EUROPEAN CHIPS DIVERSITY ALLIANCE

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DEI REPORT

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INTRODUCTION

1. Executive Summary

The European semiconductor sector must fill 75,390 additional roles by 2030 (ECSA Skills Strategy, 2024). Traditional recruitment practices alone cannot close this gap. Meanwhile, diversity, equity and inclusion (DEI) barriers limit access to available talent across European markets. This creates risks for both competitiveness and major policy initiatives like the European Chips Act.

The European Chips Diversity Alliance conducted comprehensive research to understand these intersecting challenges through three complementary methods that capture different organisational perspectives. The research includes:

- A survey of 73 professionals which provided sector-wide quantitative insights.
- Interviews with 17 executives which captured strategic perspectives.
- A focus group with 12 early career professionals which revealed daily workplace realities.

This methodological approach ensures findings reflect both strategic leadership views and operational experiences across diverse organisational contexts. These range from SMEs to multinational corporations operating across European Union member states.

Research findings build upon established evidence showing that diverse teams achieve 19% higher innovation revenues and 9% higher profit margins (Lorenzo & Reeves, 2018). However, the European semiconductor context reveals distinctive patterns requiring sector-specific understanding rather than generic diversity approaches, particularly given the business-to-business nature of the industry and complex regulatory environments across European operations. Organisations demonstrate a clear pattern in their DEI performance that reveals both capabilities and challenges.

Pattern 1

The pipeline-performance pattern: Innovation strength alongside talent development challenges

Survey data shows that organisations consistently rate innovation and product development as their strongest DEI performance area, with 49% indicating performance exceeds expectations. Executive interviews reinforced this finding, with multiple leaders describing observed connections between diverse teams and enhanced business outcomes.

This innovation strength exists alongside systematic challenges in talent pipeline development. Survey results show talent pipeline as a growing priority. Executive interviews described insufficient graduates entering the sector. Early career professionals in the focus group highlighted structural barriers including complex visa processes across EU member

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states and recruitment agencies lacking understanding of technical requirements limiting diversity of applicants reaching organisations.

Gender representation patterns across European contexts illustrate this pattern further. Female early career professionals described minimal representation in engineering education and workplaces. Executive interviews revealed that organisations achieving improvements struggled with retention challenges. This reflects broader challenges where women represent just 10-15% of technical semiconductor roles, dropping to less than 5% in technical director positions (GSA & Accenture, 2022).

This pattern shows that **while organisations can effectively utilise diverse talent for innovation, they are struggling to develop sustainable pathways for future diverse talent.** The disconnect becomes concerning given European policy initiatives demanding expanded sector capacity when talent pipeline development faces systematic barriers.

Pattern 2

The implementation gap: strategic investment versus daily experience

Research reveals misalignment between organisational DEI investments described by executives and inclusion experiences reported by employees across organisational levels. This gap exposes differences between formal DEI policies and daily workplace practices that determine authentic inclusion outcomes.

Executive interviews revealed substantial investments in DEI, including formal committee structures, dedicated roles, and integration into performance systems. Some leaders reported implementing specific numerical targets, with some linking portions of executive bonuses to diversity metrics. However, early career professionals in the focus group revealed that only 26% rated their organisation's DEI efforts as highly visible in their daily work environment. Multiple executives acknowledged that diversity initiatives frequently relied on volunteers balancing DEI responsibilities alongside primary job functions, creating sustainability concerns that could limit progress.

Early career professionals in the focus group consistently emphasised that meaningful inclusion occurred through daily interactions rather than formal programmes. Their insights revealed practical barriers affecting participation across multinational European operations, including communication challenges related to language assumptions, meeting management across time zones, and cultural references that excluded international colleagues. These operational realities demonstrate the importance of consistent workplace behaviours rather than policy frameworks alone.

Survey data reinforced this implementation gap. While 25% of organisations prioritise employee experience and culture as their top current focus, 45% felt their organisation met or exceeded expectations in delivering inclusive workplace experiences. Resource constraints compound these challenges, with 27% identifying budgetary and time limitations as their highest DEI challenge and 45% rating resource pressures among their top two barriers. This resource challenge affects European organisations differently based on

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size, regulatory context, and operational complexity across diverse member state requirements.

Pattern 3

The efficiency-inclusion culture challenge: Technical excellence versus inclusive practices

Research exposes cultural tensions within technically focused European semiconductor environments where efficiency priorities and inclusion practices are perceived as competing rather than complementary objectives. This tension reflects broader patterns identified in semiconductor engineering cultures where efficiency becomes prioritised over collective well-being, with inclusion work often concentrated among women and minority employees, limiting their visibility and career advancement (Appelhans, 2022).

However, data seems to complicate this opposition between efficiency and inclusion. Skillset diversity consistently ranks as the top diversity priority, indicating sector understanding that diverse capabilities drive performance outcomes. Executive interviews described successful recognition of different thinking approaches enhancing innovation processes, with leaders emphasising how varied backgrounds contributed to creative problem-solving and unique solution development.

Early career professionals generally described collaborative and respectful team environments whilst identifying specific areas where inclusive practices could enhance rather than compete with technical effectiveness. Their insights highlighted communication approaches, meeting management across cultural contexts, and language considerations that could strengthen participation for all team members without compromising technical standards. This suggests opportunities for cultural reframing that positions inclusion as enhancing technical excellence rather than competing with operational efficiency.

The cultural challenge requires addressing European-specific dynamics, given that 80% of surveyed organisations operate internationally and face varying cultural expectations around communication, decision-making, and workplace interaction across different European markets.

Pattern 4

The B2B invisibility challenge: Sector-specific talent attraction requirements

Research identifies unique challenges facing business-to-business technology sectors in attracting diverse talent that distinguish semiconductors from consumer-oriented technology companies. Executive interviews noted that the business-to-business nature created inherent visibility problems, as most companies lacked consumer brand recognition. Early career professionals suggested better engagement with school-age students, while survey comments mentioned the need for highly visible publicity and marketing initiatives.

Unlike consumer-oriented technology companies, semiconductor organisations cannot rely on product interaction for talent discovery, requiring approaches that differ fundamentally from consumer technology recruitment models. This challenge becomes particularly acute

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when competing for a shared candidate pool with consumer technology companies that benefit from natural product visibility and brand recognition.

Strategic priorities for European semiconductor DEI advancement

The convergence of findings across survey data, executive interviews, and focus group insights reveals four strategic priorities emerging directly from European semiconductor sector evidence. These priorities reflect both immediate operational requirements and longer-term positioning needs as European policy initiatives reshape sector expectations.

- **Demonstrate that inclusion enhances technical outcomes** rather than competing with operational efficiency. Early career professionals in the focus group emphasised that meaningful inclusion occurred through daily intra and interpersonal interactions rather than formal programmes, while executives described how diverse thinking approaches enhanced innovation processes. This addresses the cultural perception identified in research that efficiency and inclusion compete, requiring systematic approaches that embed inclusive practices into daily work.
- **Establish dedicated DEI resources** instead of relying on volunteers to balance DEI responsibilities alongside their main roles. Survey data showed substantial resource pressures combined with executive interviews describing volunteer-dependent efforts for structured programmes. This creates sustainability concerns, indicating a need for systematic investment in DEI infrastructure so it is better embedded in colleagues' day-to-day experiences. This resource challenge affects European organisations differently based on size and regulatory context, requiring tailored approaches.
- **Adapt approaches to different organisational and regional contexts**, research findings showing that effective DEI approaches vary significantly across different operational environments. Executive interviews revealed that smaller organisations noted advantages in informal relationship-building approaches whilst larger organisations described formal programming requirements. Additionally, different European countries require different approaches due to varying regulatory requirements and cultural contexts, with survey comments noting that different local regulations within EU countries created implementation barriers.
- **Coordinate sector-wide talent attraction efforts** to address the distinctive challenges facing European business-to-business technology sectors in building diverse talent pipelines. All stakeholder groups recognised that individual company efforts cannot achieve the scale required for pipeline transformation, particularly given projected talent gaps reaching 75,390 by 2030 (ECSA Skills Strategy, 2024). The business-to-business nature of semiconductor companies creates inherent visibility problems compared to consumer-oriented technology firms, requiring coordinated approaches that leverage collective European advantages.

These priorities require coordinated efforts that build upon demonstrated current strengths. The European Chips Diversity Alliance's development of methodologies and tools for the sector provides a foundation for evidence-based approaches to these challenges.

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2. PROJECT OVERVIEW AND METHODOLOGY

2.1 European Chips Diversity Alliance

The European Chips Diversity Alliance (ECDA) is a consortium co-funded by the European Union and coordinated by SEMI Europe, with 11 partners from 6 countries. The alliance will enhance the diversity, equity, and inclusion (DEI) in the European microelectronics sector by building bridges from industry to the world of education. The Alliance will lower the barriers to enhance participation in the sector from under-represented groups by providing data, operational tools, case studies, trainings, and programs to improve workplace diversity and inclusion.

The objectives of the European Chips Diversity Alliance are to:

- Bring together industry and the world of education including universities and training organisations.
- Develop an innovative methodology to gauge Diversity, Equity, and Inclusion (DEI) trends and dynamics in the EU microelectronics sector.
- Formalise the DEI Advisory Council and produce Vision Paper with actionable measures and recommendations for enhanced DEI in the sector.
- Develop innovative training and operational tools to improve DEI in the EU microelectronics sector.

2.2 Work package 2

Within the six ECDA's Work Packages, WP2 of the EU Chips Diversity Alliance plays a critical role in establishing a strong foundation for the project's success. It focuses on three key areas:

- The project's "DEI Mapping Methodology" (D2.1) is a key tool employed by WP2. This methodology will conduct diagnostic assessments and gather data on DEI dynamics and trends (T2.3). This continuous monitoring process will serve to identify areas for improvement. By analysing trends, the project can pinpoint areas within the microelectronics sector that require the most attention regarding DEI. The data collected will guide the development of targeted initiatives that directly address specific DEI challenges. This will also involve developing a framework to continuously assess the project's progress and measure its impact on Diversity, Equity, and Inclusion (DEI) within the microelectronics sector. This mechanism will ensure data-driven decision-making throughout the project lifecycle.
- Formalisation of the European Advisory Council (D2.2) on DEI under the Pact for Skills: A dedicated council will be established to serve as a central body overseeing all DEI initiatives. This council will bring together key stakeholders from across the sector, fostering collaboration and ensuring coordinated efforts to enhance DEI across the entire ecosystem.

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- DEI Reports and Vision Paper (D2.3): Finally, WP2 will produce comprehensive reports (T2.4) outlining the current state of DEI in the microelectronics sector. These reports will analyse key drivers and inhibitors, and recommend concrete actions for improvement. Additionally, a Vision Paper will be developed, outlining the desired future state for DEI within the sector.

By generating this "DEI intelligence," the project will be well-equipped to develop effective strategies and policies that drive lasting progress towards a more diverse, equitable, and inclusive microelectronics sector.

EudaOrg is the leading partner of the consortium for Deliverable D2.1 and D2.3. SEMI Europe is leading the Deliverable D2.2.

2.3 Research approach and data sources

This report builds on both secondary research analysis and primary data collection to develop comprehensive insights into DEI in the European semiconductor sector.

Secondary research methodology

Secondary research drew from academic literature, industry reports, and policy documents. Consortium partners contributed to identifying relevant sources, with guidance to emphasise recent research where possible - particularly studies from 2018 onwards. Partners made choices based on what sources were available and relevant.

The review examined peer-reviewed articles, industry analysis from organisations like McKinsey & Company and Boston Consulting Group, plus policy frameworks from international bodies such as ISO. Partners sought research that clearly demonstrated DEI impacts on organisational performance.

Primary research methodology

Three main approaches formed the primary research: structured interviews with senior leadership, focus groups involving early career professionals, and a comprehensive workforce survey. Together, these methods captured different viewpoints across organisational levels and career stages. The result was both strategic and day-to-day insights into current DEI practices, challenges, and opportunities across the European semiconductor sector.

Bringing together secondary and primary research means the findings rely on established academic evidence alongside current sector experiences. This combination supports practical recommendations that address the specific context of the European semiconductor industry.

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3.FUTURE-PROOFING THE WORKFORCE THROUGH DIVERSITY, EQUITY AND INCLUSION

This section provides an overview of secondary research in diversity, equity and inclusion and the impact it has on organisational performance.

3.1 Strengthening talent resilience through diversity and equity

Modern organisations confront a fundamental challenge: established talent management practices no longer provide the resilience needed in today's volatile business environment. To understand how organisations can develop this resilience, clear definitions prove essential. ISO 30415 defines diversity as the characteristics of differences and similarities between people, while equity represents the principle that policies, processes and practices should be fairly applied and individual needs recognised. Resilience is seen as the ability to absorb and adapt in a changing environment. Research from a range of contexts shows that diversity and equity, when properly understood and implemented, form essential foundations for organisations seeking to adapt, innovate, and maintain success over time.

How systemic equity creates organisational strength

The strongest evidence comes from research examining fairness throughout entire organisational systems rather than concentrating on diversity measures. Researchers who analysed employment systems covering job structures, compensation, recruitment, development, and performance management found that organisations with thorough equity frameworks consistently showed higher resilience and reduced employee stress (Lam Lai et al., 2024).

This method demonstrates how structural fairness establishes conditions allowing diverse talent to contribute their complete capabilities. Studies across European and international settings found that organisations embedding equity throughout their systems expand their available talent pools while deepening their organisational capabilities (Lam Lai et al., 2024; Winnicka-Wejs, 2024). Progressive organisations recognise diversity and equity as core capabilities determining their adaptive capacity in uncertain environments, rather than viewing them as compliance requirements.

Values create lasting competitive advantages

Research shows that workforce resilience depends more on cultural factors than financial incentives alone. Studies comparing different leadership approaches within organisations found that although compensation matters, trust, dignity, and ethical consistency cannot be replaced when sustaining long-term performance and retention (Tsolaki, 2025).

This understanding comes from research that identified six essential elements shared by resilient workforces: organisational stability during change, development of both personal and collective resilience, empathetic leadership, effective navigation of competing values,

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meaningful work purpose, and realistic comprehension of incentive limitations (Tsolaki, 2025).

Strategic support needs thoughtful implementation

Organisations that invest in employee support programmes encounter complex relationships between their interventions and workforce resilience. Research across different organisational contexts shows that strategic support programmes strengthen employee resilience and openness to change, yet their success depends heavily on broader fairness perceptions (Long, Cooke & Mavondo, 2025; Winnicka-Wejs, 2024).

Perceived organisational justice works as a critical boundary condition that can reduce the positive effects of support programmes when employees perceive existing fairness levels as adequate (Long, Cooke & Mavondo, 2025). This finding suggests that effective equity-focused talent systems must ensure development opportunities stay accessible across diverse populations while carefully managing organisational fairness perceptions.

Diverse teams show superior crisis navigation

Theoretical frameworks examining diversity-resilience relationships reveal clear advantages in how diverse teams handle challenges. Research shows that diverse teams excel across three essential phases: anticipating problems before they appear, coping effectively during crises, and learning thoroughly from experiences (Duchek et al., 2020).

The mechanism works through broader knowledge bases and varied perspectives that improve environmental scanning and threat identification. During crises, diverse teams construct multiple interpretations rather than defaulting to oversimplified analyses. Studies across sectors confirm that broader knowledge bases enable more creative solutions, especially valuable for unusual problems requiring innovative approaches (Duchek et al., 2020; Winnicka-Wejs, 2024).

Performance evidence shows clear advantages

Evidence for diversity's impact on organisational success continues growing stronger. Companies with above-average diversity achieve 19% higher innovation revenues and 9% higher profit margins compared to less diverse counterparts (Lorenzo & Reeves, 2018). Longitudinal research shows that top-quartile diverse companies have 39% greater likelihood of financial outperformance, rising from 15% in 2015 (McKinsey & Company, 2023).

Operational benefits prove equally substantial. Inclusive teams make better business decisions 87% of the time, operate twice as efficiently with half the meetings, and deliver 60% superior results (Cloverpop, 2017). Analysis of 108 technology companies found that highly gender-diverse firms returned on average 5.4% more annually than less diverse peers over five years (Morgan Stanley, 2017).

Especially noteworthy is research showing that high-performance management practices often achieve diversity outcomes more effectively than traditional programmes. Analysis of

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approximately 800 companies reveals that management innovations designed for performance improvement frequently boost workforce diversity as a beneficial consequence (Dobbin & Kalev, 2025). This evidence suggests that diversity and performance work together synergistically rather than requiring trade-offs.

Building adaptive organisational capacity

The research synthesis shows that diversity and equity work as fundamental organisational capabilities rather than supplementary programmes. Studies indicate that 80% of managers across various industries consider greater stakeholder inclusion in planning essential for: building resilience; enabling organisations to harness diverse experiences during crisis planning; maintain stronger relationships; and access varied skill sets when facing unexpected challenges (Winnicka-Wejs, 2024).

This evidence points toward organisations that embed diversity and equity principles throughout their talent systems building adaptive capacity that enables effective responses to complex challenges and sustained competitive advantage across changing conditions. Future-ready organisations need talent systems that access broad capability pools, develop diverse forms of expertise, and ensure all employees can contribute their full potential throughout their careers.

3.2 Driving performance and innovation through inclusion

While diversity and equity create the foundational conditions for organisational resilience, inclusion serves as the critical mechanism that transforms this potential into tangible performance outcomes. ISO 30415 defines inclusion as the practice of including all stakeholders in organisational contexts. Yet research reveals that effective inclusion goes far beyond participation to encompass genuine belonging, psychological safety, and the ability for all employees to contribute their authentic perspectives to drive innovation and performance.

How inclusion multiplies diversity's impact

Analysis shows that inclusion practices have significantly more powerful effects on driving innovation compared to diversity by itself, indicating that how organisations leverage diversity matters more than diversity itself (Okatta et al., 2024). Research across multicultural environments reinforce this finding, showing that inclusion practices substantially enhance innovation outcomes when combined with workforce diversity (Chaudhry et al., 2021).

The difference operates through the shift from mere representation to authentic contribution. Comprehensive inclusion practices, including fairness, belongingness, recognition of uniqueness, and positive diversity climate, all contribute to organisational innovation (Chaudhry et al., 2021). This creates conditions where diverse perspectives can genuinely influence organisational outcomes rather than remaining underutilised.

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From inclusion to belonging

Contemporary research distinguishes between inclusion and belonging, revealing important differences in their impact on performance. While inclusion focuses on embracing diversity, belonging emphasises cultivating cultures that expect to be positively shaped by differences rather than simply accommodating them.

Research reveals that belonging addresses fundamental psychological needs for social acceptance and connection that directly impact performance (Ayoko & Fujimoto, 2024). Studies demonstrate the importance of creating workplace environments where employees feel genuinely valued, as this connection significantly influences both individual wellbeing and organisational outcomes (Thompson, 2022). Belonging-focused inclusion strategies therefore address both performance outcomes and the human needs that underpin sustainable organisational success.

Leadership as the critical enabler

Evidence consistently identifies leadership commitment and accountability as critical factors determining inclusion effectiveness. Research shows that organisations with strong leadership support for inclusion initiatives achieve significantly better performance outcomes (Okatta et al., 2024). However, effective inclusive leadership requires understanding that different backgrounds bring different expectations of communication, decision-making, and workplace interaction.

Studies reveal that 70% of the world's workforce operates within cultures that value collective decision-making and clear hierarchies, requiring leadership approaches that differ from traditional management methods (Livermore, 2025). Research identifies common leadership approaches that can undermine inclusion: providing too much independence to employees who prefer collective decision-making, overemphasising comfort at the expense of intellectual challenge, focusing excessively on cultural differences, and applying inappropriate communication styles across different cultural contexts.

Effective inclusive leaders demonstrate self-awareness, empathy, commitment to fairness, and empowerment of underrepresented groups. Research shows that gender-diverse companies with inclusive leadership are 25% more likely to experience above-average profitability compared to those without inclusive leadership practices (Sun et al., 2024).

Measuring inclusion's business value

Research emphasises moving beyond diversity statistics to measure inclusion's direct impact on business outcomes. Studies demonstrate that a 1% increase in female representation at executive level corresponds with a 3.5% increase in net profit margin, but only when accompanied by inclusive practices that enable authentic contribution (Kincaid, 2023). This evidence highlights that representation without inclusion may not translate into performance benefits.

Effective inclusion demonstrates specific organisational characteristics: high employee engagement, psychological safety for honest communication, diverse representation in

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decision-making processes, and leadership that reflects organisational diversity (Kincaid, 2023). Organisations demonstrating these characteristics consistently show stronger innovation outcomes and financial performance compared to those focusing solely on diversity representation.

Creating sustainable performance advantages

The research synthesis reveals that inclusion and belonging function as the mechanism that transforms diversity potential into sustained organisational performance. Evidence shows that organisations must move from explaining why DEI matters to implementing structural changes and daily practices that enable all employees to contribute authentically (Thompson, 2022). Future-ready organisations need to create environments where psychological safety, belongingness, and meaningful participation combine to unlock diverse teams' full potential.

4. CONTEXTUAL LANDSCAPE OF DEI IN THE EUROPEAN SEMICONDUCTOR SECTOR

Having established the theoretical foundation for DEI's business impact, we now examine how these insights apply specifically within the European semiconductor context. This analysis examines DEI implementation across four interconnected dimensions that span from structural challenges to practical outcomes: foundational industry challenges that create the context for diversity initiatives, organisational implementation approaches that determine how companies operationalise DEI, measurable business impacts that justify investment in these programmes, and the unique barriers and opportunities that distinguish semiconductor companies from other sectors.

4.1 Industry foundation challenges

The European semiconductor sector faces structural challenges that significantly shape diversity, equity, and inclusion initiatives. Workforce demographics present immediate concerns, with one-fifth of European semiconductor workers aged 55 or older and Germany anticipating about 30% retirements over the next decade (McKinsey & Company, 2024). This ageing demographic creates both talent shortages and succession planning challenges that directly intersect with DEI priorities.

Talent pipeline issues run particularly deep across European institutions. Academic programmes struggle to keep pace with industry evolution, creating what researchers describe as marked skills deficits and a misalignment between academic training and evolving industry needs (Medgyes et al., 2021). Current estimates suggest that by 2030, demand for semiconductor professionals in Europe will leave a talent gap of 75,390 professionals (ECSA Skills Strategy, 2024). This scale of shortage cannot be addressed through traditional recruitment alone – it demands more inclusive and diverse talent development strategies.

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Industry attractiveness further shapes these demographic challenges. Research indicates that certain areas within the semiconductor sector face employee experience challenges, including career development opportunities, limited flexibility in working conditions, and demanding work-life balance expectations, though these factors vary significantly across different roles and companies (McKinsey & Company, 2024). Many semiconductor companies find it challenging to compete with consumer-oriented tech firms for talent, which can make it more difficult to attract diverse professionals.

Brand perception further hampers talent attraction. About 60% of senior executives believe semiconductor companies have weak brand image and recognition compared with other technology companies (McKinsey & Company, 2024). This visibility problem directly impacts the sector's ability to attract diverse talent from both traditional and non-traditional backgrounds, creating a self-reinforcing cycle of limited diversity.

4.2 Organisational DEI implementation

DEI implementation varies significantly across European semiconductor organisations, with some areas showing strong foundations whilst others reveal substantial gaps across multiple operational dimensions.

Inclusive leadership research provides perhaps the strongest European academic foundation for understanding DEI implementation. According to Randel et al. (2018), inclusive leadership occurs when leaders create environments where employees feel both a sense of belongingness and uniqueness, being valued for their individual perspectives. However, semiconductor-specific research reveals cultural barriers. Appelhans (2022) demonstrates how "efficiency" becomes culturally coded in the industry to prioritise individual productivity over collective well-being, with tasks that sustain the workplace – like mentoring, coordination, or diversity work – often offloaded to women and minority employees, limiting their visibility and career advancement.

This efficiency-inclusion tension represents a fundamental sector challenge. Research shows that personal productivity practices valued for streamlining work often devalue "inclusion work" and offload "unimportant" tasks to less powerful employees, primarily women and minorities (Appelhans, 2022). This creates structural barriers where marginalised engineers are disproportionately tasked with low-visibility work, limiting their opportunities for promotion and reinforcing existing hierarchies.

Employee experience and culture further reveal systemic sector-wide challenges. Employee satisfaction still lags other similar industries, with employee experience leading to issues with retention impacted by factors such as long hours and high-pressure deadlines (McKinsey & Company, 2024). Companies that prioritise engagement through regular feedback, recognition programmes, and employee involvement in decision-making tend to see higher retention levels (CTG, 2023).

Deloitte defines Employee Experience (EX) as being informed by six core relational attributes an employee interacts with: the work they do, the places they work in, the

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diverse people they work with, the technology they use, the organisation they work for, and their personal well-being and inclusion (Deloitte, 2024).

Learning and development approaches show more promising developments across European contexts. European research demonstrates that DEI must be embedded in organisational and educational strategies to drive equity and sustainability, with successful implementations requiring adaptive, contextual, and co-created approaches with learners (Jentjens et al., 2025). The research emphasises that curriculum and training programmes must address diverse processing styles, communication preferences, and support mechanisms, particularly important given the technical complexity of semiconductor work. The EUROCONTROL Toolkit offers an actionable model for sectoral implementation, combining operational, cultural, and leadership strategies (EUROCONTROL, 2024).

Progression and performance systems reveal barriers throughout the sector. Women in technical positions account for just 10-15% of roles, with less than 5% of technical director and VP positions held by women (GSA & Accenture, 2022). The leadership gap widens significantly in higher roles, indicating systemic barriers in career advancement rather than being limited to pipeline issues. Research shows that around a third of large companies reported that women make up 30-40% of all new hires, but this rate drops to 10-20% for technical roles, with nearly a third of companies awarding less than 5% of technical promotions to women (GSA & Accenture, 2022).

Recruitment faces both structural and procedural barriers within the sector. The semiconductor industry relies heavily on international talent, particularly for advanced roles, but faces significant barriers in accessing global talent pools (Semiconductor Jobs, 2024). Visa and administrative barriers emerge as significant obstacles, with qualified candidates sometimes being lost to competitors due to lengthy administrative processes (Emerge Talent Cloud, 2024).

Innovation and product development represents an area where research gaps are particularly pronounced. The semiconductor sector is undergoing rapid technological advancements, particularly in AI and advanced packaging technologies. The global push for green solutions is intensifying, with AI simulations emerging as critical for renewable energy and decarbonised manufacturing, highlighting the sector's evolving relationship with sustainability challenges (TrendForce, 2023). Companies are planning to invest approximately $1 trillion in new fabrication plants by 2030 (McKinsey & Company, 2022). However, research linking DEI practices to innovation outcomes in semiconductor contexts remains limited, despite the sector's critical role in technological advancement.

Customer experience implications of DEI in semiconductor contexts remain largely unexplored. Research from other sectors show creating campaigns that enable marginalised or underrepresented groups to fully experience and connect with brands, fosters loyalty (Boston University Hospitality Review, 2022). However, application to B2B semiconductor contexts requires further investigation.

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Suppliers and supply chain DEI implementation faces unique challenges in the semiconductor sector. Research indicates that in 2023, European suppliers represented 8% of the $30 billion global semiconductor device production market but accounted for 28% of the $30 billion equipment market worldwide and 34% of the total $20 billion subsystem market (Yole Group, 2023). This global dependency creates both challenges and opportunities for implementing DEI initiatives across the value chain.

Positive marketing and brand awareness research suggests opportunities for differentiation within the competitive landscape. Purpose-driven brands with genuine social and environmental engagement foster stronger loyalty and deeper emotional connections (Kotler & Sarkar, 2018). Sustainability messaging boosts brand trust, even among engineers, demonstrating its impact beyond consumer markets (Bhattacharya & Sen, 2004). However, much of the research on positive marketing originates from consumer-focused contexts; semiconductor-specific data is still limited.

Talent pipeline development faces the most significant challenges identified across all research areas. European studies consistently report marked skills deficits and misalignment between academic training and evolving industry needs (Medgyes et al., 2021). The shortage of qualified labour in microelectronics, compounded by issues of diversity and inclusion, stems from outdated curricula that do not cater to emerging fields such as artificial intelligence and data-driven technology (Tzanova, 2021). Research identifies a specific scarcity of engineers with expertise in quantum technologies, citing poor mathematics preparation and the need for upskilling (Greinert et al., 2024).

4.3 Business benefits and performance impact

Research demonstrates compelling evidence for the business benefits of DEI implementation in technology sectors, with direct implications for semiconductor companies. A growing body of research consistently demonstrates a strong positive correlation between diverse teams and organisational success (McKinsey & Company, 2020). Companies that embrace DEI not only foster fairer work environments but also unlock greater innovation, agility, and financial performance.

Innovation benefits prove particularly relevant to semiconductor sector competitive requirements. Boston Consulting Group's survey of more than 1,700 companies found that companies with above-average total diversity had both 19% higher innovation revenues and 9% higher EBIT margins (Lorenzo & Reeves, 2018). These findings gain additional significance given that 85% of executives agreed that diversity is crucial to gaining the perspectives and ideas that foster innovation (Forbes Insights, 2011).

Financial performance correlations extend beyond innovation metrics across multiple studies. Morgan Stanley's analysis of 108 tech companies found that highly gender-diverse tech firms returned on average 5.4% more annually than their less diverse peers over five years (Morgan Stanley, 2017). McKinsey research reinforces these findings, showing that top-quartile companies had a 39 percent greater likelihood of financial outperformance

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versus their bottom-quartile peers in 2023, up from 15 percent in 2015 (McKinsey & Company, 2023).

However, implementation approaches significantly influence outcomes across organisations. Passive approaches to DEI are destined to fail. Hiring diverse talent or appointing diverse leaders is not enough. The true measure of success lies in the lived experience of employees. To move from performative to transformative DEI, organisations must implement robust measures, including: strengthening leadership accountability and capabilities at all levels; ensuring fairness and transparency through data-driven meritocracy; enforcing zero-tolerance for discrimination; fostering belonging by supporting multivariate diversity; communicating openly and frequently about DEI strategy and vision; and embedding DEI as a core strategic pillar (McKinsey & Company, 2020).

4.4 Sector-specific barriers and opportunities

The semiconductor sector presents unique structural characteristics that both challenge and create opportunities for DEI implementation across all operational areas. Technical complexity serves as both a barrier and potential differentiator for inclusive practices within this specialised industry.

Educational barriers compound recruitment challenges significantly. The semiconductor industry presents unique entry barriers due to its emphasis on advanced STEM skills, which intensifies entry barriers for groups historically marginalised in technical fields (Semiconductor Jobs, 2024). Girls and students from ethnic minorities frequently encounter societal biases and lack of encouragement in mathematics, physics, or computing, visible as early as primary or secondary school. Degree programmes central to the semiconductor industry, such as electrical engineering and materials science, tend to have low female enrolment and insufficient ethnic minority representation, resulting in a smaller, less diverse talent pool (Semiconductor Jobs, 2024).

The industry's geographic concentration creates additional barriers to diverse talent acquisition. European semiconductor clusters face similar challenges to other global hubs, with Silicon Saxony in Germany, the largest semiconductor cluster in Europe, containing more than 400 industry actors and projecting 100,000 workers by 2030 (Silicon Saxony, 2024). This growth presents opportunities to embed DEI practices from the ground up in new facilities and initiatives but also intensifies competition for limited diverse talent pools.

Supply chain considerations add complexity to DEI implementation across the value chain. European suppliers demonstrate significant influence in the equipment and subsystem segments representing substantial portions of global equipment markets whilst having smaller shares in device production (Yole Group, 2023). This positioning suggests that European companies have significant influence in the equipment and subsystem segments where DEI initiatives could have substantial impact.

The sector faces unique challenges as unlike consumer-facing technology companies, semiconductor organisations must balance highly specialised technical requirements with

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inclusive practices. This technical complexity requires specialised approaches to DEI that account for the sector's unique operational demands and performance requirements.

VOICES FROM THE SECTOR

To understand current realities, we conducted comprehensive primary research across the sector.

5. KEY THEMES

This section synthesises insights from three distinct stakeholder groups within the European semiconductor sector: early career professionals, senior leadership, and the broader workforce. Together, these voices provide a picture of diversity, equity and inclusion (DEI) priorities, challenges, and opportunities across organisational levels and career stages.

Key research findings

Finding 1: The performance paradox

Strong innovation performance alongside weak talent pipeline development (survey and interview data)

Current strengths:

- 49% of organisations exceed expectations in innovation through diverse teams.
- Clear business benefits from diversity recognised by leadership.

Critical gaps:

- Only 22% exceed expectations in talent pipeline development.
- 27-point gap between current innovation success and future talent preparation.

What this means: Organisations excel at using existing talent for innovation but struggle to develop sustainable pathways for future talent acquisition.

Finding 2: The implementation gap

Strategic investment versus daily employee experience (interview and focus group data)

Leadership perspective:

- Executives report substantial DEI investments including formal structures and dedicated roles.
- Some organisations link executive performance to inclusive leadership.

Employee reality:

- Only 26% of early career professionals rate DEI efforts as highly visible in daily work
- Meaningful inclusion occurs through daily interactions rather than formal programmes

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What this means: Disconnect exists between strategic intentions and operational implementation.

Finding 3: The efficiency-inclusion tension

Technical excellence versus inclusive practices (survey, interview and focus group data)

Current perception:

- Efficiency-focused engineering culture perceives inclusion as competing with productivity.
- 15% identify cultural resistance as top DEI challenge.

Sector foundation:

- Skillset diversity ranks as #1 priority (40% currently, 38% future).
- Innovation success demonstrates diverse teams enhance technical outcomes.

What this means: Need to reframe inclusion as enhancing rather than competing with technical excellence.

Finding 4: The B2B visibility challenge

Sector-specific talent attraction requirements (survey, interview and focus group data)

Unique barriers:

- Business-to-business nature creates inherent visibility problems compared to consumer technology.
- Cannot rely on product interaction for talent discovery.
- Lacks consumer brand recognition that facilitates recruitment

Coordinated solution required:

- Individual company efforts insufficient for pipeline transformation.
- Talent pipeline rises to 38% priority for ECDA initiatives (highest among all areas).

What this means: There is a need for coordinated industry-wide effort to address visibility and talent attraction challenges.

Finding 5: Priority evolution

Shifting focus from internal culture to external talent development (survey data)

Current state:

- Employee experience and culture: 25% top current priority
- Talent pipeline: 16% current priority

Future trajectory:

- Talent pipeline becomes top future priority at 25%
- Gender diversity shows largest increase in targeted efforts: 27% to 34%

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What this means: Organisations are shifting from internal engagement toward external talent acquisition.

5.1 Areas of agreement

DEI as a business imperative

Across all stakeholder groups, there is strong consensus that DEI represents a critical business priority rather than a compliance exercise. Early career professionals valued inclusive cultures for innovation, with survey respondents highlighting the importance of "building an inclusive culture where everyone feels safe to speak up and bring in ideas to drive innovation." Executives explicitly linked diverse teams to improved business outcomes.

Survey respondents strongly reinforced this business-focused view. Talent retention ranked as the top current motivator for DEI efforts, with 48% rating it as very important with talent acquisition following closely at 42%. Regulatory compliance ranked significantly lower. Currently 33% rate it as very important, confirming that DEI is driven by workforce needs rather than compliance obligations.

Talent pipeline as the sector's greatest challenge

All three groups identified the talent pipeline as the most pressing long-term challenge facing the sector. Early career professionals highlighted structural barriers including visa processes and recruitment agencies lacking technical understanding. They emphasised the need for earlier intervention, with concerns that university and engineering school might be too late for intervention. Executives quantified this challenge extensively. They described insufficient numbers of graduates entering the sector. Many engineering graduates, particularly women, do not pursue semiconductor careers after graduation.

Survey data confirmed this priority. Talent pipeline rose from second place in current priorities (16%) to the top future focus area (25%). It was rated as the highest priority for ECDA initiatives.

Gender representation as a persistent concern

Gender diversity emerged as a consistent and intensifying priority across all stakeholder groups. Female early career professionals described stark realities. They spoke of being among very few women in their engineering classes and workplaces. Executives described both challenges and responses. Some achieved improvements in female representation within short periods. However, they acknowledged ongoing retention challenges.

Survey data revealed gender as the second-highest diversity priority. Currently 27% prioritise this, rising to 34% in future planning. This suggests growing recognition that gender diversity is essential for talent acquisition.

Skillset diversity as the foundation

All groups demonstrated clear consensus on skillset diversity as fundamental to DEI efforts. Early career professionals emphasised the value of different technical backgrounds and geographical experiences in problem-solving. Executives described how diverse thinking

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approaches enhanced innovation processes. Survey respondents overwhelmingly prioritised skillset diversity. This consistency suggests that skillset diversity provides a stable foundation for broader DEI efforts.

Importance of inclusive daily practices over formal programmes

All groups emphasised that meaningful inclusion occurs through consistent everyday behaviours over formal DEI structures. Early career professionals valued respectful communication and cooperative mindsets. They noted that inclusion was most tangible in interpersonal habits rather than formal structures. Executives described observing cultural changes in team dynamics and collaborative approaches.

Survey respondents rated employee experience and culture as their current top priority at 25%. However, only 45% felt their organisation met or exceeded expectations in this area. This indicates significant room for improvement in translating priorities into practice.

Recognition of communication and cultural barriers

All stakeholder groups acknowledged that communication challenges significantly impact inclusion in multinational environments. Early career professionals identified specific barriers. These included fast speech, cultural references, and assumptions about local norms that made participation more difficult. Executives described implementing practical adaptations. They mentioned changing working languages and adapting communication styles for different cultural contexts.

5.2 Tensions and differing expectations

Visibility and integration of DEI efforts

A disconnect emerged between leadership intentions and employee perceptions of DEI visibility and integration. Many executives described substantial DEI investments, formal committee structures, and dedicated roles. Yet only 26% of early career professionals rated their company's DEI efforts as highly visible. Early career professionals noted that corporate DEI messages did not always lead to concrete action in team settings. They observed that DEI rarely came up during performance reviews.

Approaches to measurement and accountability

Perspectives varied significantly on how to measure and drive DEI progress. This revealed fundamental differences in philosophy and implementation. Some executives described implementing specific numerical targets linked to compensation. They established detailed objectives across organisational levels. Others expressed concerns that specific targets might drive inappropriate behaviours. Early career professionals rarely mentioned formal metrics. They focused instead on practical day-to-day inclusion experiences. Survey data revealed that 25% identified "lack of goals and metrics" as their top DEI challenge.

Resource allocation and competing priorities

Tension emerged between DEI aspirations and operational realities across different stakeholder groups. Executives often described substantial DEI investments and dedicated

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teams. They also noted that many diversity initiatives relied on volunteers. These individuals balanced DEI responsibilities alongside primary job functions. Early career professionals commented that DEI initiatives competed with immediate work demands.

Survey respondents strongly confirmed these resource pressures. They identified "budgetary and time resources" as the most common challenge. These resource challenges affected organisations differently based on size and structure. Smaller organisations reported particular constraints but also advantages in informal relationship-building approaches.

Generational differences in expectations and communication preferences

Clear tensions emerged around generational differences in DEI expectations and approaches. Executives frequently mentioned adapting to different generational expectations. They described managing teams of younger colleagues. This required new approaches to communication, feedback, and work-life balance. Early career professionals demonstrated pragmatic expectations. They sought clarity on career progression and fair treatment rather than extensive formal programmes.

Poll data from early career professionals revealed interesting patterns. "Career growth opportunities" ranked first for job selection factors. "Feeling valued and respected" ranked first for workplace preferences. However, survey respondents also identified "cultural resistance" as a significant challenge at 15%. Comments noted entrenched attitudes and generational differences in receptiveness to diversity discussions.

Regional and cultural adaptation challenges

Stakeholder groups revealed different perspectives on balancing global DEI consistency with local cultural adaptation. Executives with international operations described significant variations. These included cultural contexts, regulatory requirements, and societal attitudes across their global footprints. Early career professionals working in multinational environments described communication barriers. These linked to language, speech patterns, and working hours. They focused more on day-to-day inclusion impacts.

Survey respondents reflected this complexity across their global operations. Organisations were represented across ten different headquarters countries. 80% reported Asia-Pacific and North American presence. The regulatory fragmentation challenge was particularly acute within Europe itself. Survey comments highlighted frustration that different local regulations within EU countries created implementation barriers.

5.3 Opportunities for collaborative action

Education and outreach coordination

All stakeholder groups recognised that individual company efforts cannot adequately address pipeline challenges. Executives described limitations of competing for existing talent rather than growing the overall workforce. Early career professionals suggested public sharing of hiring process experiences to motivate company improvements. Survey

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respondents strongly prioritised talent pipeline development for ECDA initiatives. This suggests appetite for coordinated sector-wide action.

Leadership development and capability building

Multiple executives described challenges transitioning from technical expertise to inclusive leadership. They noted that managing diverse teams required different capabilities. Survey data showed mixed performance ratings for inclusive leadership. Equal proportions rated their organisation as exceeding expectations and needing improvement. Early career professionals emphasised leadership importance in setting expectations and creating inclusive norms.

Knowledge sharing and best practice exchange

All groups expressed interest in learning from others' experiences and sharing effective approaches. Executives described successful collaborative educational programmes. Early career professionals suggested opportunities for younger staff to contribute ideas. Survey respondents showed strong interest in sector-wide initiatives, particularly those focused on practical guidance and tools.

Communication and visibility enhancement

The sector faces significant challenges communicating its opportunities and impact to potential talent. Executives noted that the business-to-business nature created inherent visibility problems. Early career professionals suggested better engagement with school-age students. Survey respondents frequently mentioned the need for highly visible publicity and marketing initiatives. They called for more engaging storytelling about semiconductor careers.

Strengthening recruitment and retention practices

All groups identified recruitment as requiring attention, though for different reasons. Early career professionals noted gaps when recruitment involved third-party agencies lacking technical understanding. Executives described comprehensive retention strategies but acknowledged losing talented professionals. Survey data showed recruitment and talent pipeline as lower-performing areas.

These findings reveal a sector at a critical juncture in its DEI journey. There is strong consensus on the business value of diversity and urgency of talent pipeline challenges. Clear opportunities exist to better align leadership intentions with employee experiences. The sector needs coordinated sector-wide efforts and more effective approaches to building inclusive cultures that support all professionals throughout their careers.

6. INSIGHTS FROM EARLY CAREER PROFESSIONALS

Twelve early career professionals participated in a focus group in November 2024 at SEMICON Europa. Participation included a diverse range of professionals across varying organisations, roles, genders and backgrounds. Participants answered anonymous polls,

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participated in breakout groups and presented their findings and experiences which was recorded. Participants answered a structured focus group protocol, and the qualitative data was analysed using thematic analysis. These findings incorporate both the quantitative and qualitative results.

6.1 Workplace realities

Early career professionals generally described collaborative and respectful team environments. Many noted that even in workplaces where formal inclusion programmes were not developed or developing, supportive peer relationships helped create a welcoming atmosphere. These daily interactions formed a foundation for feeling included and valued.

Some participants working in larger organisations and referred to DEI efforts led by corporate departments. These were not always visible in their immediate work environments. Participation in related programmes often depended on individual managers or local leadership. This made it difficult to know whether DEI was viewed as a shared responsibility or simply managed by specific teams. Internal communications were usually distributed through digital platforms or general announcements, but these messages did not always lead to concrete action in team settings. One participant noted the challenge of engagement: "I sometimes wouldn't read these emails or some of these initiatives … unless this becomes part of my MBOs, of my targets that I'm measured with, it could be difficult that I spend and allocate a lot of time to do it."

Multinational collaboration was common and often valued. At the same time, participants described communication barriers linked to language, speech patterns and working hours. These factors influenced how involved they felt during meetings or group discussions. Some mentioned that fast speech, cultural references or assumptions about local norms made it harder to follow conversations. Although these issues were rarely intentional, they shaped how confident people felt contributing to team activities. "I know I've talked really fast... not everyone can always pick up on what you're saying when you're talking really fast or acting like English is everybody's native language, it's not necessarily fair," reflected one participant.

Hiring processes were also raised as a point of concern. While some had positive experiences, others noted gaps when recruitment involved third-party agencies. In these cases, it was felt that recruiters did not fully understand the technical context or team needs. This sometimes resulted in narrow shortlists and less diverse candidate pools. This was identified as an area that should be improved in their organisation in negotiating with suppliers. As one participant explained: "There was a lot of middlemen like companies that filter a lot... maybe they don't understand the needs of the role or they're putting a lot of restrictions on what they're letting through."

Visa and administrative barriers also emerged as significant obstacles. One participant shared: "Somebody was selected for a job and it was so hard to get a visa... at the end was hired somewhere else. So it's frustrating to lose a talent just because it has been so long to go through administrative stuff." In some European countries, job advertisements

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sometimes listed language requirements that didn't match the day-to-day use of English inside the company. "You will still find requirements as being fluent in Italian, although the sector is so multinational... in the company you're gonna talk mainly in English," noted one participant. Participants felt this discouraged otherwise qualified applicants from applying, especially in a sector that depends on international talent.

Gender was mentioned often. Female participants recalled being one of the only females in their engineering classes and said this carried through into their working lives. They rarely saw women in technical roles or leadership, and this was seen as shaping both perception and possibility. "I studied electrical engineering. I was like one of the five women in 100 student class," shared one participant. Another noted starkly: "I have never seen a single woman in my production after two years where I'm working."

Participants in smaller organisations noted that flatter structures made it easier to raise suggestions or speak with leadership. These settings sometimes allowed for quicker responses to inclusion-related feedback. However, smaller teams often lacked formal policies or dedicated roles focused on DEI. This meant progress relied more on personal values than on established procedures. The possibility for direct influence was greater, but the support structures were lighter. Where inclusion was noticed, it was usually in the way teams interacted. Participants mentioned that clear, respectful communication and a cooperative mindset made a difference in how included they felt.

Overall, inclusion was most tangible in interpersonal habits rather than formal structures. Participants emphasised the importance of consistent day-to-day behaviours, while also identifying clear gaps in hiring, communication, and visibility. Without more alignment between values and practice, there was concern that progress might remain uneven.

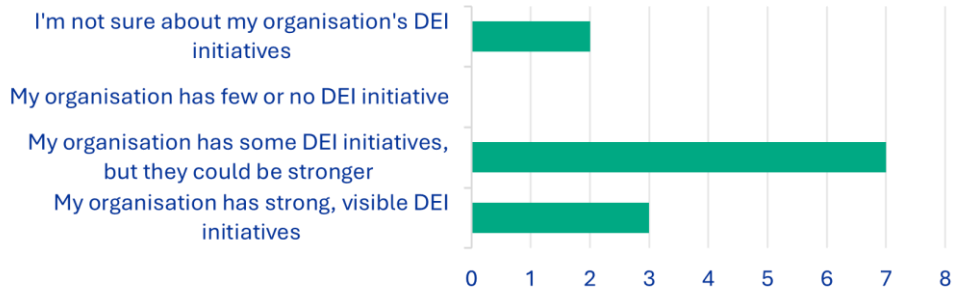

Figure 6.1.1: Participants describe their organisation’s DEI efforts

6.2 Future outlook

Participants shared positive views about how DEI efforts may grow in their workplaces. Many were encouraged by changes they had seen and hopeful about further progress. Many shared a sense of commitment to their workplaces and optimism about their own development. At the same time, they pointed to specific areas where further progress could help ensure that inclusion is felt consistently.

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A key area of feedback was the need for clear growth pathways and structured opportunities to develop their career within their organisation. While many described positive experiences at team level, progression was sometimes viewed as ambiguous or informal. When asked what mattered most in choosing a sector in an anonymous poll, "career growth opportunities" ranked first (see Figure 6.2.1). Participants were not necessarily dissatisfied, but many wanted to better understand what was required to advance and how their contributions were recognised beyond immediate tasks.

Salary and benefits were also prioritised. Pay was not treated as separate from DEI but as something that shaped whether people felt fairly treated. Work-life balance was mentioned in a similar way. These points were raised as part of how DEI shows up in real, everyday terms. The consensus was that equity and transparency should be embedded in all elements of their role from salary to how they progress in the workplace.

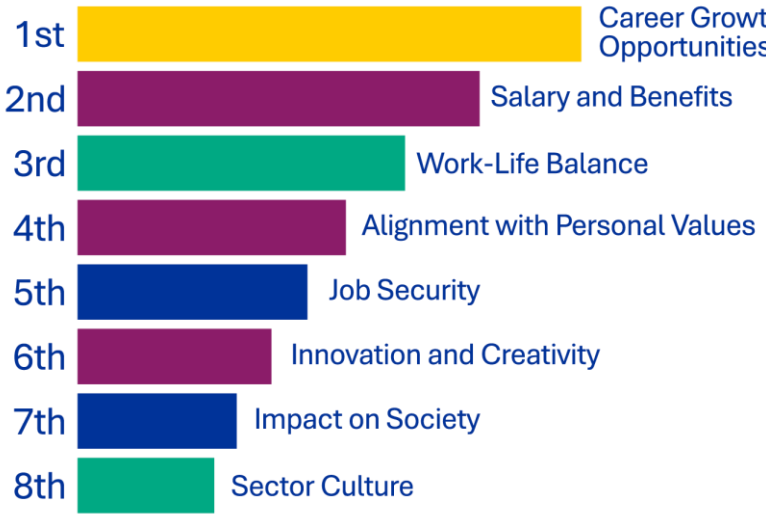

Figure 6.2.1: Participants rank the most important factors when choosing a job

Participants were also asked to rate what is most important to them when choosing a workplace. "Feeling valued and respected" was ranked first (see Figure 6.2.2), followed by "equal opportunities for advancement" and "support for work-life balance and well-being." When discussing what made people feel respected at work, participants gave specific examples such as being mindful of pace of speaking, time zones and respecting culture differences. They spoke about how feedback was handled and how workloads were shared out.

Several participants reflected that values did matter to them, but often in practical rather than abstract terms. These included being able to speak up, being treated fairly, and feeling like part of a team. While some participants sought purpose-led cultures, most described their expectations in terms of fairness, recognition and the ability to grow.

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Figure 6.2.2: Participants rank which of the following aspects are most important in an inclusive workplace

Some also mentioned that they had tried to improve inclusion in small ways. This included helping new colleagues settle into their roles or offering suggestions to improve how things were done. These efforts were informal and based on what felt right, not on a formal role or request. Participants were not asking for formal leadership roles but noted that opportunities to shape inclusion often came later in one's career, once authority or tenure was established. Some felt that younger professionals could be invited to contribute earlier, particularly in areas like peer mentoring or feedback on internal processes.

Overall, the tone was constructive but measured. Participants felt inclusion was increasingly present in organisational language and strategy but not always reflected in day-to-day structures or routines. They were hopeful that recent efforts would continue but emphasised the need for greater clarity on how fairness and inclusion are embedded into progression, communication and everyday practice. Rather than seeking new programmes, many called for better visibility of what already exists and more consistent ways to take part.

6.3 Readiness to act

Several participants mentioned that inclusion felt more impactful when it showed up in regular work habits, not just in policies or statements. In some cases, even when companies had DEI goals, they didn't always change how their teams worked. A few noted that DEI rarely came up during performance reviews or regular meetings, which made expectations unclear.

Participants described practical aspects of their working day that shaped whether they felt included. Some spoke about expectations around response times or the way meetings were handled across different time zones. Others noticed that language and cultural differences were not always acknowledged, even though they shaped working relationships and teams could become more aware and intentional. These issues were rarely deliberate, but they still had an impact on participation. Many of the challenges

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raised weren't framed as direct exclusion. Instead, they reflected patterns that had become normal and could be improved.

Participants generally felt that DEI didn't need to be complex. They spoke about simple, steady practices like setting clear roles, giving regular feedback, and equitable opportunities. These actions helped signal that inclusion wasn't an extra. It was part of how things worked. These young professionals didn't want DEI to be spoken about; they wanted it embedded in their day-to-day work life. The overall tone was pragmatic and constructive. The group was not looking for ideal conditions but showed a strong interest in being part of meaningful, shared progress.

A few participants reflected on the role of leaders in shaping these norms, leadership was described as key to setting expectations. Some supported the idea of training or cross-sector exchanges that could help bring DEI more fully into management practices. Others noted that when inclusion was not tied to performance indicators or business outcomes, it was more likely to be overlooked.

6.4 Opportunities for ECDA

Participants pointed to several areas where external support could enhance DEI efforts in the semiconductor sector. Although ECDA was not directly mentioned, the feedback highlights possible ways to assist organisations.

Improving access to the sector

Some participants observed that formal qualifications and particular hiring steps play a key role in joining the sector. Concerns were raised about recruitment agencies lacking full insight into the specific needs of teams, which could result in suitable candidates being missed and diverse candidates being excluded at this stage. These points highlight opportunities to enhance recruiter understanding and broaden how candidates are sourced, potentially increasing diversity in the workforce. Female participants in technical roles noted their experience of often being the only female in their university class. "Although it was the engineering school for women, we're 100% men. So, something needs to be done about that," reflected one participant. It was noted that better engagement with school age students is needed to develop awareness of the sector, so it attracts more people to study, in particular, engineering in university.

Connecting strategy to daily work

While many companies have public DEI commitments, participants felt these are not always reflected in everyday activities. Inclusion was seldom discussed in team meetings or performance reviews. This gap points to a need for practical guidance and tools to help teams apply inclusion principles in their regular tasks and interactions. ECDA's operational tools provide structured guidance to organisations to embed DEI initiatives into colleagues' day-to-day experiences and could play a role in supporting this issue flagged by early career professionals.

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Making inclusion more visible

Only a quarter of participants rated their organisation's inclusion efforts as highly visible. Many felt that existing initiatives lacked clear communication and were not fully integrated into career development or leadership expectations. "We know the company's doing initiatives, but we don't have workshops that we can do regularly to get us familiar with those," noted one participant. Increasing transparency and embedding inclusion into daily work could improve this. Offering opportunities to spotlight and promote initiatives could support organisations to better grow awareness on the initiatives they are running and the impact they have had.

Supporting shared learning

A few participants mentioned the importance of learning from others and having chances to discuss DEI openly. This included mentoring and opportunities for younger staff to share ideas. "Young people need to speak up more about what they face in the hiring process... they should be even potentially sharing it in public because this should motivate the companies to address these challenges," suggested one participant. This suggests room for initiatives that foster cross-company exchange and peer learning.

7. LEADERSHIP OUTLOOK

Seventeen executives from across the semiconductor sector in Europe participated in one-to-one interviews between September to November 2024 conducted remotely. Participation included a diverse range of professionals across varying organisations, roles and backgrounds. Thirty percent of executives interviewed were female. Participants answered a structured interview protocol, and the qualitative data was analysed using thematic analysis. These findings incorporate these qualitative results. These conversations occurred prior to recent pushbacks against DEI, particularly in the United States, so it is possible policies may have changed since.

7.1 Current organisational landscape

Diversity as business performance driver

Multiple executives interviewed described observing connections between diverse teams and business outcomes in their organisations. One executive noted: "It's not just gender, but also diversity in experiences. We have people with different technical backgrounds, and they have also had different geographical experiences, so you not only have theoretical understanding but actual understanding of how culture plays a part."

Several leaders described observing performance improvements they linked to increased diversity. One noted: "With increased diversity, performance improved. You can correlate it, and it is an absolute positive correlation. We would not have been able to achieve what we have achieved if we wouldn't have actively reached out and looked for diversity." Another

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described changes in team dynamics: "I can tell you that I have observed the efficiency, the style, the way of debating that has changed dramatically …where it's not about having a sense of power over each other but more having a collaborative way of thinking."

Leaders described recognising different types of diversity benefits in their organisations, particularly in innovation processes. Multiple executives emphasised the value of different thinking approaches in problem-solving. A female entrepreneur described how her team's varied backgrounds naturally contributed to creative solutions and unique approaches to challenges. Several executives described integrating diversity considerations into their business strategy, with some viewing diverse teams as performance enablers rather than compliance requirements.

Maturity spectrum of DEI implementation

Interviewees described their organisations being at different stages of DEI development. Several executives described substantial transformations in gender representation and cultural composition within their companies over relatively short periods. One leader described a transformation from 11% to 36% female representation within two and a half years, alongside changes in executive team composition and working language. Other executives described more gradual or ongoing development processes. Leaders noted that progress varied significantly across different regions and business units within their organisations, with some areas advancing more quickly than others.

Leaders described varying approaches to DEI implementation across their organisations. Some described formal committee structures and dedicated roles, whilst others relied on senior-level sponsorship without specific executive positions. Multiple executives described informal approaches, particularly in smaller organisations where diversity developed organically through hiring practices rather than formal programmes.

Accountability and measurement

Multiple executives described implementing specific target-setting approaches in their organisations. Leaders outlined detailed objectives across different organisational levels, including overall representation, executive positions, and technical roles. Some described targets progressing from current levels of around 36% to 40% overall representation, with more ambitious goals for leadership positions.

A few leaders described integrating DEI outcomes into performance structures. Executives reported that portions of bonuses across their organisations were linked to diversity and broader ESG metrics. One leader described a specific target on hiring female staff. However, some executives described preferring different approaches to numerical targets. These leaders expressed concerns that specific targets might drive inappropriate behaviours and emphasised maintaining meritocratic principles whilst actively promoting diversity.

Multiple executives acknowledged resistance to diversity initiatives themselves and within their organisations. Some executives felt it would send the wrong message, "we don't set ourselves any targets... we feel that will drive the wrong behaviour and we want to

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demonstrate very clearly that it's a meritocracy." While others noticed a range of perspectives in the workplace with one executive stating, “to be honest, it's mixed feelings. Some people say… I know what I do and I'm experienced enough to make the right phrasing and to do the right things. Others are quite positive and very curious about it... And then you have the category of people who are saying we pay far too much attention [to] DEI and also ESG.”

Several leaders described using data analysis to understand diversity patterns within their organisations. Executives reported examining retention rates across different demographic groups and identifying areas where talent might be leaving disproportionately. This data-driven approach helped organisations target specific interventions and track progress over time.

7.2 Strategic outlook

Talent pipeline as critical priority

Multiple executives identified talent shortages as a significant challenge facing their organisations. Leaders quantified the scale of the problem, describing insufficient numbers of graduates entering the sector and noting that many engineering graduates, particularly women, do not pursue semiconductor careers after graduation.

Several leaders described educational outreach programmes their organisations had developed to address pipeline challenges. These initiatives included dedicated teams focused on STEM engagement, conferences and training programmes for current employees, and partnerships with universities. Activities ranged from robotics competitions to sponsoring Women in STEM societies, with the goal of increasing sector visibility among potential candidates.

Some executives emphasised the importance of early intervention in the education pipeline. One leader described observing different gender representation patterns between younger and older student cohorts, attributing these differences to parental guidance and lack of role models for young women in technical fields. Leaders acknowledged the limitations of individual company approaches to pipeline development. Multiple executives noted that competing for existing talent was less effective than collectively growing the overall workforce available to the sector. One explained: "If we attract a female engineer, our competitor cannot attract her. So, it's about growing the overall workforce rather than competing for existing talent."

Several executives acknowledged the long-term nature of pipeline development, with some noting that meaningful change requires sustained commitment over many years. Leaders described the challenge of maintaining investment in initiatives that may not show immediate returns.

Retention and career development focus

Multiple executives identified retention as a critical challenge, particularly for women in technical roles. Leaders described observing talented professionals leaving the sector, often

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after key life events such as starting families. Some executives noted that companies struggled to effectively support employees returning to work after career breaks.

Several leaders described comprehensive retention strategies their organisations had implemented. These included personal coaching programmes for women above certain seniority levels, structured career development plans, and mentoring initiatives. Executives emphasised the importance of creating clear advancement pathways and ensuring diverse representation in succession planning. Some executives highlighted the business case for retention, noting the significant investment required to replace experienced employees. Leaders described how losing skilled professionals could impact productivity and project timelines, with some estimating 18 months to two years before replacement employees reached full effectiveness.

Flexibility emerged as a key theme in retention discussions. A female entrepreneur described developing accommodating work arrangements for employees with caregiving responsibilities, noting that such adaptations benefited both individuals and the company. Several executives described mentoring and development programmes as effective retention tools. Leaders emphasised the personal satisfaction of developing others and the importance of having honest conversations about career progression rather than avoiding difficult discussions about advancement opportunities.

Global versus local adaptation

Multiple executives with international operations described challenges in implementing consistent DEI strategies across different regions. Leaders noted significant variations in cultural contexts, regulatory requirements, and societal attitudes towards diversity across their global footprints. Several executives described substantial regional differences in diversity progress. Some regions showed strong advancement whilst others faced greater societal and cultural barriers. Leaders reported that traditional cultural norms in certain markets created additional challenges for implementing diversity initiatives.

Some executives described practical adaptations required for international operations. These included changing working languages to ensure broader participation, adapting communication styles for different cultural contexts, and balancing global standards with local regulatory requirements. Leaders described the challenge of maintaining consistent organisational values whilst respecting different cultural contexts. Executives noted the need for flexible approaches that could accommodate regional variations whilst preserving core diversity principles.

7.3 Leadership readiness and barriers

Skills gap in inclusive leadership

Multiple executives described challenges in transitioning from technical expertise to effective people management. Leaders noted that whilst their engineering backgrounds provided strong problem-solving skills, managing diverse teams required different capabilities that were not always part of their professional development. Several leaders

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described generational management as a particular challenge. Executives reported managing workforces with significantly different expectations around communication, feedback, and work-life balance compared to previous generations. Some described average workforce ages in the late twenties, requiring adaptation of traditional management approaches.

Organisations had implemented various training programmes to address leadership skill gaps. Leaders described mandatory inclusive leadership training programmes with high participation targets, unconscious bias training, and cultural competency development. Some executives noted that training delivery through local facilitators helped ensure cultural relevance. Communication skills emerged as a critical development area. A female executive identified practical challenges many technical leaders face, noting the ability to notice when someone needs support and then having the follow up conversation. She speculated the communication aspect is often the more difficult skill to develop.

Resource constraints and competing priorities

Multiple executives described resource allocation challenges affecting DEI implementation. Leaders noted that many diversity initiatives relied on volunteers who balanced these responsibilities alongside their primary job functions, creating sustainability concerns. Smaller organisations reported particular resource constraints but also noted certain advantages. Leaders from companies with fewer than 50 employees described informal approaches that prioritised direct relationship-building over systematic programming. However, these organisations often lacked dedicated HR support or formal development structures.

Some executives described tensions between short-term business pressures and long-term diversity investments. Leaders acknowledged that some initiatives did not show immediate returns, requiring faith in longer-term benefits. Financial pressures from quarterly reporting and shareholder expectations added complexity to resource allocation decisions. Several executives mentioned industry cyclicality as a factor affecting DEI investment. Leaders noted that the semiconductor sector's volatility influenced internal resource planning. They also observed that this volatility shaped external perceptions, which could impact talent attraction.

Cultural resistance and change management

Multiple executives described various forms of resistance to diversity initiatives within their organisations. Leaders reported encountering scepticism from some employees who questioned the value of diversity programmes or felt that sufficient attention was already being paid to inclusion. Several leaders described competitive culture challenges within engineering environments. Executives noted that the sector's focus on technical performance and competitive achievement could sometimes conflict with collaborative diversity approaches. Some observed that highly competitive environments might attract certain personality types whilst potentially discouraging others.

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Leaders described different strategies for addressing fairness concerns. Some executives emphasised transparent communication about programme objectives and methods, stressing that initiatives focused on skill development rather than preferential treatment. Multiple executives reported encountering fatigue with diversity discussions among their workforces. Leaders adapted their communication strategies to focus on business context and practical outcomes rather than theoretical concepts. Some noted that employees needed refreshed perspectives on why diversity mattered to organisational success.

Generational differences added complexity to change management efforts. Executives described adapting communication approaches to match different preferences, with some noting that younger employees preferred more direct, concise messaging.

7.4 Areas for sector-level support

Industry collaboration and ecosystem development

Multiple executives described successful collaborative educational programmes involving partnerships between companies, universities, and research institutions. Leaders reported that individual companies could not achieve the scale needed for effective talent pipeline development, making collaboration essential for meaningful impact. Several leaders emphasised the benefits of sector-wide approaches to diversity challenges. Executives noted opportunities for sharing best practices and coordinating strategies whilst allowing individual organisational adaptation. However, some acknowledged that competitive dynamics could limit the depth of collaboration possible.

Leaders described regional coordination benefits, particularly in areas where multiple semiconductor companies operated in proximity. Executives noted that employees could transition between companies without relocating, creating dynamic local ecosystems that benefited from coordinated educational initiatives. Several executives emphasised broader ecosystem thinking that extended beyond traditional industry boundaries. Leaders suggested involving academic institutions, research centres, and government agencies in collaborative approaches to talent development and diversity advancement.

External communication and brand enhancement

Multiple executives identified significant communication challenges affecting the sector's ability to attract talent. Leaders noted that the business-to-business nature of the industry created inherent visibility problems, as most companies lacked consumer brand recognition. Several leaders described problematic aspects of traditional sector promotion approaches. Executives suggested that conventional marketing materials often failed to convey the exciting technical challenges and innovation opportunities available within the industry.

Some executives emphasised the substantial gap between the sector's actual impact and public understanding. Leaders noted that whilst semiconductors were fundamental to modern technology, most people used these innovations without understanding the underlying engineering achievements. Leaders described different communication requirements for engaging younger generations compared to traditional industry marketing

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approaches. Executives noted the importance of using contemporary platforms and communication styles to reach potential candidates where they seek information.

A female leader emphasised the importance of impact-focused messaging: "I think there's so much more semiconductor can do to get young people, in particular, curious and inspired around the technology to really help them to get more people wanting to come and work in the semiconductor space. So we could do so much more with schools, high schools, and not just universities."

Education system integration

Multiple executives described significant gaps between current educational curricula and industry requirements. Leaders noted that engineering programmes often focused primarily on applications rather than providing exposure to semiconductor manufacturing processes, partly due to the prohibitive costs of relevant equipment.

Several leaders described substantial cost barriers affecting practical education. Executives noted that both educational institutions and smaller companies faced challenges accessing advanced semiconductor equipment needed for hands-on learning experiences. Some executives advocated for broader recruitment beyond traditional electronic engineering backgrounds. Leaders emphasised that semiconductor manufacturing required diverse technical expertise, including mechanical engineering, physics, and chemistry specialists working collaboratively.

Alternative educational pathways received attention from several executives. Leaders suggested that apprenticeship programmes might prove more effective for building diverse talent pipelines. Several executives emphasised the long-term commitment required for educational system integration. Leaders noted that meaningful change in talent pipeline development required sustained investment over multiple years rather than short-term initiatives.

Policy and regulatory considerations

Multiple executives described evolving regulatory requirements affecting their DEI approaches. Leaders noted increasing importance of social sustainability metrics alongside environmental considerations, with DEI becoming core components of broader reporting requirements. Several leaders described regional regulatory variations creating implementation complexity for multinational operations. Executives noted different legal requirements for workforce diversity across countries, with some locations mandating specific representation levels whilst others focused on process and opportunity equality.

Some executives described changing customer and procurement requirements. Leaders reported increasing requests for diversity information as part of business relationships, with expectations that this trend would continue growing. Multiple executives suggested that companies might face business consequences if unable to demonstrate progress in diversity areas. Leaders acknowledged substantial knowledge gaps around emerging regulatory requirements, and they noted that significant legislation was developing.

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Several executives described challenges in balancing compliance across international operations. Leaders emphasised the importance of maintaining consistent organisational values whilst navigating different national regulatory environments, suggesting that company culture should guide implementation approaches across varying legal frameworks.

8. PERSPECTIVES FROM THE BROADER WORKFORCE

8.1 Survey scope and content

The ECDA Sample Pool Survey (see Annex 1) was developed to create a detailed profile of diversity, equity and inclusion (DEI) in the European semiconductor sector. The survey drew on both individual and organisational perspectives, capturing the variety of roles represented and the associated policies, priorities, and organisational structures.

The questionnaire addressed a range of themes, starting with individual and organisational demographics, motivations for DEI activity, current investments and initiatives, and the diversity dimensions prioritised within organisations. It also invited respondents to share examples of DEI success, identify barriers to progress, and their perspectives on the role the ECDA project should play in supporting DEI in the sector.

Participants were asked to rate their organisation's current performance and prioritisation in the following ten DEI areas:

- Customer experience
- Employee experience and culture
- Inclusive leadership
- Innovation and product development
- Learning and development
- Positive marketing and brand awareness
- Progression and performance
- Recruitment
- Suppliers and supply chain
- Talent pipeline

The same list was then ranked in order of priority for the next three years, enabling comparisons between current and future focus.

The survey also examined six diversity dimensions:

- Age
- Disability
- Gender identity
- Neurodiversity
- Racial or ethnic origin
- Skillset

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For each dimension, respondents rated its importance in their organisation's current DEI strategy and indicated if they expected that priority to shift over time.

Additional questions examined the main drivers of DEI investment, such as meeting regulatory requirements, attracting and retaining talent, strengthening organisational reputation, or pursuing other strategic objectives. Open-ended items invited examples of success, opportunities to highlight ongoing barriers, and challenges anticipated in the coming three years.

By combining structured ratings and rankings with qualitative insights, the survey produced a dataset that reflects sector-wide trends while also capturing the distinct circumstances of individual organisations and perspectives within organisations. The findings inform the design and development of ECDA tools, training programmes, and strategic recommendations.

8.2 Profile of respondents and their organisations

Between June and September 2024, the sample pool survey was open for colleagues to participate from across the semiconductor sector in Europe. The call to participate appeared in the SEMI Europe newsletter, was posted on consortium members' social media, and shared through both consortium and associate partner networks. Seventy-three individuals from the sector completed the survey fully. Responses came from a wide span of job levels, functions, and countries, giving a range of perspectives that reflects both strategic oversight and day-to-day operational realities.

Respondents were asked to report their level within their organisation as seen in Fig 8.2.1, with nearly one in three describing themselves as senior management. Twenty-seven percent held other management posts, while twenty-one percent were in executive management. Around one in five were in non-management roles, with a small remainder selecting other. This distribution across organisational level means the results include both those shaping long-term strategy and those working in the delivery and operational reality of this strategy.

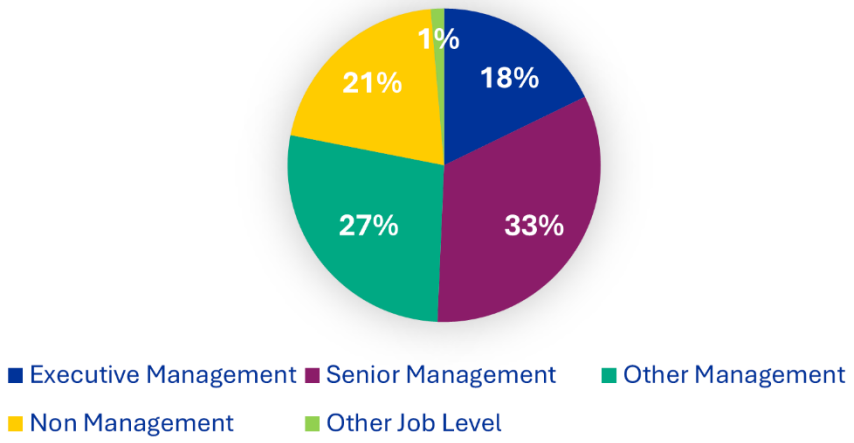

Fig 8.2.1 Breakdown of respondents by level in their organisation

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The respondents came from organisations headquartered in ten countries: Austria, Belgium, France, Germany, Ireland, Japan, Netherlands, Switzerland, the United Kingdom, and the United States. Most of the organisations operated internationally. Four in five reported a presence in Asia-Pacific, and the same percentage reported a presence in North America. Latin America featured less often, with 15 percent reporting operations there. This points to a workforce that is influenced by global operations and not bound to a single regional context.

Company size varied considerably, as shown in Figure 8.2.2. Almost half of participants worked in firms employing between 1,000 and 9,999 people. Large-scale organisations with over 10,000 staff accounted for 22 percent of respondents. Smaller companies were also strongly represented, with 16 percent in the 1–99 range, 10 percent in the 200–499 range, and 4 percent in the 500–999 range. This mix shows the survey reached voices from both multinational organisations, and SMEs and startups, each facing a range of workforce realities.

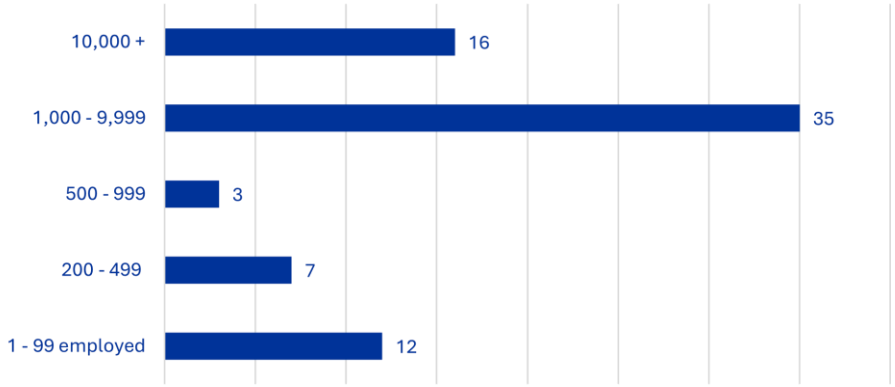

Fig 8.2.2 Breakdown of participation by organisation size

Functional roles, shown in Figure 8.2.3, covered twenty-one categories. Human resources were the single largest cohort, with ten respondents, followed by corporate management with nine. R&D contributed eight responses and academia seven. A smaller group of five respondents held executive or board-level positions. Both product management and engineering had four respondents, and three for training or education, and marketing or sales. The remaining functions were smaller in number: IT support, manufacturing engineering, sales, quality assurance, and a range of specialist areas including chemicals and materials, business development, and consulting.

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Fig 8.2.3 Breakdown of participants by function

Respondents were asked to disclose their job role, with responses representing a broad mix of roles, with a noticeable concentration in senior leadership positions. Six were CEOs, alongside other executive roles such as CTO, Chief People Officer, Vice President, and Division CEO. There was also strong representation from technical leadership, including multiple engineering directors, senior engineers, and heads of department. Human resources featured prominently, with HR Directors, HR Business Partners, and HR consultants among the participants. Academic and research roles were also present, including professors, lecturers, and R&D leads. The remaining job roles covered a wide range of business, operations, sustainability, communications, and specialist functions, reflecting the diversity of professional pathways in the sector.

When the results are viewed as a whole, leadership roles are clearly prominent, with more than half of respondents in management or executive positions. This influence is felt throughout the dataset, but it does not dominate the picture. Technical expertise, academic perspectives, and specialist functions all appear alongside those leadership voices, adding to the variety of perspectives represented.

Human resources and corporate management respondents often spoke from the perspective of shaping organisational culture and managing talent pipelines. Those in R&D and academia linked these workforce priorities to research goals, emerging technologies,

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and the training of future specialists. Engineering leaders described the operational demands of running complex facilities, from production targets to technical problem-solving. Other, smaller functional groups offered more specific angles: the role of IT systems in enabling cross-site collaboration, how marketing can influence the sector's visibility, or the compliance requirements that come with operating across multiple jurisdictions. These insights, though drawn from fewer participants, add context to the broader themes and show how interconnected the sector's functions can be. Geographic diversity is another factor that shapes the dataset. The high number of companies with activity in Asia-Pacific and North America reinforces how interconnected the sector is. It also means that workforce challenges and solutions are often discussed across multiple jurisdictions. Including smaller companies in the sample prevents the analysis from being dominated by the experience of large-scale corporate environments.

Taken together, these responses create a picture of a workforce that is senior in profile but broad in scope. Leadership, technical expertise, academic insight, and functional specialism are all present. This combination provides a grounded starting point for the analysis that follows, ensuring that recommendations will speak to organisations of different sizes, structures, and geographies.

8.3 Current state

Current motivators for DEI efforts

Participants were asked to rate the importance of four drivers in motivating DEI in their organisation, using a five-item scale: very important, important, moderately important, slightly important, and not important.

Retaining talent ranked highest. Nearly half of respondents (48 percent) rated it as very important and a further 32 percent as important. Only 4 percent rated it as not important.

Reputation and brand followed closely, with 44 percent rating it as very important and 34 percent as important. Fewer than one in ten viewed it as slightly important or not important, showing that visibility, credibility and stakeholder trust are strong motivators for many organisations.

Finding talent was also a key driver, with 42 percent selecting very important and 41 percent important. The results suggest that broadening access to skilled candidates remains a shared priority.

Regulatory requirements were the least common top driver, with 33 percent rating them as very important and 27 percent as important.

Overall, the findings show that DEI priorities in the sector are guided far more by workforce needs than by compliance obligations. Retaining talent is the most influential factor, followed by protecting and enhancing reputation and ensuring a strong talent pipeline. While regulations matter, it is human capital and reputation that shape the direction and ambition of DEI strategies.

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Current priorities

This section draws on two sources of evidence from the survey:

- Quantitative ratings where participants ranked ten areas of diversity, equity and inclusion (DEI) activity in order of their current prioritisation. Figures referenced draw on the percentage of respondents who selected each category as their top priority.
- Qualitative open-text responses, provided by 17 participants.

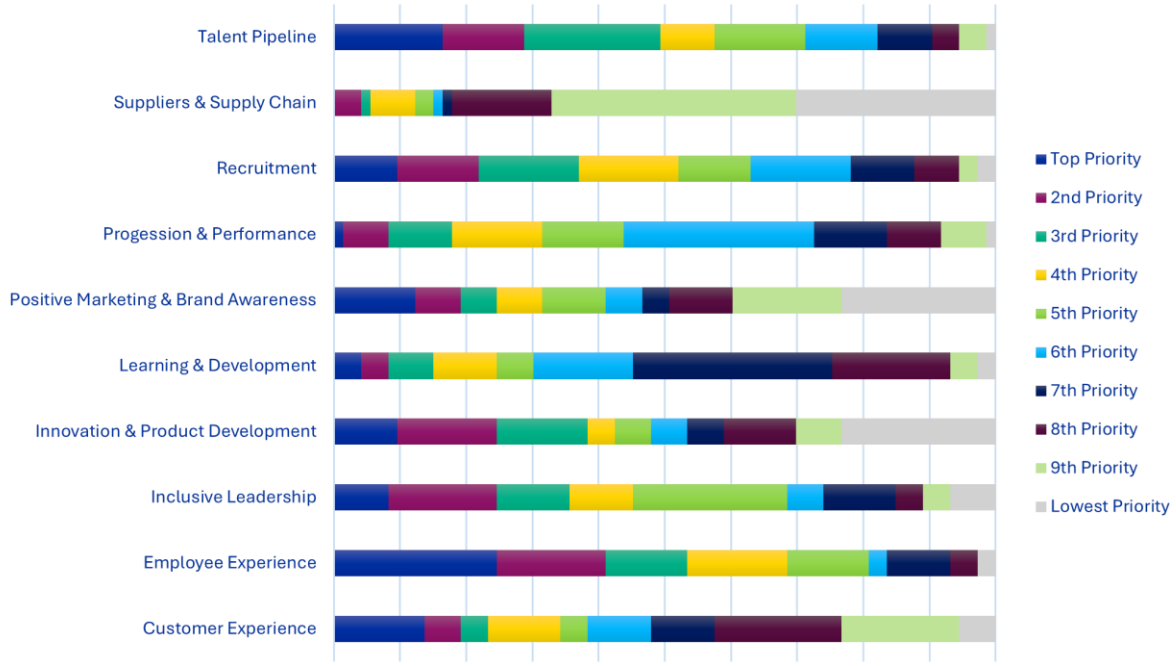

Fig 8.3.1 Current priorities for DEI initiatives

Quantitative results

Responses show that employee experience and culture is the most common current focus, with 25 percent ranking it as their top priority, and a further 28 percent ranking it in the top three. This emphasis reflects a strong interest in creating workplaces where inclusion is embedded into everyday practices. Talent pipeline ranked second, with 16 percent placing it first and a further 33 percent ranking it in the top three, suggesting that attracting and developing future talent is a sustained priority. Customer experience followed, with 14 percent identifying it as the highest priority, indicating that some organisations view DEI as closely linked to service quality and diverse market engagement.

Other areas received more varied rankings. Recruitment (10 percent top priority) and progression and performance (1 percent top priority, but with notable shares of 17 percent in top three) show that workforce advancement remains important, though not universally ranked first. Inclusive leadership was the top priority for 8 percent of respondents but more often appeared in the middle of the ranking, reflecting varied integration into organisational strategy.

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Lower prioritisation was seen for positive marketing and brand awareness, learning and development, and innovation and product development, each with fewer than 12 percent placing them first. These areas were often positioned lower in the ranking, with learning and development, for example, placed seventh by 30 percent of respondents. Suppliers and supply chain was least likely to be a current focus, with no first-place rankings and over two-thirds placing it ninth or lowest.

Qualitative results

When describing what drives their organisation's DEI activity, many respondents emphasised the importance of culture, inclusion, and innovation. One respondent highlighted "building an inclusive culture where everyone feels safe to speak up and bring in ideas to drive innovation. This is key for us as a science and tech company." Another stressed the value of "fostering culture, living of corporate values and enhance attractivity as an employer."

Several participants tied DEI priorities directly to the current and upcoming serious shortage of STEM talents, with one stating that the "top priority is to attract more girls/females into semiconductors" and another pointing to "the need to attract the best research student / staff talent from across the world."

Innovation and business outcomes were also recurring themes. Respondents described DEI as a way to "foster innovation power and build the best team" and noted that "incorporating diverse perspectives can result in better product design and recognition of market opportunities." Others referred to ethical and reputational drivers, including "ethics and moral code of the company culture" and maintaining fairness, culture, respect, innovation as guiding principles.

A small number referenced distinctive organisational contexts, such as being a female-led company, while others spoke more generally about the benefits of an open and diverse business culture. Several noted that DEI is not only about internal cohesion but also about strengthening employer branding in a competitive global talent market. As one put it, "We believe on the impact of nurturing an inclusive culture and the impact on business results, innovation, [and] quality of decisions through diversity of thought."

Taken together, the findings suggest that current DEI priorities are anchored in the immediate needs of employee experience and talent development but are reinforced by a broader belief in the cultural, ethical, and business value of diversity. These drivers are not purely aspirational; they are tied to tangible outcomes in innovation, competitiveness, and organisational resilience.

Current performance

Survey participants rated their organisation's current performance across ten DEI areas, using a five-point scale: Outstanding, Exceeds Expectations, Meets Expectations, Needs Improvement, and Unacceptable. The results provide a nuanced picture of strengths and areas for further development in the European semiconductor sector.

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Performance was strongest in *innovation and product development*, where nearly half of respondents (49 percent) rated their organisation above expectations, with 40 percent selecting “exceeds expectations” and 10 percent “outstanding”. Only 11 percent felt performance in this area needed improvement.

Employee experience also ranked highly, with 38 percent saying it “exceeds expectations” and 7 percent rating it as “outstanding”. Just over half of respondents placed employee experience at “meets expectations”, while only 21 percent saw it as an area requiring improvement. *Positive marketing and brand awareness* showed a similar pattern, with 38 percent exceeding expectations and 3 percent rating their organisation as outstanding, although a quarter of respondents felt it could be strengthened.

Other areas showed consistent delivery for the majority of organisations but fewer top-tier ratings. In *customer experience*, half of respondents rated performance as meeting expectations, with 25 percent exceeding expectations and 6 percent outstanding. *Learning and development* also scored well, with 26 percent exceeding expectations, 7 percent outstanding, and 44 percent meeting expectations, though one in five respondents highlighted the need for improvement. *Progression and performance* followed a similar trend, with nearly three-quarters meeting or exceeding expectations (47 and 26 percent respectively) and only 23 percent identifying it as an area requiring improvement.

Findings for *inclusive leadership* were mixed. While 28 percent of respondents felt their organisation exceeded expectations and 4 percent rated it as outstanding, an equal share of 28 percent reported that it needed improvement and 7 percent rated it as unacceptable. This suggests that leadership behaviours and commitment to DEI are well-developed in some organisations but inconsistent across the sector. It also reflects the range of roles responding to the survey.

The least favourable ratings were seen in *talent pipeline* and *recruitment*, both of which had similar profiles and scoring, with around 22 to 23 percent believing efforts exceeded expectations. Thirty-seven percent believed their organisations current performance meets expectations in both areas, and 38 percent reporting that improvement was needed for both areas. *Suppliers and supply chain* emerged as the lowest-performing area overall, with just 6 percent believing efforts exceeded expectations. Nearly two-thirds (64 percent) rated it at “meets expectations”, suggesting limited strategic focus or resourcing in this domain.

Taken together, the results indicate that the sector’s strongest DEI performance is currently in areas related to innovation, workplace experience, and visibility. Mid-range performance is seen in career progression, learning and development, and customer experience. Talent-related entry points and supply chain engagement are more often viewed as requiring targeted improvement. These findings provide a baseline for suggesting areas for future research and where sector-wide initiatives and targeted interventions may have the greatest impact.

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Current challenges

This section draws on two sources of evidence from the survey:

- Quantitative ratings where participants ranked six potential challenges in order of priority. Figures referenced draw on the percentage of respondents who selected each category as their top priority.
- Qualitative open-text responses, provided by 67 participants, describing in their own words the barriers they see to achieving diversity, equity and inclusion in their organisation or in the semiconductor sector more broadly.

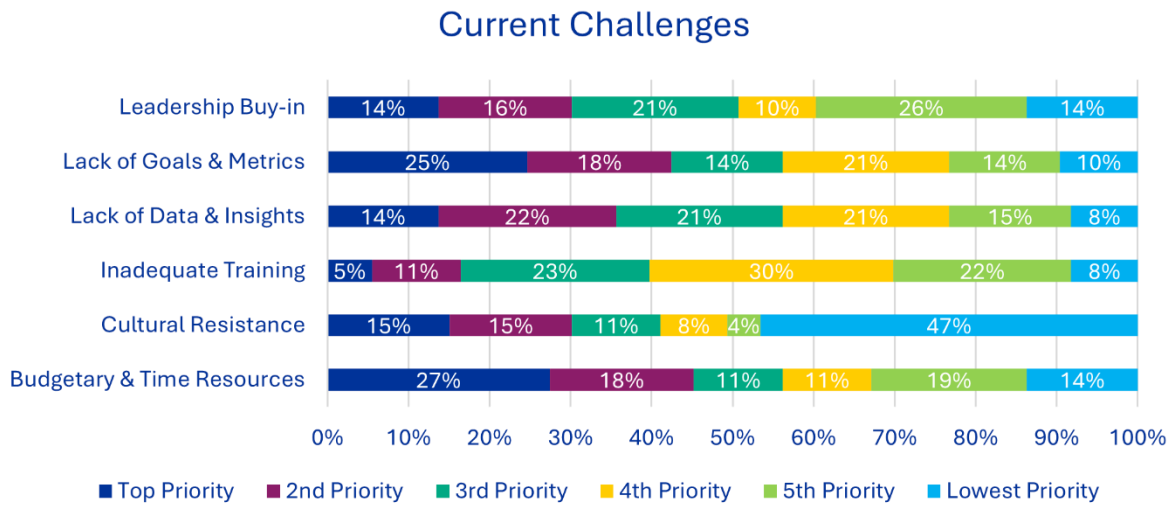

Fig 8.3.2 Current challenges in DEI in the semiconductor sector

The most common top challenge was *budgetary and time resources*, selected by 27 percent of respondents, with 45 percent rating it as either the top or second priority. Feedback pointed to tight budgets, limited staff capacity, and competing operational demands. “Limited funding and high staff-to-student ratio,” one respondent explained. Another described the effect of competing pressures: “economic downturn and customer demands mean other priorities come first.”

Lack of goals and metrics ranked closely behind, with 25 percent choosing it as their highest challenge and 43 percent ranking it in their top two priorities. Some organisations said they had no defined diversity targets, while others reported that the structures to set and track them were only put in place recently. “We have not had experienced resources to define and drive the inclusion journey until 2024,” one participant wrote. Another commented, “Without clear goals, initiatives lose focus over time.” These responses show that for many, the absence of targets is linked to wider capacity issues.

Leadership buy-in was identified by 14 percent of respondents as the top priority. Comments highlighted gaps in engagement at middle management level, limited understanding at senior levels, and inconsistent messaging. As one respondent put it, “leaders do not even understand what diversity and inclusion are and why it is important.”

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Another noted that the topic was “not according to management importance” and “it is not talked about officially” signalling a mismatch between stated values and perceived priorities.

Lack of data and insights was also the top challenge for 14 percent of respondents. Several organisations said they had no clear picture of their workforce diversity, making it harder to target action. These views reflect the practical difficulties of building evidence-based inclusion work without accurate baseline information.

Cultural resistance was selected by 15 percent. Participants spoke about entrenched attitudes, reluctance to change, and the perception that “changing the profile was ‘risk taking’”. Some pointed to broader industry stereotypes. Others described a prevailing belief in parts of the sector, “there are many limiting believes in SC industry around DEI: ‘this business is tough, no space for DEI’”. These point to a belief that embracing DEI may have a detrimental effect on the sector or may lead to fundamental changes that may be too risky.

Inadequate training was the least common top challenge, chosen by 5 percent. Still, comments suggested that training gaps play a part in slowing progress. Respondents mentioned a lack of awareness-raising activities and role-specific guidance: “Informing and training of employees about diversity is missing,” one said.

Additional themes from qualitative responses

Beyond the six ranked categories, participants raised other barriers that cut across multiple areas.

- *Talent availability and pipeline* – Many reported difficulty recruiting women into engineering and technical roles, pointing to the low share of women in STEM subjects and the need for early-stage intervention. “"Semiconductors is a male-dominated industry. Lack of engagement by girls/females is a huge ongoing barrier which we must solve, with better STEM initiatives, visionary role models, etc". Some linked this directly to education challenges: “There is still a stereotype in schools that microelectronics is not for girls”.
- *Structural and systemic factors* – Several respondents mentioned differences in local regulations across EU countries, the impact of outsourcing on skills retention, and succession planning that favours candidates with similar profiles to their predecessors. “Outsourcing has destroyed well-working functions and reduced knowledge transfer,” one participant wrote. Another referred to “different local regulations within EU countries,” noting these can slow or complicate implementation.
- *Perceptions of diversity initiatives* – A small number said diversity work is not always treated as critical or is politically sensitive in some contexts. “DEI is seen as important but still not as a priority or time-critical,” one respondent said. Another

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observed that "in some countries, DEI is politically controversial," which can influence internal positioning.

- *Broader industry and geopolitical factors* – A few responses pointed to external issues such as restrictive visa rules, concentration of specialist knowledge among older workers without structured transfer, and policy distractions. "Government's reluctance to let overseas students apply the education they have gained here" and "concentration of specific know-how in higher aged employees without the required knowledge transfer to younger ones" were among the examples given.

While a small number of respondents reported no significant barriers, most identified at least one that affects progress. The evidence shows that resource pressures, unclear objectives, leadership disengagement, cultural attitudes, and a narrow talent pipeline often intersect, creating complex conditions for advancing diversity in the sector.

Current diversity dimensions focus

This section draws on two sources of evidence from the survey:

- Quantitative ratings where participants ranked six diversity dimensions in order of priority. Figures referenced draw on the percentage of respondents who selected each category as their top priority.
- Qualitative open-text responses, provided by 5 participants.

Participants were asked to rank six diversity dimensions in order of priority in their recruitment strategy, from top to lowest. Figures refer to the share of respondents who placed each category as their top priority.

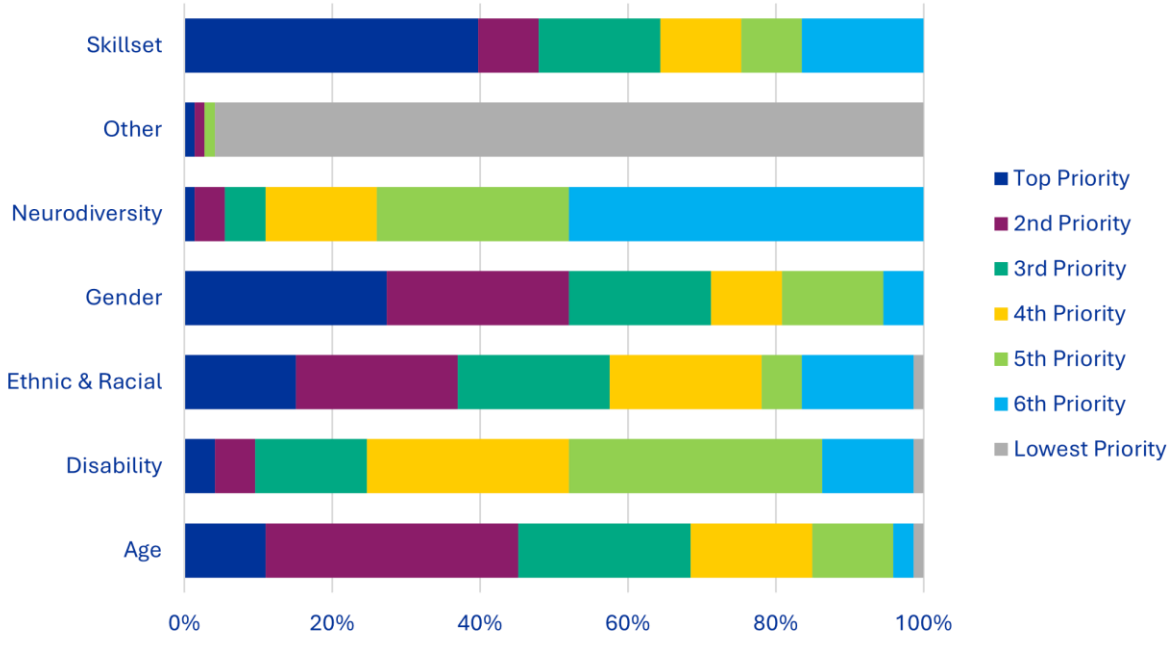

Fig 8.3.3 Current workforce diversity priorities

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Across responses, skillset received the highest share of top priority rankings, with 40 percent placing it first. Gender diversity followed at 27 percent. One respondent wrote, “Skillset is the top priority. Then getting more girls into semiconductors.”

Ethnic and racial diversity ranked next at 15 percent. Age diversity was placed first by 11 percent of respondents and had the highest share of second priority rankings at 34 percent.

Neurodiversity and disability inclusion were least often ranked as top priority, at 1 percent and 4 percent respectively.

The category listed as ‘Other’ was ranked rarely. Written responses under ‘Other’ included mentions of LGBTQ+, religion, and inclusive leadership, as well as cases where no additional diversity focus was identified. One participant explained, “Not a diversity dimension but focus for us is also on inclusive leadership.” Another suggested avoiding the term ‘DEI’, commenting that it “it is too controversial… e.g. DEI = ‘Did Not Earn It’ in the US.”

8.4 Future outlook

Future motivators for DEI efforts

In addition to assessing current motivators, participants were asked to score the same four drivers for DEI in their organisation based on their expected importance in the coming years. The same five-item scale was used: very important, important, moderately important, slightly important, and not important. This allows for direct comparison with the earlier results on current motivators.

Retaining talent is expected to remain the highest-ranked driver. In the future, 55 percent rate it as very important and 26 percent as important, with only a small proportion (5 percent) viewing it as not important.

Finding talent is projected to be the second driver, ahead of reputation and brand. The proportion rating it as very important increases from 42 percent in the current assessment to 48 percent in the future.

Reputation and brand drops to third place, with 42 percent rating it as very important and 32 percent as important. This represents a slight reduction from current results, where the combined total was higher.

Regulatory requirements remain the lowest-ranked motivator, with 22 percent rating them as very important and 29 percent as important. This is a decrease from current results, particularly in the very important category, and is matched by higher proportions selecting moderately or slightly important.

Overall, the expected order of motivators shows stability at the top, with retention remaining the leading driver. However, there is a clear change in the middle rankings, with finding talent growing in importance.

Future priorities

This section draws on two sources of evidence from the survey:

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- Quantitative ratings where participants ranked ten areas of diversity, equity and inclusion (DEI) activity in order of their anticipated future prioritisation. Figures referenced draw on the percentage of respondents who selected each category as their top priority.
- Qualitative open-text responses, provided by 13 participants.

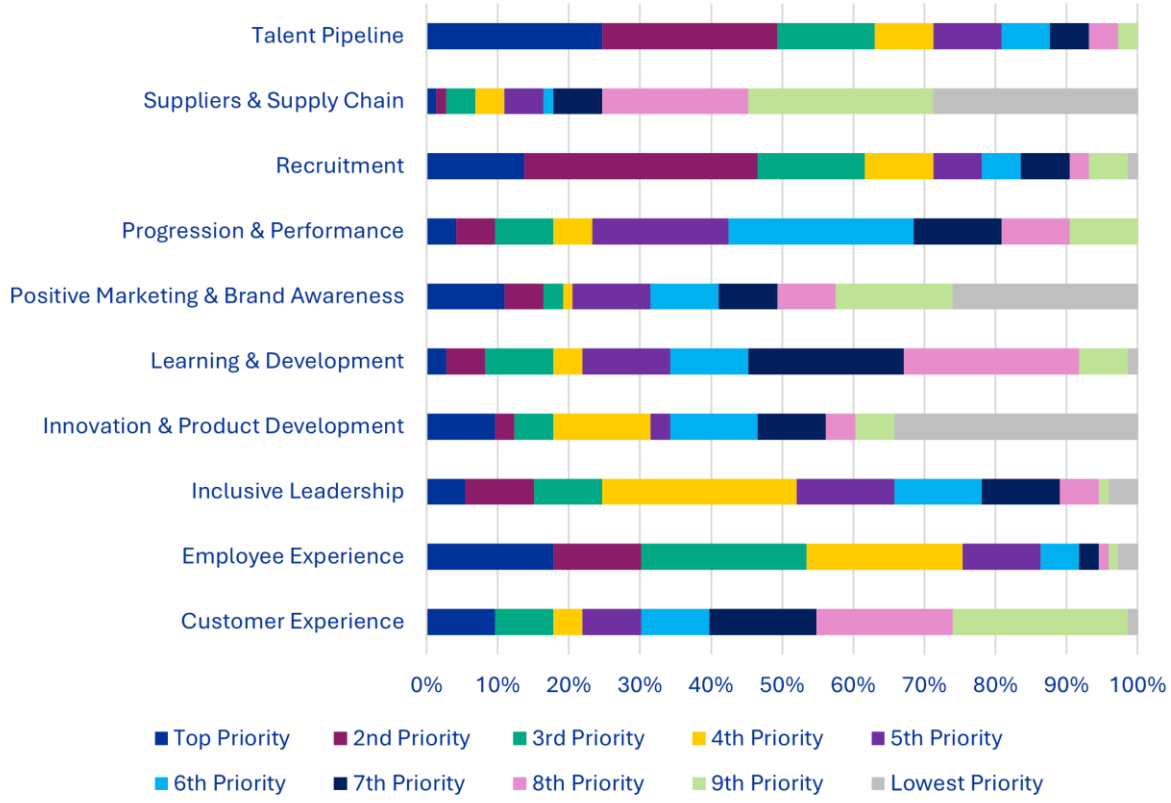

Fig 8.4.1 Future priorities for DEI initiatives

The same ranking exercise used for current priorities was repeated to capture how organisations expect their DEI focus to evolve. This comparison highlights where attention is likely to strengthen, shift, or decline.

Quantitative results

Talent pipeline is projected to become the leading priority in future planning, with 25 percent ranking it first and a further 25 percent placing it second. This is a clear rise from its current focus, where only 16 percent ranked it first.

Recruitment is expected to move sharply up the list, taking second place with 14 percent ranking it first and one-third placing it second. This marks a notable increase from its current mid-table position and points to growing emphasis on expanding the pool of candidates entering the sector.

Employee experience and culture, currently the most common top priority at 25 percent, is projected to drop to third place. Future rankings show a shift of focus from internal engagement toward securing and developing external talent.

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Other areas show smaller movements. Inclusive leadership appears more often in the middle of the ranking. Progression and performance, learning and development, and customer experience remain lower in the order for most respondents, though learning and development sees modest gains in mid-tier rankings. Suppliers and supply chain, positive marketing and brand awareness, and innovation and product development continue to be placed near the bottom, with little indication of a major shift in emphasis.

Qualitative results

Comments reinforce the quantitative trends, with talent-related goals mentioned most frequently. “Attracting more girls/females into the semiconductor sector is a big motivation,” noted one participant, while another stressed the need to “popularise microelectronics among young people of all genders, nationalities and religions… [to] create a strong base for the future” with them noting this will require a broader reduction in bias and stereotyping in societies.

Several respondents linked DEI directly to business outcomes. “Better decisions, different dimensions, on business and challenges,” wrote one, while another pointed to “diverse perspectives [that] can help improve product design and identify new market opportunities.”

Cultural priorities also remained visible. One participant described the aim of being “a company that offers a genuine great employee experience where debate, dialogue and respect for others’ views… is essential,” while others referred simply to “working culture” as a continuing driver.

When reviewing these findings together, it suggests a refocusing of DEI priorities in the sector. While employee experience and culture remain important, internal engagement remaining important but playing a smaller role. The emphasis is expected to shift toward building and sustaining a stronger talent pipeline and a more active focus on recruitment. The data suggests more attention will be given to widening and diversifying the pool of future candidates, where attracting diverse candidates and securing future skills are critical. Respondents still view principles such as inclusion, fairness, and innovation as essential, so future approaches are likely to link workforce expansion with efforts to sustain a positive organisational culture.

Future challenges

This section draws on 68 qualitative responses from the survey. Participants were asked to identify barriers they believe may affect diversity, equity and inclusion (DEI) in the semiconductor sector in the years ahead. The feedback highlights a mix of persistent challenges and new pressures expected to shape the sector’s ability to advance inclusion.

One of the most frequently mentioned themes was the availability of talent. Many warned of a continuing shortage, with some anticipating greater competition across sectors. This was linked to demographic shifts, with one respondent noting “changing expectations from younger generations entering the workplace, increasing war for talent and shortage of

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talent." Others pointed to the low share of women in STEM subjects and the need for sustained outreach, describing the "lack of engagement by Girls/Females" as "a huge ongoing barrier which we must solve, with better STEM initiatives, visionary role models, etc." Several also flagged the need to retain skilled employees once hired, as well as to ensure that talent development covers a range of profiles and skills.

Resource constraints remain a prominent concern. Respondents again cited "limited resources and budget constraints" as factors that could undermine leadership commitment, slow progress, and make it difficult to prioritise DEI alongside other demands. These limits were often described in the same breath as cultural resistance and societal stereotypes, with one respondent identifying the main barrier was such stereotypes, adding that they expected them to persist. Others spoke about the risk that diversity measures are "skewed too far" in a way that may result in "missing out on quality talent."

External and structural factors were also seen as increasingly significant. Some warned that "geopolitics" and "political restrictions" could affect talent mobility and market access, while others anticipated that "de-globalisation will become a challenge." Competition from other tech sectors was mentioned frequently, with concerns that more appealing opportunities elsewhere could draw skilled candidates away from semiconductors. Immigration rules were also cited, with one respondent referring to "stupid fuss around immigration" as a recurring frustration.

Several participants raised governance risks within diversity policy. These included fears that oversight could weaken if "governance of diversity policy becomes too distributed within an organisation" and that diversity work might drift into compliance rather than tangible change, with one respondent noting their organisation is "more concerned with ensuring that all measures are met than showing concrete examples of positive implementation." Others stressed the importance of sustaining "leadership ownership and mindset at all levels" and addressing "misconceptions about diversity and inclusion" that could undermine support.

Some challenges were tied to inclusion for specific groups. Several highlighted the need to recruit disabled people "for their talent and not for their [disability]," while others pointed to the need for "protection of people of older (pre-retirement) age" and adapting work to an ageing population. Achieving a "good work life-balance" was mentioned as increasingly important as the workforce gets older.

Comparison with current challenges

The 68 responses on future challenges show strong continuity with the barriers already described in the current picture. Resource constraints, leadership commitment, cultural resistance, and limits in the talent pipeline remain central issues, as one respondent noted when citing "limited resources and budget constraints" alongside the risk that "leadership commitment to this issue might be lacking." However, the forward-looking comments place more weight on external and structural pressures. These include concerns about geopolitics

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and competition with more appealing tech sectors, as well as the “war for talent” and the shift in expectations from younger generations entering the workplace.

Another difference is the sharper attention to governance risks within diversity policy. Some participants warned that “governance of diversity policy becomes too distributed within an organisation and there is no oversight on policy implementation,” while others linked future success to making sure all measures are met through concrete examples of implementation. There is also a wider framing of inclusion efforts, with calls to address barriers for disabled candidates and to prepare for an ageing workforce.

Future diversity dimensions focus

This section draws on two sources of evidence from the survey:

- Quantitative ratings where participants ranked six diversity dimensions in order of anticipated future priority. Figures referenced draw on the percentage of respondents who selected each category as their top priority.
- Qualitative open-text responses, provided by 4 participants.

The same ranking exercise used for current priorities was repeated to understand how respondents expect their focus to shift in the coming years. While the order of the leading dimensions remains similar, there are notable changes in emphasis.

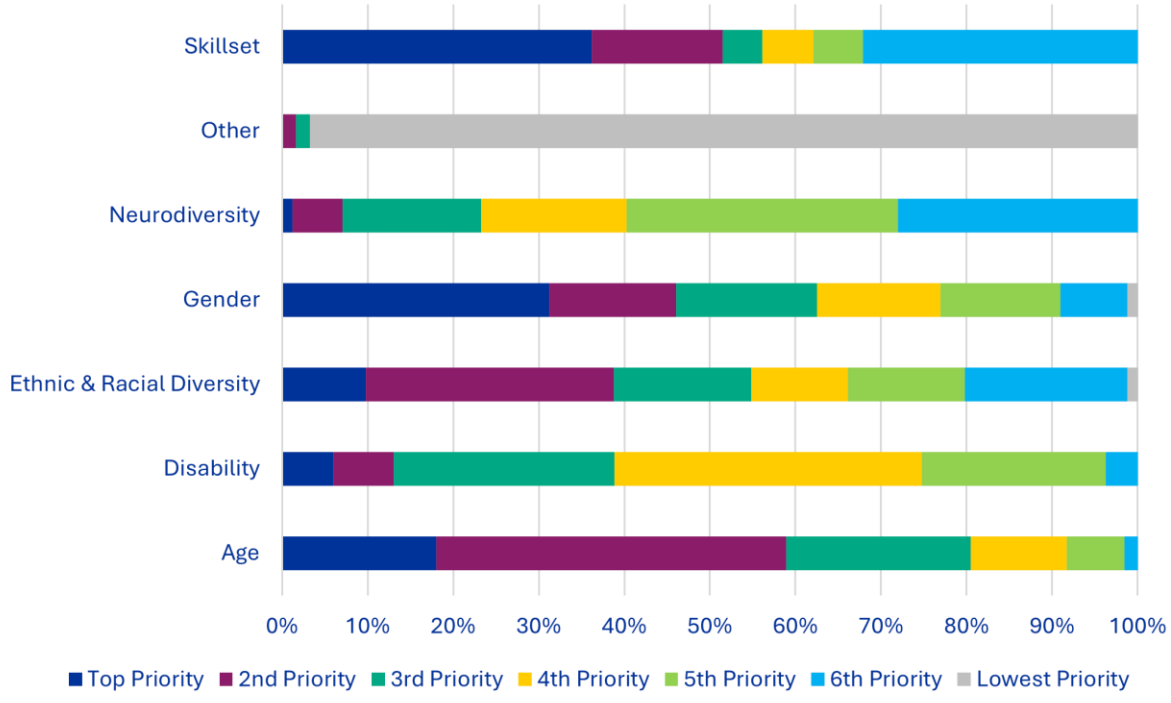

Fig 8.4.2 Future workforce diversity priorities

Looking ahead, skillset is expected to remain the highest priority, with 38 percent placing it first. While this is slightly lower than the current 40 percent, it still holds a clear lead over other dimensions. Gender diversity follows at 34 percent, an increase from the current 27 percent, suggesting sustained and growing emphasis on this area.

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Ethnic and racial diversity is placed first by 11 percent of respondents in future rankings, down from 15 percent, although it remains widely valued, with one-third placing it second. Age diversity sees a marked decline in prominence, moving from 11 percent to 8 percent in first place and from 34 percent to 19 percent in second place.

Significant changes are seen for disability and neurodiversity inclusion. Disability rises 31 percent to 45 percent in the top three, while the proportion ranking it as a lower priority falling considerably. Neurodiversity shows a similar positive trend, with 18 percent of respondents, an increase of 7 percent including it in their top three. These shifts suggest a gradual rebalancing of priorities toward dimensions that have historically received less focus. Written responses included calls for more focus on diversity in leadership with respondents wanting more succession planning and considerations for gender diversity in leadership.

8.5 Opportunities for ECDA

ECDA priorities

This section draws on one source of evidence from the survey:

- Quantitative rankings where participants ordered ten potential areas for ECDA initiatives. Figures referenced here reflect the percentage of respondents who selected each category as their top priority.

The ranking results show that the talent pipeline stands out as the strongest initiative focus, with 38 percent of respondents placing it first. This is a higher share than in the current priorities data (16 percent) and future priorities (25 percent), indicating that respondents see a direct role for ECDA in supporting the flow of skills into the sector. Inclusive leadership is the second highest priority at 18 percent, a notable increase compared with its position in both the current and future priorities lists, where it was more often placed mid-ranking. Recruitment ranks lower in this exercise, with 7 percent selecting it first, despite its projected rise in importance in the future priorities data.

Other areas attract smaller shares of top priority rankings. Employee experience is chosen first by 10 percent, lower than in the current and future priorities data, suggesting that while organisational culture remains valued, respondents may see it as less central to ECDA's remit. Innovation and product development, learning and development, and customer experience receive limited top priority rankings, while suppliers and supply chain is placed last by 19 percent, broadly consistent with its position in the other rankings.

Taken together, the findings suggest that respondents want ECDA's initiatives to concentrate more heavily on building and sustaining a strong talent pipeline and strengthening inclusive leadership. This alignment on talent, combined with a relatively higher emphasis on leadership within ECDA's potential scope, points to a view that sector-level action can add value by tackling these areas collectively.

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ECDA diversity dimensions focus

This section draws on two sources of evidence from the survey:

- Quantitative rankings where respondents ordered seven diversity dimensions in terms of their priority for ECDA's work.
- Qualitative open-text responses provided by 3 participants.

The results show that respondents largely want ECDA's focus to mirror the sector's own future priorities. Skillset remains the clear leader, with the same top ranking as in the sector's future focus results. Gender diversity is the next most prioritised area, again matching the sector, with several participants emphasising leadership representation and succession readiness for women.

Ethnic and racial diversity ranks in the same position as in the sector's future priorities, indicating no change in emphasis. Age diversity also holds a similar place, but here the qualitative input points to a specific interest in promoting older talent, including those who may have retired.

Disability inclusion and neurodiversity remain lower priorities, but both see slightly less concentration in the lowest rankings compared to the sector's future focus, hinting at a modest openness for ECDA to give these areas more attention.

'Other' dimensions were rarely prioritised, with limited comments. Those who did comment wanted a focus on LGBTQIA+. Overall, these results suggest that ECDA's focus should largely reflect the sector's existing priorities, with scope to build on emerging interest in age diversity, disability inclusion, and neurodiversity.

Desired ECDA impact and delivery approach

The insights in this section draw exclusively on qualitative responses to two open-ended questions from the ECDA stakeholder survey. Participants were asked what impact they would like ECDA to have on the semiconductor sector and on their organisations, and what formats or channels would be most effective for delivering that impact.

Intended impact on the sector and organisations

Participants described a range of changes they would like to see in the semiconductor sector, many of which align with ECDA's goals. Several called for stronger efforts to inspire the next generation, particularly girls, to pursue careers in STEM. As one participant put it, "Be able to raise awareness among students from high school on the amazing possibilities for future careers in the STEM area. Inspire girls and boys to pursue their dreams making an impact on humanity through innovative technologies to improve quality of life."

Others stressed the importance of increasing representation across the sector. This was framed both as a moral and a business imperative: "A more representative, diverse European semiconductor ecosystem with a healthy talent pipeline resulting in increased innovation and market success." Calls were made for "a doubling or tripling of the

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percentage of girls/females in semiconductors" and "increased participation by females and international staff and students to give increased participation overall."

Some saw ECDA's role as helping organisations build practical DEI capacity, for example by "help[ing] define DEI regulatory guidelines that will hold organisations accountable for their policies and practices" or by "providing best practice guidelines and benchmarks". A few called for bolder leadership in shifting culture, urging ECDA to "inspire (and educate?) leaders in DEI topics – we need leaders to be courageous, go first and act as positive role models. Employees and culture will follow."

While many comments focused on expansion of current priorities, others introduced specific new emphases. These included "more inclusion across the industry", "more innovation from more geographies, especially in Europe, India, Africa", and "knock[ing] down cultural barriers". There was also interest in raising the profile of the sector overall: "not to focus on existing employees in the industry as much. Try to improve the image of the semiconductor industry as a whole. In the 90s it was cool, now… we are definitely down the list."

Preferred formats and channels for ECDA activities

When asked how ECDA should deliver on these ambitions, responses spanned both traditional and digital approaches. Video was the most frequently mentioned medium, with suggestions for "10–20 minute videos", "awareness videos", "short reels on LinkedIn", and "movies/YouTube/documentary". Many saw value in highly visible, engaging campaigns: "highly visible publicity and marketing initiatives… to encourage more kids and students (girls especially) to enter the industry."

Events and live interaction were also popular. Participants suggested "web-based talks/seminars", "interactive workshops and hands-on learning experiences", and "visibility in as many semiconductor events as possible (shows, conferences etc.)". The emphasis was often on practical tools that could be integrated into daily work, such as "material that is crisp and targeted for managers who are no experts in DEI" and "learning material tool kits for external communication on diversity topics."

Some proposed education-focused formats for earlier engagement, including "experimental kits and online resources/tools for school children" and "grass roots engagement in schools/colleges with education on careers in semiconductor industry." Others favoured direct storytelling and role modelling: "popularise the successful stories of completely different people about their path to microelectronics" and "inspire through outstanding single cases, explain HOW it was done and WHY it was important."

Social media featured prominently to reach wider audiences, with suggestions ranging from "media interaction through Twitter, TikTok and Facebook/Instagram" to "more social media activities to motivate especially the young generation." Several stressed the importance of combining channels and formats to maintain reach and momentum over time.

Summary

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Many participants spoke about the need to grow a strong and diverse talent pipeline. This included reaching students at an earlier age, making the sector more visible, and encouraging more girls to consider semiconductor careers. Several called for greater international outreach, saying they wanted to see “more people with more diverse backgrounds” and “increased participation by females and international staff and students.” Cultural change within organisations was another common theme, with respondents urging leadership to “go first and act as positive role models” and to ensure diversity is treated as “a win-win situation for both sides.” Some linked this to improving the sector’s public image, suggesting more engaging storytelling, role model profiles, and practical resources for managers. The most frequently mentioned formats were short videos, interactive workshops, and easy-to-use toolkits that companies could adapt for their own needs.

RECOMMENDATIONS

9. STRATEGIC RISKS AND OPPORTUNITIES FOR THE SECTOR

The European semiconductor sector faces a critical inflection point where diversity, equity and inclusion advancement will determine both competitive positioning and policy success. Research findings reveal systematic challenges that, if unaddressed, threaten sector sustainability whilst creating unprecedented opportunities for European leadership in inclusive innovation.

The talent crisis threatens sector growth

The European semiconductor sector must fill 75,390 additional roles by 2030 (ECSA Skills Strategy, 2024) whilst facing an aging workforce, with one-fifth of workers aged 55 or older and Germany anticipating 30% retirements over the next decade (McKinsey & Company, 2024). Traditional recruitment cannot close this gap when pipeline development shows the weakest performance across all DEI areas measured.

This creates immediate risk to European Chips Act implementation and broader strategic autonomy objectives. Without coordinated action to expand diverse talent pipelines, the sector cannot achieve the workforce expansion required for European semiconductor leadership.

Individual efforts cannot achieve required scale

The business-to-business nature of semiconductor companies creates visibility disadvantages that individual organisations cannot overcome alone. Survey respondents prioritise talent pipeline development at 38% for ECDA initiatives, significantly exceeding current organisational focus at 16%, indicating recognition that collective action is essential.

Resource constraints compound this challenge, with 45% of survey respondents rating resource pressures among their top barriers whilst many organisations rely on volunteers to manage DEI initiatives alongside their primary roles. Shared approaches can reduce individual burden whilst achieving economies of scale impossible for isolated efforts.

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European coordination creates competitive advantage

European policy frameworks provide unique opportunities for coordinated workforce development that competitors in other markets lack. Companies with above-average diversity achieve 19% higher innovation revenues (Lorenzo & Reeves, 2018), demonstrating proven business benefits that European organisations can scale through collective action.

The convergence of Chips Act workforce objectives, Pact for Skills partnerships, and Corporate Sustainability Reporting Directive requirements enables coordinated approaches that serve multiple strategic objectives whilst reducing compliance burden. This positioning differentiates European semiconductor employers in competitive global talent markets.

Coordinated DEI advancement therefore represents both operational necessity and strategic opportunity for European semiconductor leadership in critical technologies.

10. PRIORITY ACTIONS FOR SECTOR ADVANCEMENT

Research findings reveal four critical areas requiring immediate action to address the systematic gaps identified whilst building upon demonstrated sector strengths.

10.1 Fix the talent pipeline

Talent pipeline development represents the sector's greatest challenge and highest priority for coordinated action.

Start educational engagement in secondary schools

- Begin intervention before university entrance, given minimal female representation in engineering university programmes.
- Coordinate sector-wide engagement with schools through shared programmes demonstrating career opportunities and industry impact.
- Pool resources for equipment demonstrations and hands-on experiences that individual companies cannot provide alone.
- Establish role model programmes featuring diverse professionals sharing career pathways.
- Create engaging content for younger audiences through contemporary communication platforms.

Develop alternative pathways through apprenticeships

- Establish apprenticeship programmes as alternative routes into semiconductor careers, which demonstrate higher retention rates than traditional recruitment (Institute of Student Employers, 2024).
- Coordinate development across multiple organisations to achieve scale whilst addressing diverse technical expertise needs.
- Include mechanical engineering, physics, and chemistry specialists alongside traditional electronic engineering backgrounds.

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Eliminate recruitment process barriers

- Address third-party recruitment agency gaps through shared education programmes that develop technical understanding and diverse candidate sourcing strategies.
- Coordinate advocacy for administrative efficiency improvements affecting international talent acquisition.
- Align language requirements in job advertisements with actual workplace needs rather than local language mandates that discourage qualified international applicants.

10.2 Make DEI visible in daily work

Transform organisational investment into employee experiences through systematic embedding of inclusive practices.

Integrate inclusion into technical operations

- Embed inclusive practices directly into daily work rather than separate programmes.
- Address communication barriers including speech pace, cultural references, and meeting management that exclude international colleagues.
- Develop practical frameworks for inclusive technical collaboration that enhance rather than compromise operational effectiveness.
- Train technical managers on inclusive leadership whilst maintaining engineering excellence standards.
- Focus on practical skills including recognising when team members need support and conducting effective conversations across cultural and generational differences.

Transition from volunteer-dependent models

- Establish dedicated resources for DEI implementation rather than relying on volunteers balancing responsibilities alongside primary roles. When using this model ensure resources are allocated in colleagues schedules for this work.
- Create clear accountability structures ensuring DEI receives appropriate priority and resources.
- Integrate inclusive practices into job descriptions, performance criteria, and career development pathways.

10.3 Pool resources to address common challenges

Coordinate sector-wide approaches to overcome individual organisational resource limitations.

Address emerging diversity dimensions systematically

- Expand focus beyond traditional diversity areas to include neurodiversity and disability inclusion, which show increasing future prioritisation.
- Leverage research showing that neurodiverse individuals possess skills particularly valuable in tech roles, including pattern recognition and systematic thinking capabilities (Change the Face, 2023).

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- Address age diversity as strategic priority given workforce demographics and pending retirements.
- Develop systematic approaches for retaining experienced workers' expertise whilst creating intergenerational mentoring programmes.

Create shared implementation resources

- Develop coordinated training programmes addressing leadership capability gaps, particularly for technical leaders transitioning to people management in multinational environments.
- Establish knowledge-sharing platforms enabling access to tested approaches, policy templates, and implementation guidance.
- Adapt resources for different organisational sizes and operational contexts.
- Pool expertise for navigating varying European regulatory requirements whilst maintaining consistent organisational values.

10.4 Coordinate visibility efforts to compete for diverse talent

Address business-to-business visibility disadvantages through collective sector promotion.

Launch coordinated talent attraction initiatives

- Develop joint educational initiatives demonstrating semiconductor career opportunities through engaging storytelling and role model profiles.
- Create shared visibility campaigns using social media and contemporary platforms to reach potential candidates where they seek career information.
- Address public understanding gaps about semiconductor industry impact through coordinated education.
- Emphasise how semiconductor innovations underpin modern technology whilst offering compelling technical challenges.

Leverage European policy alignment

- Position European semiconductor careers as offering unique opportunities for inclusive innovation whilst supporting strategic autonomy objectives.
- Coordinate messaging that differentiates European employers through systematic emphasis on inclusive practices and career development opportunities.
- Align DEI initiatives with European policy frameworks including Chips Act workforce objectives and Corporate Sustainability Reporting Directive requirements.
- Demonstrate how coordinated action serves multiple strategic objectives simultaneously.

Success requires organisations treating these actions as core business strategy with systematic implementation that addresses identified gaps whilst building upon demonstrated innovation strengths.

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11. PRIORITIES FOR FUTURE RESEARCH AND INSIGHT

The research reveals specific knowledge gaps that limit evidence-based DEI implementation in the European semiconductor sector. These gaps emerge directly from the literature review and primary research findings, representing areas where insufficient understanding prevents effective advancement of the priority actions identified.

11.1 Semiconductor-specific innovation-inclusion mechanisms

Despite strong performance in innovation understanding remains limited on how diversity enhances technical outcomes in semiconductor contexts. A review of available research identified that research linking DEI practices to innovation outcomes in semiconductor contexts remains limited, despite the sector's critical role in technological advancement.

Specific gaps requiring research:

- How diverse perspectives enhance technical problem-solving in complex engineering environments specific to semiconductor manufacturing and design.
- Whether the efficiency-inclusion tension identified by Appelhans (2022) in semiconductor engineering can be addressed through evidence-based approaches that demonstrate inclusion enhancing rather than competing with technical excellence.
- How to systematically embed inclusive practices into highly technical work environments whilst maintaining rigorous technical standards.
- What specific mechanisms enable diverse teams to achieve superior innovation outcomes in business-to-business technology contexts.

11.2 Daily implementation approaches in technical environments

Primary research revealed that only 26% of early career professionals rate DEI efforts as visible in daily work despite substantial leadership investment. However, limited guidance exists on practical approaches for embedding inclusion in technical work environments.

Specific gaps requiring research:

- Practical frameworks for making inclusion visible and integrated into daily technical operations rather than separate programmes.
- How to address communication barriers (speech pace, cultural references, meeting management) that exclude international colleagues without compromising technical collaboration effectiveness.
- Effective approaches for transitioning technical leaders to inclusive people management in multinational environments, particularly given the challenges identified in managing diverse workforces with different generational expectations.
- Sustainable resource models that move beyond volunteer-dependent implementation, which multiple executives identified as creating unsustainable barriers to systematic progress.

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11.3 Talent attraction strategies

The literature review noted that semiconductor organisations cannot rely on product interaction for talent discovery, requiring approaches that differ fundamentally from consumer technology recruitment models. However, research on effective B2B technology sector talent attraction remains limited.

Specific gaps requiring research:

- Educational intervention approaches both before and during university level to strengthen the talent pipeline.
- Research to better understand the lack of females choosing the sector and leaving the sector.
- Coordinated visibility approaches that enable B2B technology sectors to compete effectively with consumer technology companies for diverse talent.
- How to address the substantial gap between the sector's actual impact and public understanding through effective communication strategies.
- Alternative educational pathways, particularly apprenticeship models, that demonstrate high retention rates in technical sectors.

11.4 Addressing European-specific implementation complexity

Primary research identified that 80% of organisations operate internationally whilst facing varying cultural expectations and regulatory requirements across European markets. However, research on effective multinational DEI implementation in European contexts remains insufficient.

Specific gaps requiring research:

- How to balance global DEI consistency with local cultural adaptation whilst maintaining effectiveness across different European regulatory frameworks.
- Practical approaches for addressing the regulatory fragmentation challenge, where "different local regulations within EU countries create implementation barriers".
- How European policy frameworks (Chips Act, Pact for Skills, CSRD) can be leveraged to support coordinated DEI advancement rather than creating compliance burden.
- Effective coordination models that address competitive dynamics whilst achieving collective impact in technical industries.

11.5 Supply chain DEI integration approaches

The literature review identified supply chain DEI as facing "unique challenges in the semiconductor sector" with significant knowledge gaps. Despite European suppliers representing substantial portions of global equipment markets, research on supply chain DEI implementation remains limited.

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Specific gaps requiring research:

- How to effectively integrate DEI principles across complex global semiconductor supply chains whilst considering European influence in equipment and subsystem segments.
- Practical approaches for implementing inclusive practices across supply networks without creating additional burden on supplier relationships.
- How supply chain DEI requirements can strengthen rather than complicate supplier relationships and procurement processes.
- Collective action opportunities that leverage European market positioning for broader industry advancement.

Research implementation priorities

These knowledge gaps should be addressed through:

1. Quantitative and qualitative research targeting specific knowledge gaps. For example, research on the talent pipeline challenges should incorporate student and educators perspectives and be cognisant of including diverse profiles voices to capture nuanced insights.
2. Semiconductor-specific case studies examining successful approaches within European contexts to develop sector-relevant guidance rather than adapting generic approaches.
3. Cross-cultural implementation research addressing the specific challenges of European multinational operations whilst accounting for varying regulatory requirements and cultural contexts.
4. Longitudinal tracking of implementation approaches to understand effectiveness over time and identify factors that predict sustained improvement versus short-term compliance responses.
5. Practical validation through pilot programmes testing research-based approaches in real organisational contexts to ensure applicability before broader sector adoption.

CONCLUSIONS

This research reveals a sector with demonstrated strengths alongside systematic gaps that threaten future competitiveness. European semiconductor organisations excel at innovation through diverse teams yet struggle with talent pipeline development. Leadership investment in DEI sometimes fails to translate into visible inclusion in daily work. The sector's technical culture perceives efficiency and inclusion as competing priorities when evidence shows they enhance each other. These challenges compound in a business-to-business environment where visibility disadvantages limit access to diverse talent pools.

The solution requires action across four interconnected areas. Talent pipeline development must begin earlier through coordinated educational engagement. Inclusion must become embedded in daily technical operations rather than confined to separate programmes. The

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efficiency-inclusion tension must be resolved by demonstrating how inclusive practices enhance technical outcomes. Resource constraints demand pooled approaches that achieve scale impossible for individual organisations.

European semiconductor organisations have five years to address workforce expansion needs that traditional recruitment cannot meet. This research has identified the approaches that demonstrate effectiveness alongside the barriers that limit progress. The evidence provides a foundation for systematic implementation across the sector.

ANNEXES

Annex 1: Sample pool survey

Sample Pool Survey

Introduction

What is the European Chips Diversity Alliance

The European Chips Diversity Alliance (ECDA) is a consortium co-funded by the European Union and coordinated by SEMI Europe, with 11 partners from 6 countries. The alliance will enhance the diversity, equity, and inclusion in the European semiconductor sector by building bridges from industry to the world of education. The Alliance will lower the barriers to enhance participation in the sector from under-represented groups by providing data, operational tools, case studies, trainings, and programs to improve workplace diversity and inclusion.

The objectives of the European Chips Diversity Alliance are to:

- Bring together industry and the world of education including universities and training organisations.
- Develop an innovative methodology to gauge Diversity, Equity, and Inclusion (DEI) trends and dynamics in the EU chips sector.
- Formalise the DEI Advisory Council and produce Vision Paper with actionable measures and recommendations for enhanced DEI in the sector.
- Develop innovative training and operational tools to improve DEI in the EU chips sector.

What is the European Chips Diversity Alliance Sample Pool Survey

The goal of the survey is to identify successes and barriers to success in DEI in the semiconductor sector. The results of this survey will inform the support and training the European Chips Diversity Alliance offers to the sector over the coming years.

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What is Diversity, Equity, and Inclusion

ISO 30415 definitions:

Diversity: *characteristics of differences and similarities between people*
Equity: *principle that policies, processes and practices should be fairly applied and individual needs recognised*
Inclusion/inclusiveness: *practice of including all stakeholders in organisational contexts*

Survey Guidelines

- Anonymity: *This survey is confidential and does not collect participant details.*
- Requirements for participation: *This survey should only be completed by full-time employees in your organisation.*
- Consider the organisation as a whole: *When answering the following questions, please consider the collective efforts of your organisation.*
- Honesty and constructive feedback: *Your honest evaluations are beneficial for development.*
- Use the full range of the scales: *There is a variety of scales in this survey. Please use the full range of the scales when providing responses.*

Data Handling

Participation in this survey is confidential. All data is protected and secured and will be deleted after the ECDA project is completed in 2027.

ECDA will not share your contact details externally. ECDA might contact you with practicalities relating to the survey or other relevant information based. You will be able to unsubscribe in all communication of ECDA by contacting ksrivastava@semi.org.

Consortium Members

Associated Partners

Q1: I confirm that I am a full-time employee in the semiconductor sector in Europe.

- Yes
- No

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Q2: I consent to participate in this survey.

- Yes
- No

You and your organisation

Q1: What is your job role? [Text]

Q2: What is your job function? [Multiple Choice]

- Academia
- Administrative Support
- Advertising
- Assembly/Packaging Engineering
- Business Development
- Chemicals/Materials
- Company Administrator
- Consulting
- Corporate Management
- Design
- Engineering Other
- Environment, Health & Safety (EHS)
- Equipment Engineering
- Executive Management/Board Member
- Fabrication and Process Engineering
- Facilities/Engineering Support
- Finance/Accounting
- Financial/Industry Analyst/Investor Relations
- Government/Public Policy
- Human Resources
- Industrial Engineering
- Integration/IT Support
- Investor Relations

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- Logistics/Supply Chain Management
- Manufacturing Engineering
- Manufacturing/Operations Management/Production
- Market Analyst
- Marketing, Sales, Business Development
- Media/Press
- Other
- Packaging/Assembly
- Product Management
- Public Relations
- Purchasing/Procurement/Office Management
- Quality Assurance/Failure Analysis/Reliability
- R&D
- Sales
- Software Engineering
- Test
- Trade Show/Events
- Training/Education
- Unknown

Q3: What is your job level? [Multiple Choice]

- Executive Management (Chairman, CEO, CFO, CMO, President, Chief, Managing Director)
- Senior Management (Vice President, Director)
- Other Management (Program Manager, Manager)
- Non-Management (Staff, Professional, etc.)
- Student
- Other job level
- Unknown

Q4: In what country is your business headquartered? [Text]

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Q5: Which regions does your organisation have a presence in? *Select all that apply.* [Multiple Choice]

- Europe, Middle East, and Africa (EMEA)
- Asia-Pacific (APAC)
- North America (NA)
- Latin America (LA)

Q6: How many people are employed at your organisation? [Multiple Choice]

- 1 - 99
- 100 - 199
- 200 - 499
- 500 - 999
- 1,000 - 9,999
- 10,000+

Current State

Q1: What motivates your organisation's diversity, equity, and inclusion efforts and investment currently? [Rating]

- Regulatory requirements: *DEI efforts are driven by the need to comply with legal standards and anti-discrimination laws.*
- Finding talent: *DEI initiatives focus on attracting a diverse workforce by creating an inclusive brand.*
- Retaining talent: *Efforts are centered on keeping diverse talent through an inclusive organisational culture that promotes equity, supports career development, and values all employees.*
- Reputation and brand: *DEI efforts enhance the organisation's public image and brand identity, aligning with customer values and increasing market appeal.*
- Other: *Please specify any other motivations driving your organisation's DEI efforts that are not captured by the categories listed above.*

Q2: Please rank the following areas in order of priority for your organisation's DEI initiatives currently, with **one** being the **highest priority**. [Ranking]

- Talent Pipeline
- Recruitment
- Employee experience and culture

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- Inclusive leadership
- Progression and performance
- Learning and development
- Customer experience
- Suppliers and supply chain
- Positive marketing and brand awareness
- Innovation and product development

Q3: Instructions: Please rank your organisation using the following guidelines. [Likert Scale]

Unacceptable: *Fails to meet basic DEI standards and requires immediate attention and corrective action.*

Needs Improvement: *Falls short of DEI expectations with areas for significant development.*

Meets Expectations: *Adequately meets DEI goals and practices as expected for a typical organisation.*

Exceeds Expectations: *Goes beyond the standard DEI practices with significant positive outcomes.*

Outstanding: *Far exceeds DEI expectations with exceptional initiatives and results.*

Considering your organisation's current performance in the following DEI areas, how would you rate the following:

	Unacceptable	Needs Improvement	Meets Expectations	Exceeds Expectations	Outstanding
Talent pipeline	1	2	3	4	5
Recruitment	1	2	3	4	5
Employee experience and culture	1	2	3	4	5
Inclusive leadership	1	2	3	4	5
Progression and performance	1	2	3	4	5
Learning and development	1	2	3	4	5
Customer experience	1	2	3	4	5

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Suppliers and supply chain	1	2	3	4	5
Positive marketing and brand awareness	1	2	3	4	5
Innovation and product development	1	2	3	4	5

Q4: Please rank the following diversity dimensions in order of priority for your organisation's DEI strategy, policies, and initiatives currently, with one being the highest priority. [Ranking]

- Age: *Individuals from different age groups and life stages.*
- Disability: *Individuals with conditions (body or mind) that can cause barriers for the person with the condition to do certain activities (activity limitation) and interact with the world around them (participation restrictions).*
- Gender identity: *Individuals from different gender identities, gender expressions, and sex characteristics.*
- Neurodiversity: *An umbrella term used to describe neurological differences in brain processes. This can include individuals that are autistic, dyslexic, and have ADHD.*
- Racial or ethnic origin: *Individuals from different races, ethnicities, and nationalities.*
- Skillset: *Individuals with varied collections of abilities, knowledge, and competencies.*
- Other: *Please specify any other diversity dimensions driving your organisation's DEI efforts.*

Q5: Please rank the following challenges in order of impact on your organisation's DEI initiatives currently, with one being the highest impact. [Ranking]

- Lack of goals and metrics
- Lack of data and insights
- Inadequate training
- Leadership buy-in
- Budgetary and time resources
- Cultural resistance

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Q6: What barriers to success, in both policies and practice, has your organisation encountered to date in diversity, equity, and inclusion? [Open-ended question]

Future State

Q1: What do you expect to motivate your organisation's diversity, equity, and inclusion efforts in the next 3 years? [Rating]

- Regulatory requirements: *DEI efforts are driven by the need to comply with legal standards and anti-discrimination laws.*
- Finding talent: *DEI initiatives focus on attracting a diverse workforce by creating an inclusive brand.*
- Retaining talent: *Efforts are centered on keeping diverse talent through an inclusive organisational culture that promotes equity, supports career development, and values all employees.*
- Reputation and brand: *DEI efforts enhance the organisation's public image and brand identity, aligning with customer values and increasing market appeal.*
- Other: *Please specify any other motivations driving your organisation's DEI efforts that are not captured by the categories listed above.*

Q2: Please rank the following areas as a priority for your organisation's DEI initiatives for the next 3 years, with **one** being the **highest priority**. [Ranking]

- Talent pipeline
- Recruitment
- Employee experience and culture
- Inclusive leadership
- Progression and performance
- Learning and development
- Customer experience
- Suppliers and supply chain
- Positive marketing and brand awareness
- Innovation and product development

Q3: Please rank the following diversity dimensions in order of priority for your organisation's DEI strategy, policies, and initiatives for the next 3 years, with one being the highest priority. [Ranking]

- Age: *Individuals from different age groups and life stages.*

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- Disability: *Individuals with conditions (body or mind) that can cause barriers for the person with the condition to do certain activities (activity limitation) and interact with the world around them (participation restrictions).*
- Gender identity: *Individuals from different gender identities, gender expressions, and sex characteristics.*
- Neurodiversity: *An umbrella term used to describe neurological differences in brain processes. This can include individuals that are autistic, dyslexic, and have ADHD.*
- Racial or ethnic origin: *Individuals from different races, ethnicities, and nationalities.*
- Skillset: *Individuals with varied collections of abilities, knowledge, and competencies.*
- Other: *Please specify any other diversity dimensions driving your organisation's DEI efforts.*

Q4: What barriers to success, in both policies and practice, do you anticipate your organisation might encounter in diversity, equity, and inclusion in the next 3 years? [Open-ended question]

EU Chips Diversity Alliance

Q1: Please rank the following areas in order of priority for the EU Chips Diversity Alliance, with **one** being the **highest priority**. [Ranking]

- Talent pipeline
- Recruitment
- Employee experience and culture
- Inclusive leadership
- Progression and performance
- Learning and development
- Customer experience
- Suppliers and supply chain
- Positive marketing and brand awareness
- Innovation and product development

Q2: Please rank the following diversity dimensions in order of priority for the European Chips Diversity Alliance for the next 3 years, with one being the highest priority. [Ranking]

- Age: *Individuals from different age groups and life stages.*

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- Racial or ethnic origin: *Individuals from different races, ethnicities, and nationalities.*
- Skillset: *Individuals with varied collections of abilities, knowledge, and competencies.*
- Other: *Please specify any other diversity dimensions driving your organisation's DEI efforts.*

Q3: Three years from now, what impact would you hope the EU Chips Diversity Alliance project will have had on both the sector **and** your organisation? [Open-ended question]

Q4: What content type, style and format would drive the most engagement in the EU Chips Diversity Alliance projects learning, tool kits and marketing material? [Open-ended question]

Closing

Thank you for taking the time to participate in this survey.
Please share any additional information not captured in the previous questions or any feedback on the survey. [Open-ended question]

Annex 2: Policy Alignment Brief

Overview

ECDA research findings demonstrate direct alignment between sector DEI advancement and key European policy objectives. This brief outlines strategic connections that position the European semiconductor sector to leverage policy frameworks for coordinated workforce development whilst addressing identified talent pipeline challenges.

Key Research-Policy Connections

European Chips Act Workforce Requirements

Research findings:

- Talent pipeline development represents the sector's greatest performance gap and highest priority for coordinated action.
- Organisations demonstrate strong innovation capabilities through diverse teams whilst struggling to develop sustainable pathways for future talent.

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- Gender representation initiatives show increasing strategic priority, indicating recognition of untapped talent pools.
- Implementation gaps exist between leadership investment and daily employee experiences of inclusion.
- Early career professionals identify structural barriers in recruitment and visibility that limit sector access.

Policy alignment: Chips Act workforce development objectives require the diverse talent pipeline expansion that individual companies cannot achieve alone. Demonstrated innovation strengths indicate that inclusive practices enhance rather than compete with technical excellence goals.

Strategic opportunity: Coordinated educational partnerships can address curriculum gaps whilst expanding participation from underrepresented groups essential for meeting workforce capacity targets.

Pact for Skills Framework

Research findings:

- Resource constraints prevent individual companies from achieving necessary scale, with budgetary and time pressures as primary barriers.
- Implementation gaps exist between leadership DEI investments and employee experiences in daily operations.
- Organisations demonstrate strength in utilising diverse teams for innovation but struggle with systematic capability building.
- Educational intervention needs begin before university level to address representation gaps in technical fields.
- Skillset diversity provides stable foundation that can support advancement in other diversity dimensions.

ANNEX 2 POLICY ALIGNMENT

Policy alignment: Pact partnership models enable resource pooling and coordinated capability development that individual companies cannot achieve alone. Educational partnerships can address earlier intervention needs whilst building systematic sector capabilities.

Strategic opportunity: hared training programmes, coordinated educational outreach, and collective capability building can overcome resource limitations whilst developing sustainable implementation expertise across the sector.

Corporate Sustainability Reporting Directive (CSRD)

Research findings:

- Regulatory compliance is declining as a primary motivator whilst business-driven talent objectives gain prominence.

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- Organisations operate across diverse international contexts, creating complexity in implementing consistent approaches.
- Cultural resistance remains a significant challenge alongside regulatory fragmentation barriers within European markets.
- Performance gaps exist between stated organisational capabilities and actual inclusive leadership implementation.
- Future challenges emphasise external structural factors rather than internal capability limitations.

Policy alignment: CSRD standardised frameworks can reduce implementation complexity whilst enabling benchmarking across diverse organisational contexts. Harmonised reporting supports evidence-based improvement approaches that address identified fragmentation challenges.

Strategic opportunity: Coordinated compliance approaches can serve multiple regulatory objectives whilst reducing individual organisational burden and enabling sector-wide performance comparison.

EU Accessibility Legislation

Research findings:

- Disability and neurodiversity priorities show significant growth in strategic importance, indicating emerging recognition of underutilised talent pools.
- Age diversity receives declining emphasis despite demographic pressures, suggesting potential misalignment with workforce realities.
- Future workforce challenges include accommodating diverse working arrangements and leveraging varied capabilities.

Policy alignment: European Accessibility Act requirements align with emerging sector priorities whilst supporting workforce expansion through previously overlooked talent sources.

Strategic opportunity: Proactive accessibility implementation and development of inclusive hiring processes creates competitive advantages in talent acquisition whilst ensuring regulatory compliance and addressing evolving demographic workforce composition.

Policy Implementation Recommendations

The convergence of research findings with European policy frameworks creates unprecedented opportunities for coordinated sector advancement. Key recommendations include:

- **Leverage policy synergies:** Position DEI initiatives as serving broader European strategic autonomy objectives whilst addressing practical workforce needs. The alignment between research evidence and policy requirements enables coordinated approaches that achieve multiple objectives simultaneously.

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- **Coordinate implementation:** Sector-wide initiatives can overcome individual company limitations whilst maximising the impact of existing policy frameworks. Coordinated approaches reduce compliance burden whilst achieving greater collective impact than isolated efforts.
- **Build on demonstrated strengths:** European semiconductor organisations show proven capabilities in innovation through diverse teams. Policy frameworks should build upon these strengths whilst addressing identified gaps in pipeline development and systematic implementation.

This alignment demonstrates that effective DEI advancement represents both operational necessity and strategic opportunity for European semiconductor leadership in critical technologies.

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