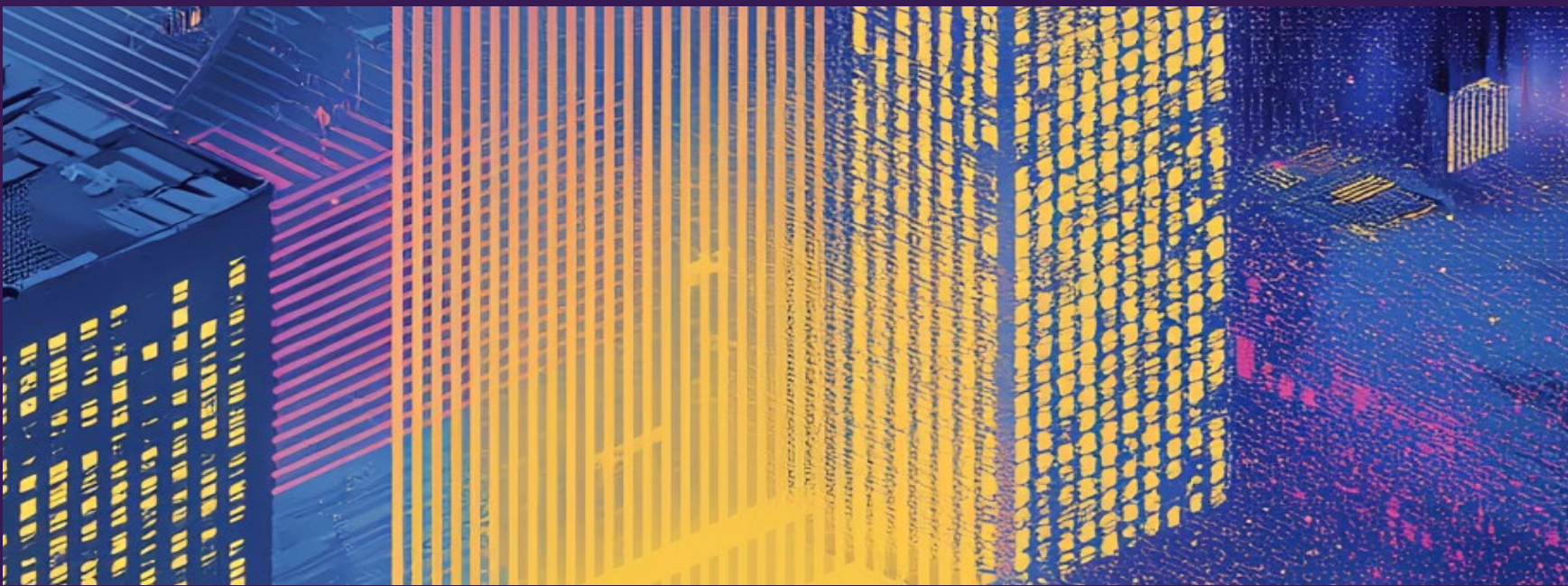
- AI expertise from in-house teams and trusted partners improves product design, innovation speed, and reliability
- Cutting-edge AI chips enhance in-house productivity, analytics, and performance
- Organization-wide AI adoption drives measurable business outcomes across engineering, IT, operations, finance, and HR

True competitive advantage does not come from isolated AI initiatives or niche technology providers, but from integrated, end-to-end transformation led by partners who can help scale AI across every business function. In an industry where disruption cycles become shorter and shorter, this holistic approach allows firms to innovate faster, operate smarter, and grow stronger.

Key Survey Insights:



- 63% of firms plan to increase AI investment to gain market share and expand into new domains
- AI investment spans two dimensions: producing new products for AI and integrating AI in internal operations
- Strategic, enterprise-wide AI adoption delivers competitive advantage across engineering, IT, operations, finance, and HR



Wipro Connection:

Wipro enables semiconductor firms to capture AI’s full value—both as a growth catalyst and an efficiency engine. Through **Wipro Intelligence™**, our unified suite of AI-powered platforms, solutions, and transformative offerings, Wipro helps organizations advance AI chip development while embedding intelligence across design, manufacturing, supply chain and enterprise operations.

This integrated, cross-functional approach brings together AI engineering frameworks, product development expertise and scalable delivery to accelerate design cycles, raise productivity and improve margins—positioning semiconductor leaders to compete and grow in the AI-driven decade ahead.

Chapter 6

Recommendations

Chapter 6: Recommendations

To thrive in an era defined by technological disruption, semiconductor leaders must adopt an integrated approach to AI-enabled transformation, and drive innovation, efficiency, and resilience across the full value chain.

1. Treat AI as a Strategic Capability, Not a Technical Tool

Move beyond isolated use cases to embed AI across every business function—from R&D and engineering to IT, finance, HR, and operations. Companies that approach AI as an enterprise capability, not just a product feature, will unlock business growth and expand profit margins.

2. Pursue Dual AI Value Streams

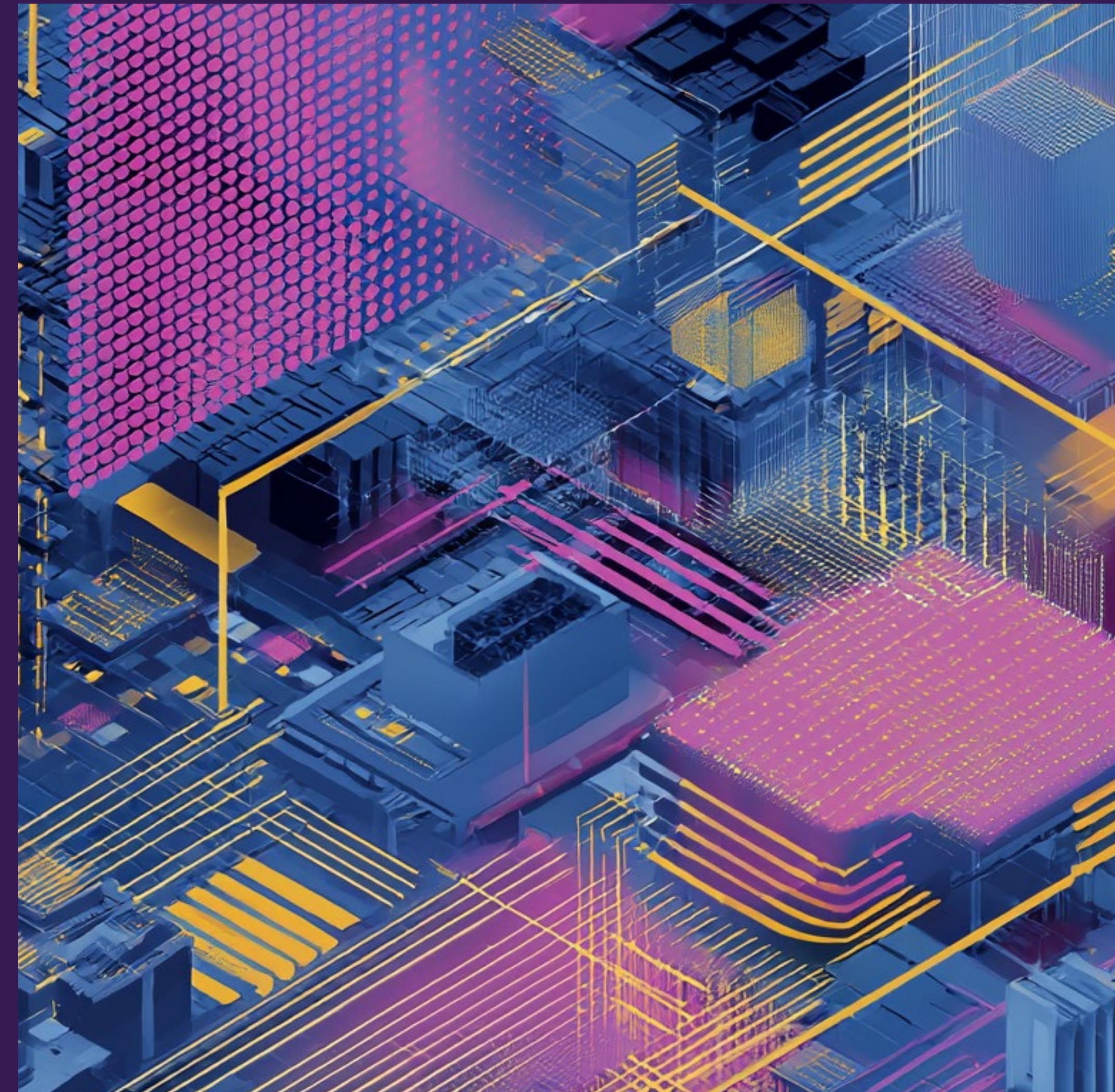
Maximize impact by investing in AI along two complementary dimensions:

AI for Growth:

Develop next-generation chips, architectures, and platforms that power the global AI economy.

AI for Efficiency:

Deploy AI internally to improve design productivity, supply chain precision, financial planning, and workforce performance.



3. Build Regional Resilience through Local Innovation

Accelerate localization strategies by aligning regional manufacturing with nearby R&D, engineering, and talent ecosystems. Leverage partnerships and incentives to strengthen domestic capability while maintaining global reach.

4. Partner for Integrated, Cross-Functional Transformation

Seek out strategic transformation partners—not just point solution providers—who can deliver measurable outcomes across multiple CXO domains. Combining engineering excellence with IT modernization, operational automation, and business process optimization is key to long-term competitiveness.

5. Invest in People and Ecosystems

Talent remains a critical constraint. Build hybrid models that combine internal upskilling with external expertise through GCCs, nearshore talent hubs, and AI-enabled workforce development.

6. Measure What Matters

Link AI initiatives to tangible business outcomes: time-to-market, yield improvement, cost optimization, and employee productivity. Define clear KPIs to track performance and ensure every AI investment delivers measurable value.

7. Move at the Speed of Disruption

Disruption cycles in semiconductors are now measured in months, not years. Adopt agile governance, rapid experimentation, and adaptive partnerships to maintain innovation velocity. Firms that act decisively will lead the next wave of growth and resilience.



Chapter 7

Conclusion



The Path Forward: AI-Enabled Transformation at Unprecedented Speed

The semiconductor industry stands at a pivotal moment of disruption. Geopolitical pressures, talent shortages, cost escalation, and the rapid rise of AI—with transformative advances emerging every three to six months—are reshaping every aspect of how chips are designed, manufactured, delivered, and supported.

AI has become the defining force driving this transformation, not only as a growth engine powering new products and markets, but also as an efficiency engine improving margins, productivity, and organizational resilience. It is transforming not just engineering, but the full operational landscape—from IT and supply chain to finance, HR, and business strategy.

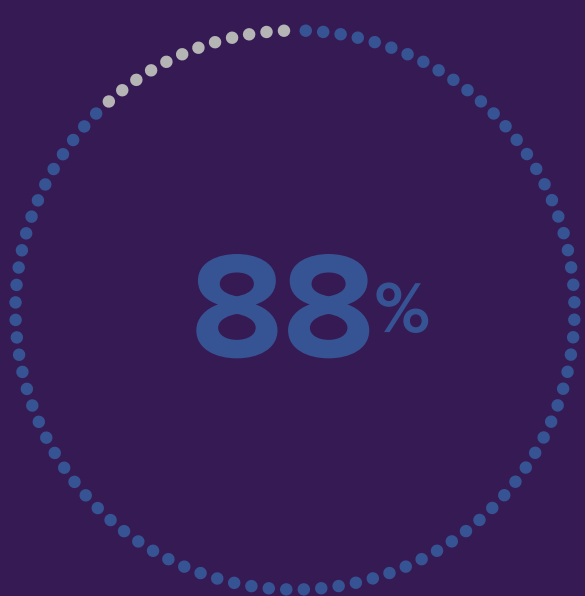
Our research shows an industry in motion:



100% of companies are investing in regional manufacturing to manage geopolitical risks.



90% are localizing supply chains to strengthen resilience.



88% are increasing local R&D and talent investment.



68% are forming partnerships to accelerate transformation.

The organizations that will lead the next decade are those deploying AI comprehensively across every CXO domain, working with partners who can deliver integrated, measurable outcomes at the speed the industry demands.



The Wipro Advantage:

Comprehensive Transformation at the Speed of Disruption

Wipro helps semiconductor leaders harness AI to re-engineer design, operations, IT, supply chains, finance and HR—creating regionalized, resilient and competitive organizations ready for the decade ahead. **Wipro Intelligence™**, our unified suite of AI-powered platforms, solutions, and transformative offerings tailored for semiconductor organizations, underpins these transformations by embedding intelligence into every layer of the semiconductor value chain. With deep domain expertise, a presence in more than 80 countries to support GCC and nearshore strategies, and proven capabilities across every CXO domain, Wipro delivers end-to-end change at the pace disruption demands.

From engineering services and AI-enabled design automation to autonomous supply-chain solutions, infrastructure modernization, intelligent cybersecurity and enterprise transformation across finance and HR, Wipro's capabilities support the full spectrum of semiconductor transformation needs.

In an industry where meaningful change occurs every three to six months, semiconductor firms require a partner able to match that velocity—combining world-class domain expertise with integrated AI, cybersecurity, cloud and operations capabilities. Wipro, powered by **Wipro Intelligence™**, provides the depth and cohesion required to deliver outcomes that matter to every CXO.



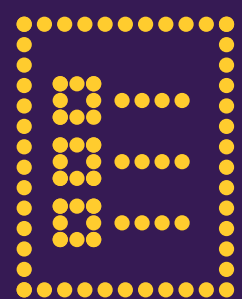
Study Detail



Namrata Sharma
Vice President and Sector
Head - Hitech



North America
USA
100 Total Respondents



Methodology
Online survey



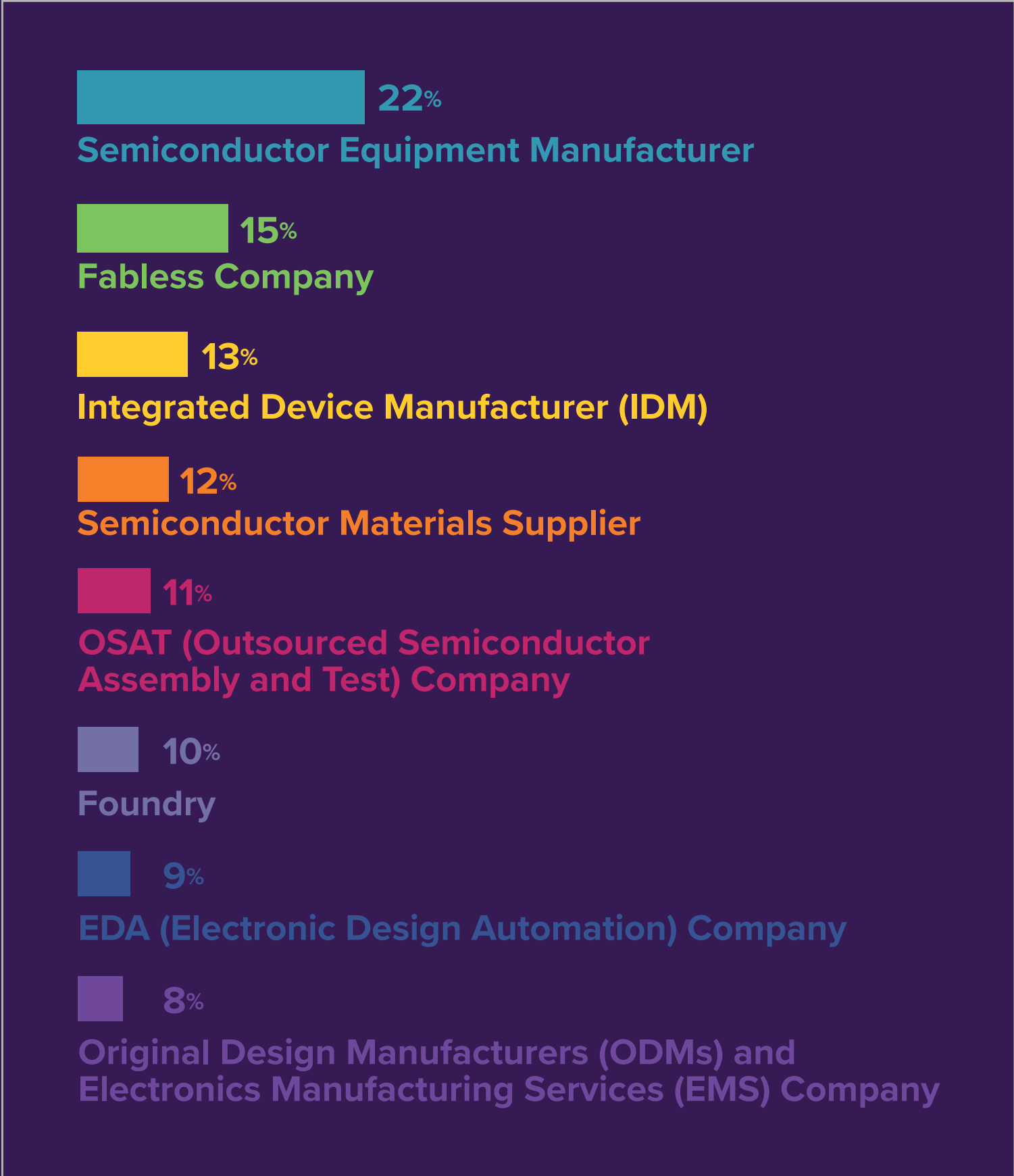
Audience Profile
Senior leaders in Technology,
Operations and Products
at large semiconductor
companies (1000+ employees
and \$500 million+
annual revenue)



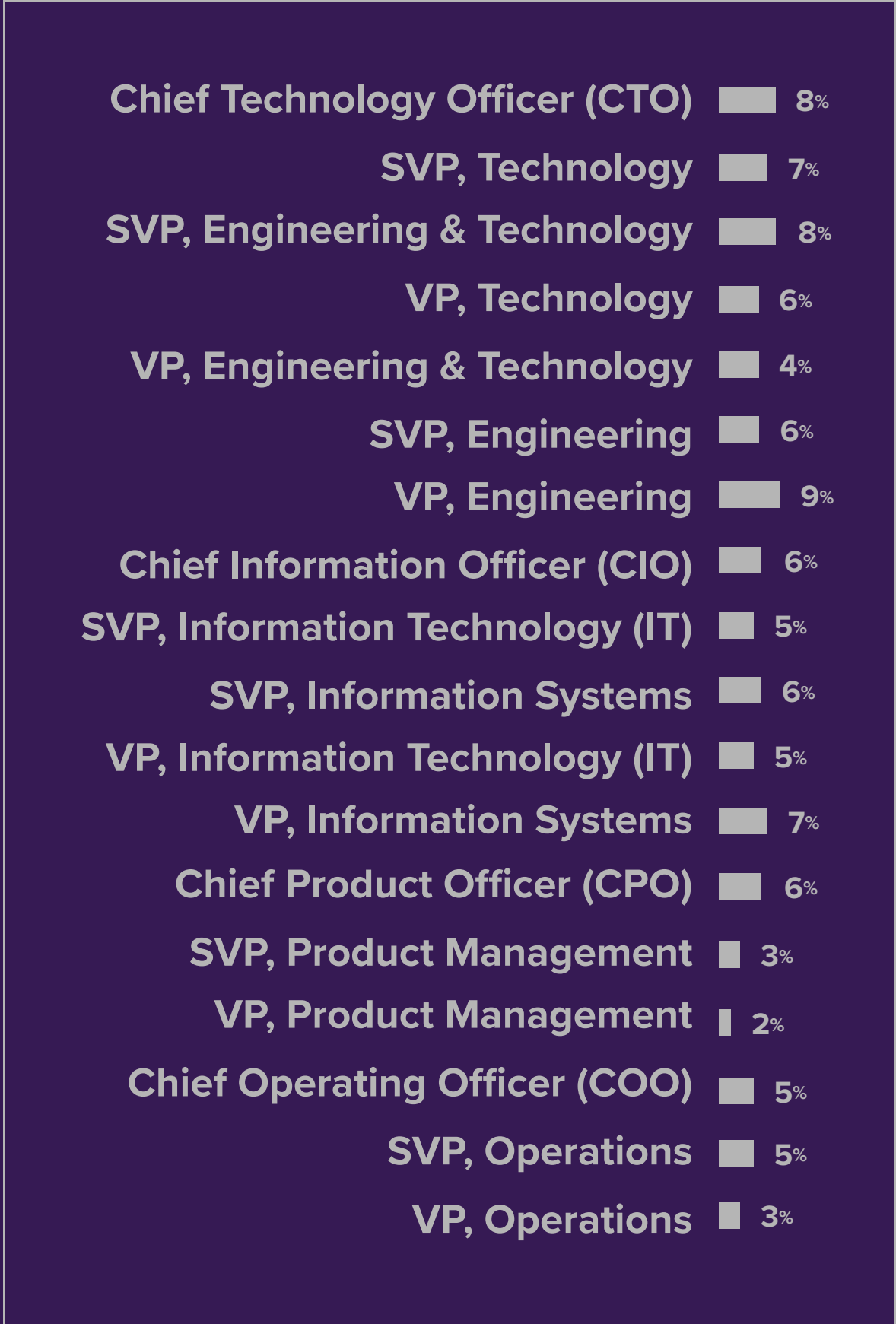
Fieldwork Dates
October 2025

Business Profile

Subsector



Job title



Number of employees



Annual revenue



The research has been conducted by [Coleman Parkes Research](#).

Coleman Parkes is a global market research agency that enables industry-leading businesses to stay ahead with survey data. For over 20 years we have developed quantitative and qualitative market research programs that deliver award winning thought leadership reports, press releases and standout headlines that identify new and emerging trends and instill confidence and credibility in our clients.

The report has been custom designed in partnership with Coleman Parkes by [Station Montréal Design Bureau](#).



AI as the Disruptive Force Transforming the Semiconductor Industry

US Semiconductor Industry Survey Findings 2025

