

Semicon Talent Demand - Survey Results 2025 Q4

The aim of this survey was to get a more specific understanding of the challenges the semiconductor industry is facing regarding the presence of sufficient talent. This talent is needed to achieve the intended leap in scale. The results are shown in this factsheet.



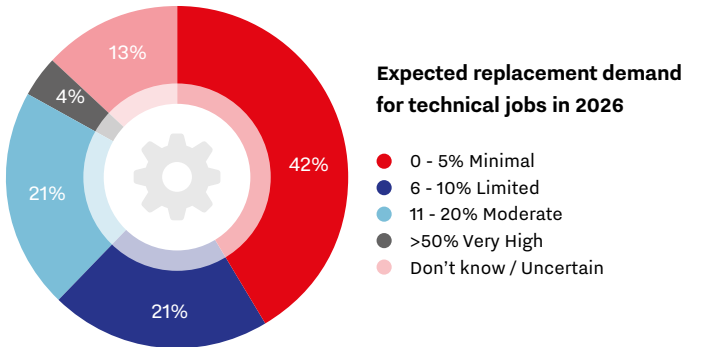
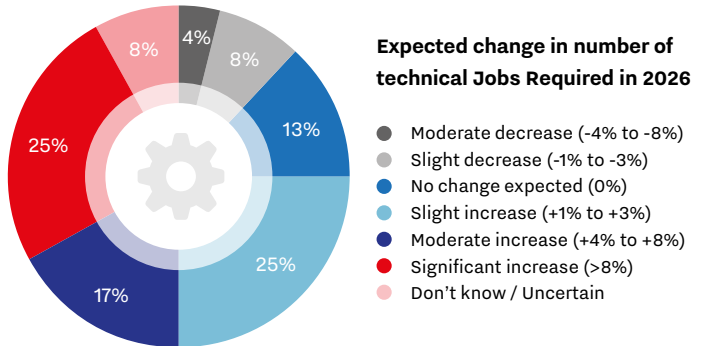
The survey results indicate that most organizations expect an increase in the total **Number of Technical Jobs Required in 2026**, with Significant increase (25%), Slight increase (25%) and Moderate increase (17%) being the most common results. After that, the next most common result is No expected change (13%).

At the same time, the **Expected Replacement Demand for Technical Jobs in 2026** is Minimal (42%) to Limited (21%). However, 21% of the respondents expect the replacement demand to be Moderate, and a very small percentage expect it to be Very high.

Taken together, these results show that most organizations expect an increase in the number of technical jobs in 2026, driven by growth and not replacement. This suggests a need to expand the technical roles within the organizations, in combination with efforts to keep the existing technical workforce.

Roles that are currently hard to fill per educational level

The respondents were asked to specify which technical talents are expected to be needed in 2025-2026 and are difficult to recruit, per education level. The top 5-7 talents expected to have demand are indicated in the tables below.



MBO	HBO	WO
CNC Milling Operator	Manufacturing Engineer	Mechanical Engineer
Field Service Engineer	Mechanical Design Engineer	Program Manager
Mechanical Design Engineer	Project Manager	Project Manager - Systems Analysis & Programming
Metal Machining Specialist	Project Procurement Specialist	Software Engineer
Precision Machining Technician	Systems Engineer / General Engineer	Strategy & Policy Manager
Production Operator		Systems Architect
		Systems Engineer / General Engineer

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Roles that are expected to require new Skills

The respondents were asked which roles they expect to require new skills and competencies in the next 5 years, and to specify what skills they expect to be needed. From the responses, the top 5 roles and their corresponding skills are:

- > **Cleanroom/Machine Operators** which will require digital and automation skills, logistics and planning capabilities, continuous improvement mindset, and knowledge of advanced manufacturing techniques (such as additive manufacturing)
- > **Department/Operations Managers** expected to combine traditional managerial skills with digitalization, automation, logistics and supply-chain collaboration capabilities, and focus on continuous improvement.
- > **Design Engineers** which will need to stay up to date with technological developments in production and assembly processes, including additive manufacturing skills.
- > **Business Intelligence** roles are expected to require data analysis and data science skills, as well as being able to apply AI to their work.
- > **R&D Engineers** as well as **R&D Project Leads/Managers** are expected to develop stronger technological literacy, especially for advanced production techniques, and apply AI in project execution and outcomes.

In addition to functions that are changing, companies also expect to see several new functions appear in their organization over the next 5 years

The survey asked respondents which new technical roles they expect to emerge within their organizations in the next 5 years. Frequently mentioned roles include AI engineers, data analysts, ICT/AI specialists, and software engineers, showing the rising importance of AI.

It is also expected to see new roles in manufacturing, such as manufacturing and process engineers, 3D printing specialists and experts in new manufacturing technologies. Additionally, many existing roles are anticipated to evolve and become more complex, rather than be fully replaced.

Training needs for upskilling technical staff

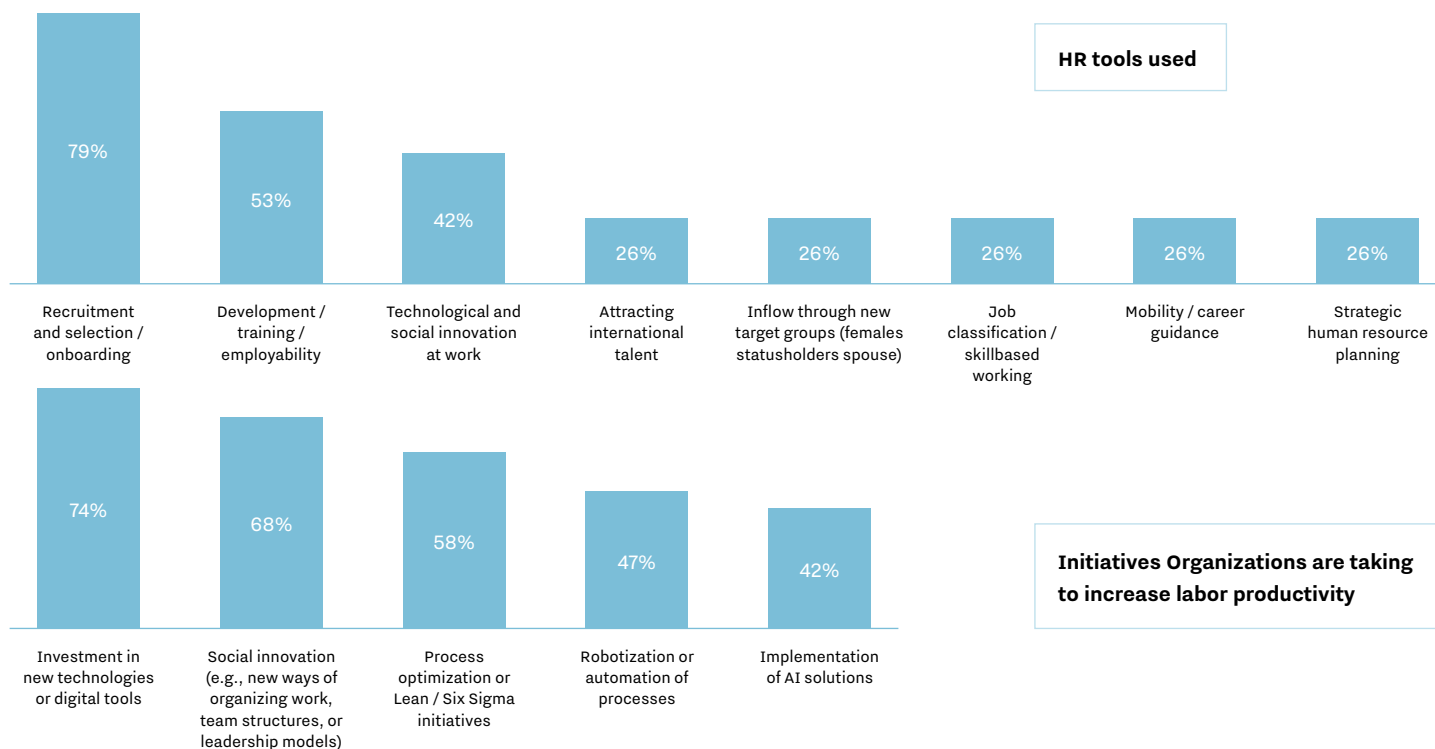
The expected emerging roles mentioned above align with the training needs reported in the results, for upskilling the current technical staff. Respondents indicate a clear need for additional training in AI applications, data science and advanced manufacturing technologies, including practical use of AI in daily operations and process optimization techniques such as EDM. In addition, leadership, innovation-oriented training, and hands-on learning and coaching on the job were frequently mentioned.

Taken together, these results show a strong link between emerging technical roles and current gaps in training. By combining insights on future roles and missing training programs, the survey provides clear direction for educational institutions to better align curricula and lifelong learning offerings with the evolving skill needs of the semiconductor and high-tech industry.

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Labor market tightness calls for action

We therefore asked companies whether they are already investing in HRM and increasing labor productivity, and what exactly they are doing. All respondents indicated they were investing in one or more initiatives. See the figures for an overview of the measures they are already taking.



This survey was a follow-up to the "Samen versnellen in de semicon" event that took place on September 4th. In the survey we asked respondents to indicate their expectations regarding mutual collaboration. Below is the input we gathered from the survey.

They expect the following from educational institutions and Labour market regions:

- Clarity in how we can connect more effectively and quickly.
- A platform/community where we can meet, share best practices and knowledge, and post internships and vacancies.
- Reduced fragmentation of initiatives/ increased cohesion.
- Better alignment between the demand and supply of talent and educational opportunities. For example:
 - Pay more attention to future-proof skills during training and respond more effectively to market innovations, so that recent graduates bring new energy to companies and drive innovation at the start of their careers.
 - There is a need for innovation in education (including flexible education and microcredentials) and more creative solutions.
- A better understanding of the processes and products within the organisations and a matching response to these.

- Offer support for on-the-job coaching and -learning.
- Work together on technology promotion for (re)training or recruitment to increase impact and improve visibility.
- Collaboration and brainstorming on ways to increase flexibility and productivity within companies. This is very important for industry.

Respondents indicate they can contribute to collaboration in the following ways:

- Contributing to recruitment and orientation programs, for example by opening their company for orientation-tours and by giving guest lectures.
- Creating work-study programs and internships.
- Deploying hybrid instructors and business experts. For example, for specific product training or subject-matter modules.
- Sharing know-how, for example, by sharing practical knowledge and incorporating real-life case studies as teaching material.
- Companies indicate they prefer to participate broadly and not just in a single component or theme.