



cecimo
European Association of Manufacturing Technologies



CECIMO Survey on **Skills Trends** for **Advanced Manufacturing**

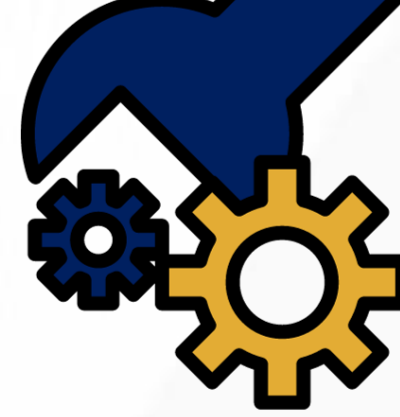
Olha HUNCHAK, Policy and Project Officer, CECIMO

December 2023



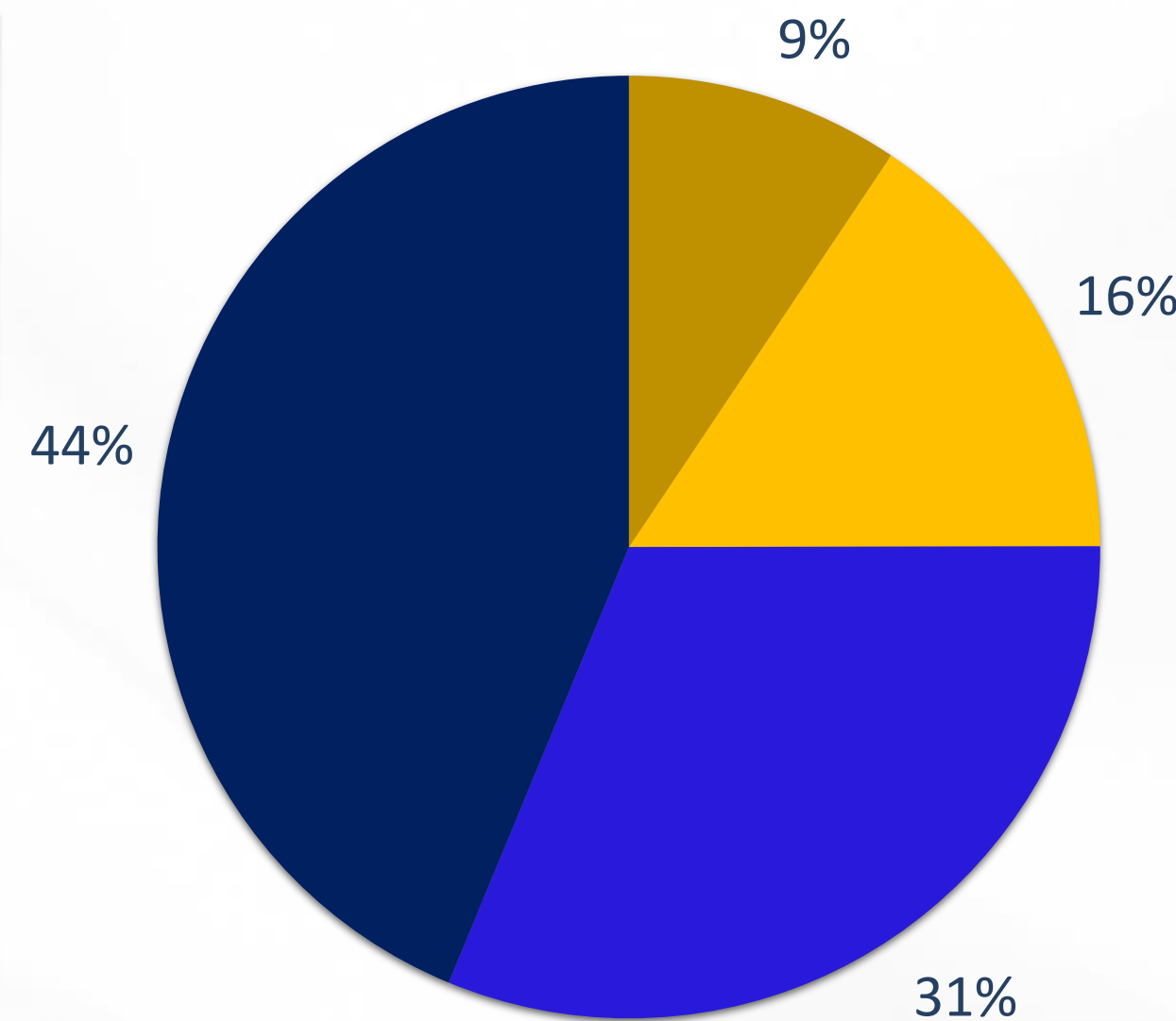


CECIMO SKILLS SURVEY



Objectives

- ❑ Establish an **Up-to-date Skills Database** for industrial stakeholders, education centers and policymakers to track evolving landscape of skills demands and emerging professional profiles. This will help us to:
 - ✓ **Align Educational curricula** with market needs to combat skills mismatches.
 - ✓ Attract a diverse workforce in the manufacturing sector, with a focus on **younger generation** and **women** to alleviate labor shortages.
 - ✓ Coordinate within European institutions for **increased training opportunities.**

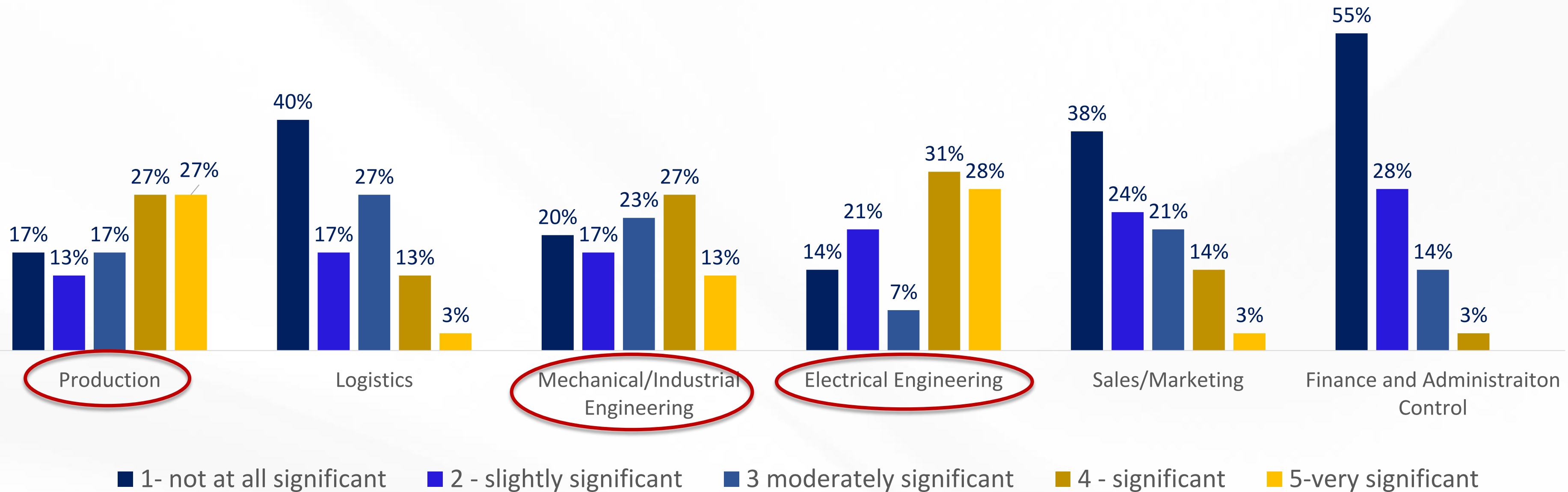


Types of Companies

- Micro <10 employees
- Small <50 employees
- Medium-sized <250 employees
- Large >250 employees



CURRENT SKILLS SHORTAGES



Most Skills Shortages are felt in:

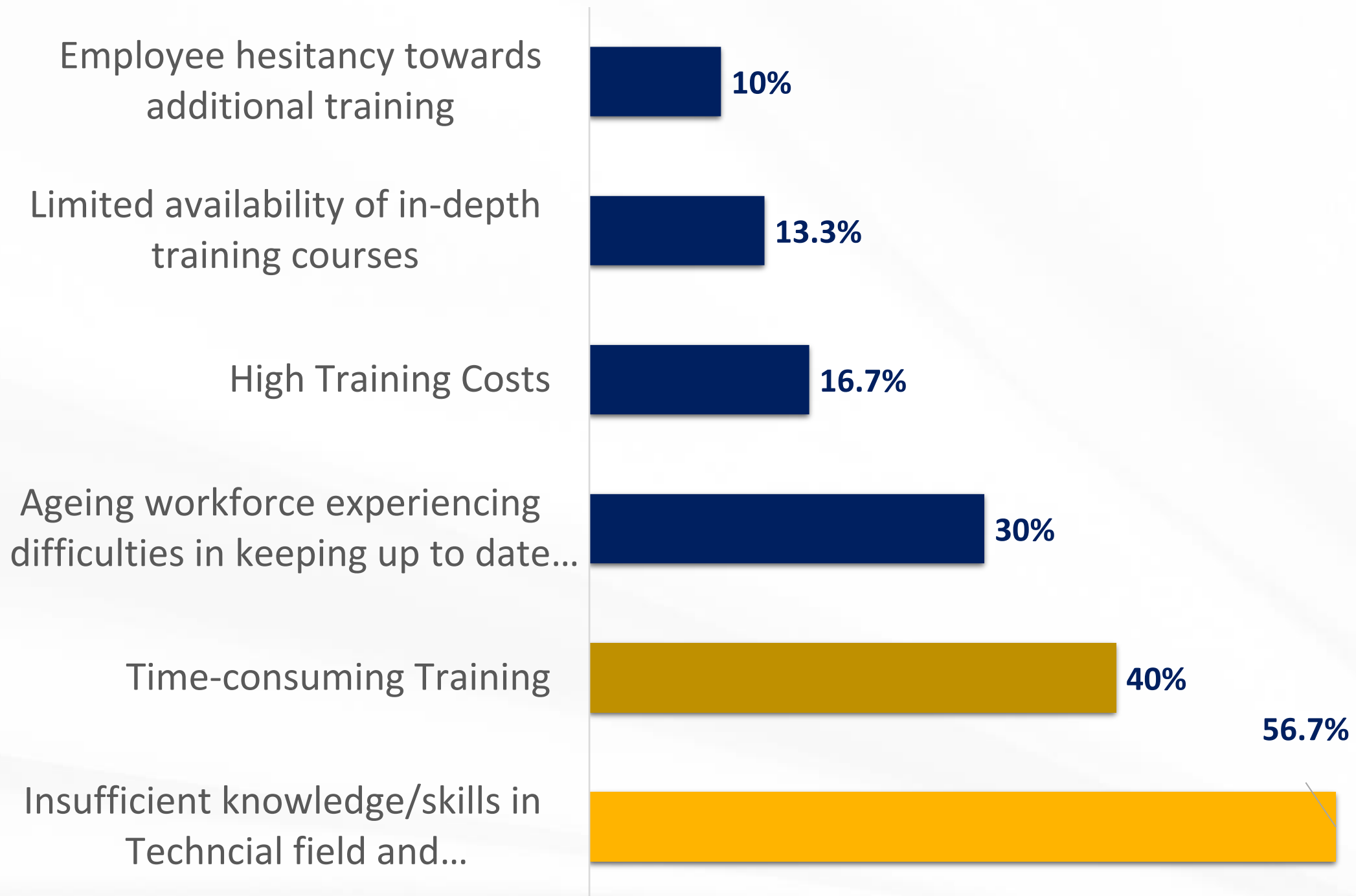
- **Electrical Engineering 59%**
- **Production 54%**, and
- **Mechanical/Industrial Engineering 40%**

Skills Shortages with moderate significance in:

- **Logistics**
- **Sales/Marketing**, and
- **Finance & Administration Control**



WHY THE SKILLS GAP PERSIST?

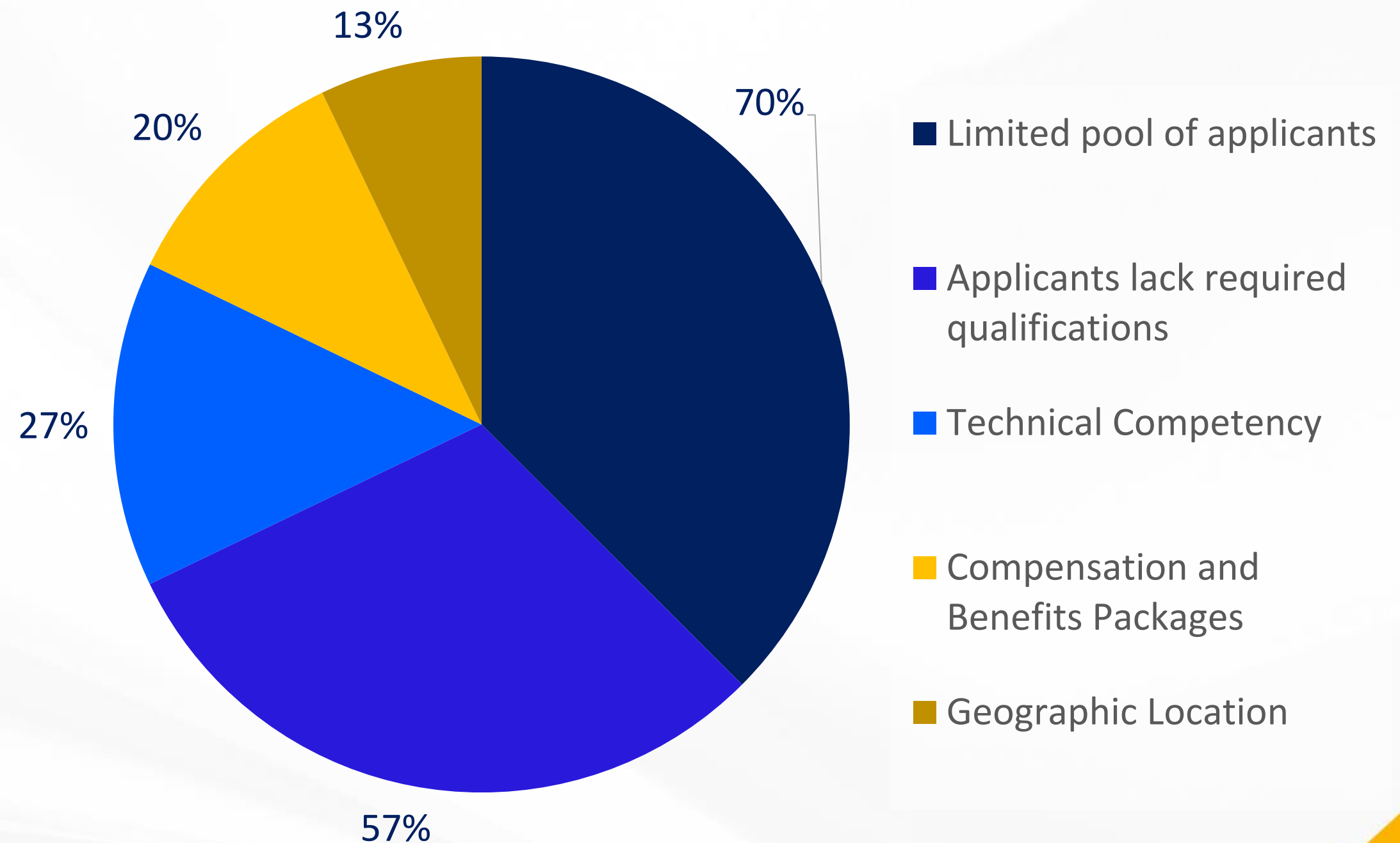


- Around **57%** of companies consider **lack of knowledge/skills** in Technical field and Automated/Digital technologies.
- **40%** perceive **training as time-consuming**.
- **30%** consider the **ageing workforce** and its struggle to keep pace with new technological advances.
- Nearly **17%** express concerns about **high training costs**.
- Other Factors:
 - Difficulty in replacing Experienced Staff
 - Protracted Time for attaining required experience
 - Heavy workload impact on teams



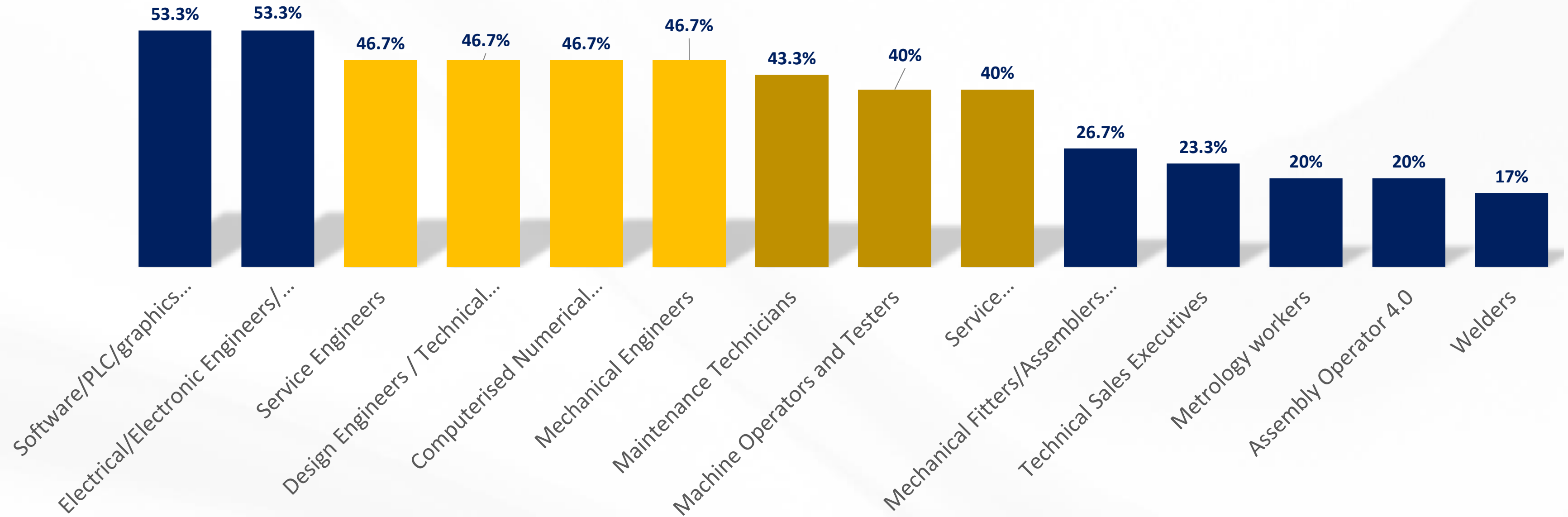
WHICH ARE THE RECRUITMENT CHALLENGES ?

- **70%** of companies experience **labour shortages** due to a **limited number of applicants**. This is mainly attributed to the fact that advanced manufacturing is seen as “**outdated**” and **less “prestigious/attractive”** among youngsters.
- Roughly **60%** of industries face the **qualification gap** due to a **lack of required skills** in finding candidates.
- Around **30%** of companies identify a lack of **technical competencies** and **20%** low **compensation/benefits packages**.
- Other: **extensive travel requirements** (e.g. *machine maintenance*) has also been flagged.





PROFESSIONAL PROFILES



53% of companies face difficulties in hiring:

- **Software/PLC/Graphics Developer**
- **Electrical Engineers/ Electrotechnicians**

Nearly **50%** of industries face difficulties in hiring:

- **Service Engineers**
- **Design Engineers / Technical Draftsman**
- **CNC Operators/Machinists**
- **Mechanical Engineers**

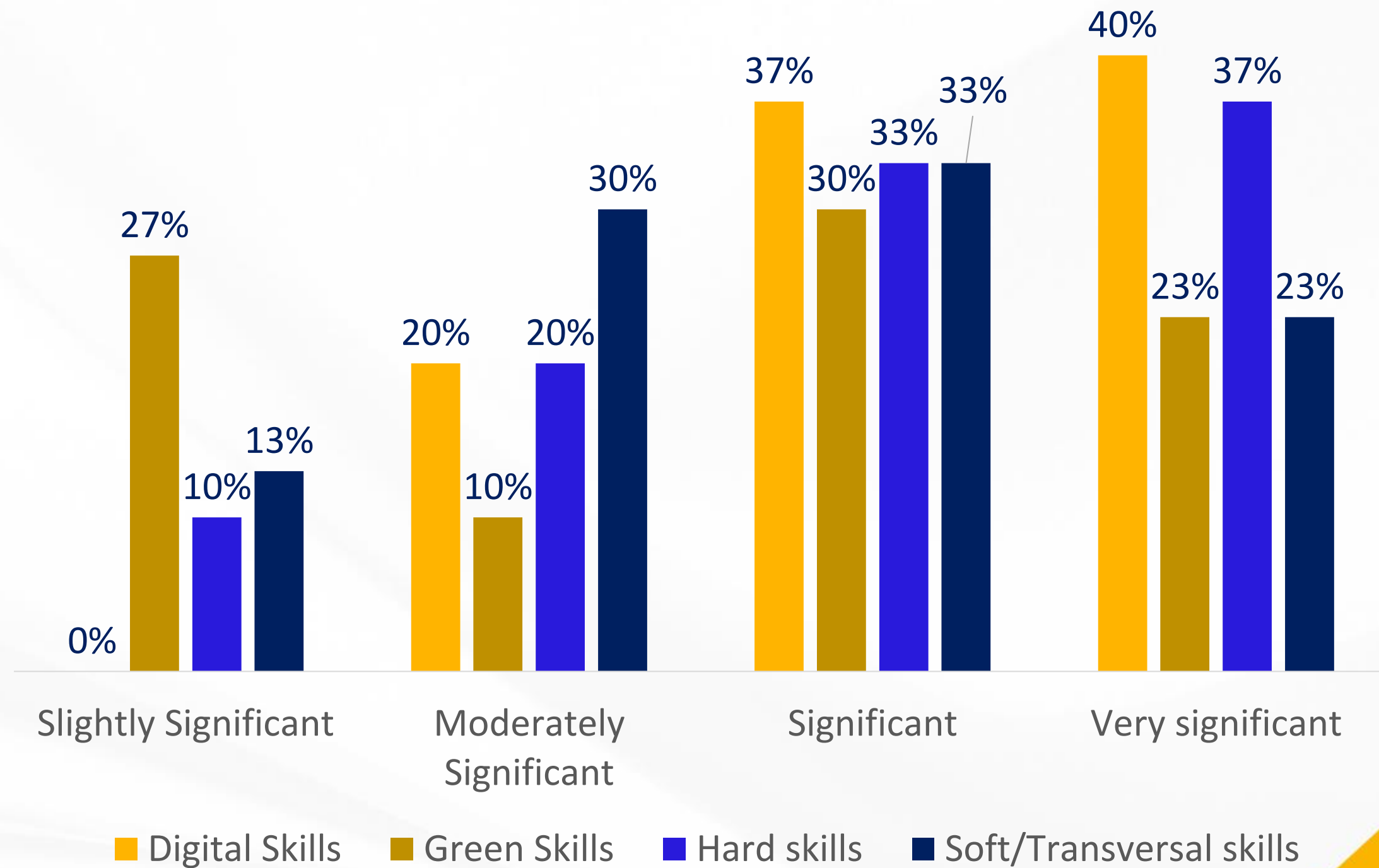
Around **40%** experience difficulties in hiring:

- **Maintenance Technicians**
- **Machine Operators and Testers**
- **Service Technicians/Relocators/Installers**



FUTURE SKILLS IMPORTANCE

- Significant/Very Significant future Skills:
 - Digital skills with 77%
 - Hard skills with 70%
 - Soft/Transversal skills with 56%
 - Green skills with around 53%





IMPACT OF DIGITISATION AND GREENIFICATION OF MANUFACTURING ON SKILLS LANDSCAPE

Existing roles will undergo significant changes, potentially impacting my company positively.

54.8%

New roles will immerge, either replacing or complementing traditional roles, resulting in a positive impact on my company.

38.7%

Skills requirements for existing roles will evolve without major role changes and my company may not be significantly impacted.

19.4%

□ Approximately **80%** of companies assert that **skill shortages** do not **impede** their **implementation of green initiatives** in business activities

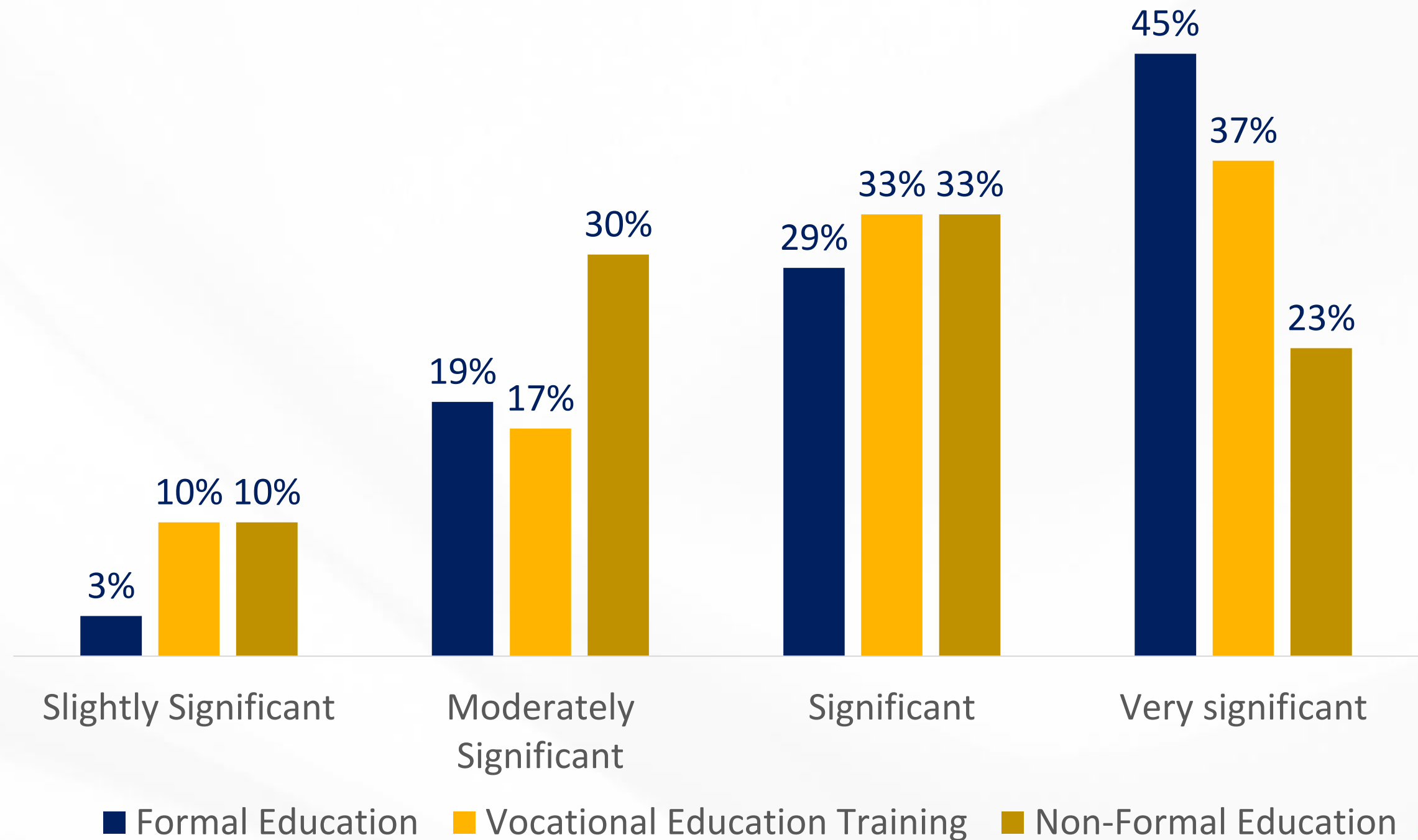
□ In contrast, **65%** of industries cite **skills shortages** as an **obstacle** to **digital technology adoption**, while only **32%** do not view it as a barrier



IMPORTANCE OF EDUCATION

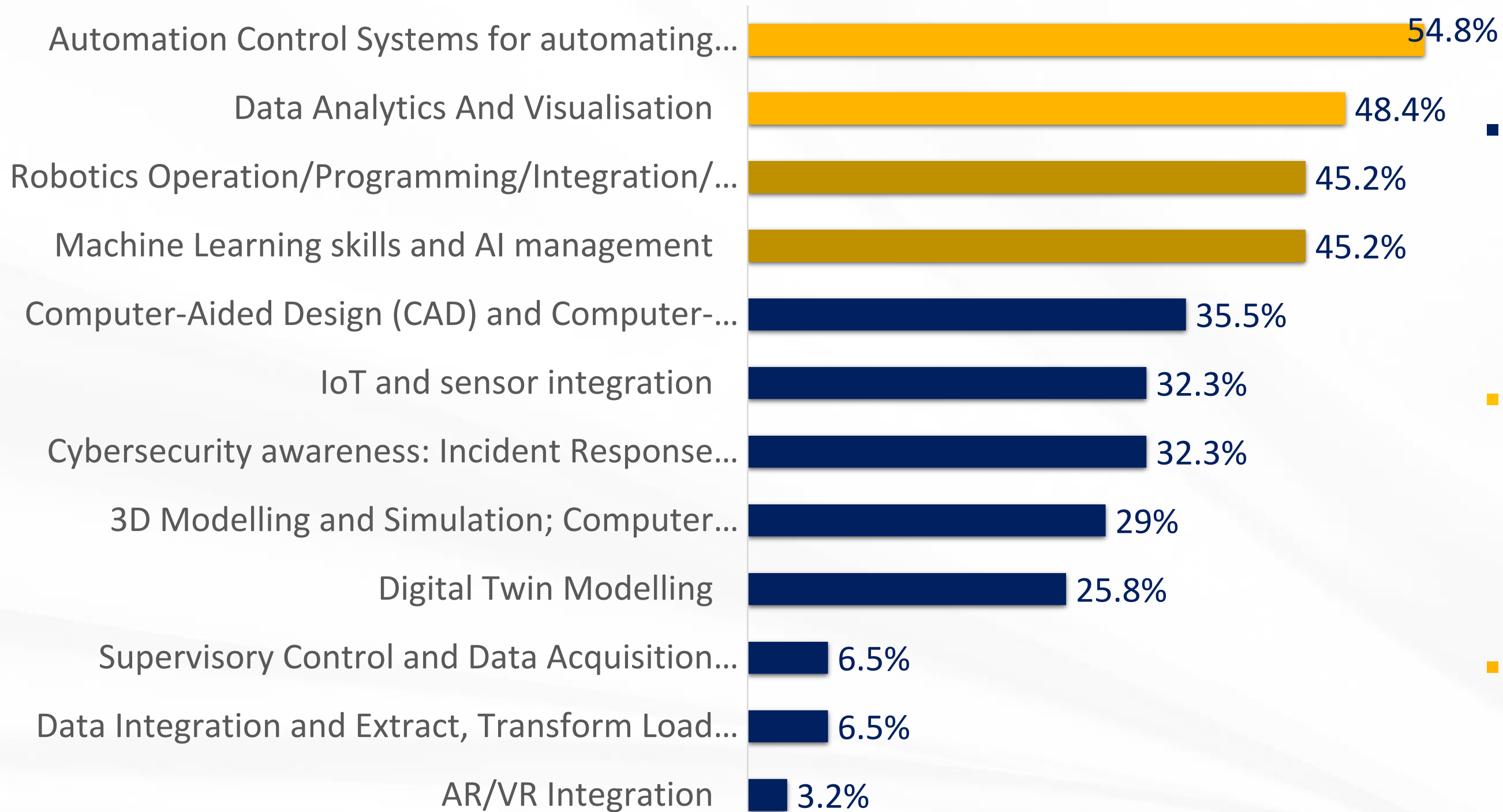


- 74% and 70% of companies acknowledge the significance of both **Formal Education and Vocational Education and Training (VET)** essential skills development, and 56% consider Non-formal Education important.
- In terms of moderate significance, 30% of industries consider Non-formal Education as slightly important, while roughly 20% attribute similar importance to Formal Education and VET.
- Understanding the varying degrees of importance assigned to different education approaches is pivotal for shaping effective and **tailored educational/training programmes.**





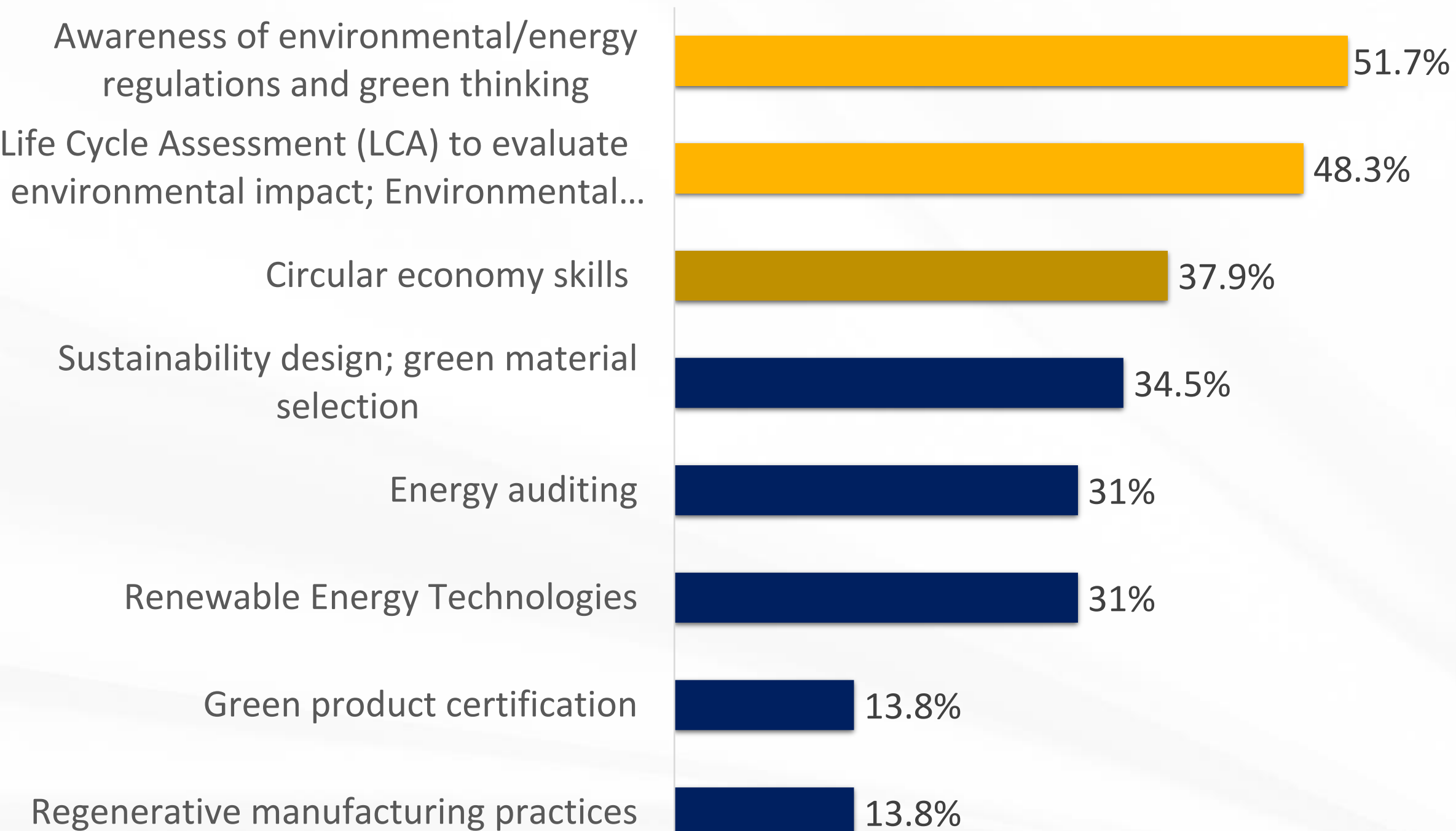
DIGITAL SKILLS - NECESSARY IN INDUSTRY'S PRODUCTION PROCESSES



- Almost **55%** of companies acknowledge the significance of **Manufacturing Automation Control Systems**. Whilst around **50%** of companies affirm the importance of **Data Analytics and Visualisation** skills.
- **45%** companies recognise the necessity of proficiency in **Robotics Operations** and **Maintenance**, including Cobots skills as well as in **Machine Learning skills** and **AI management**
- **35.5%** of companies consider important skills in **Computer-Aided Design (CAD)** and **Computer-Aided Manufacturing (CAM) Software**.



GREEN SKILLS - NECESSARY IN INDUSTRY'S PRODUCTION PROCESSES



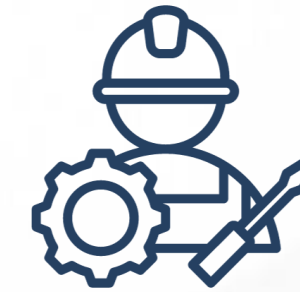
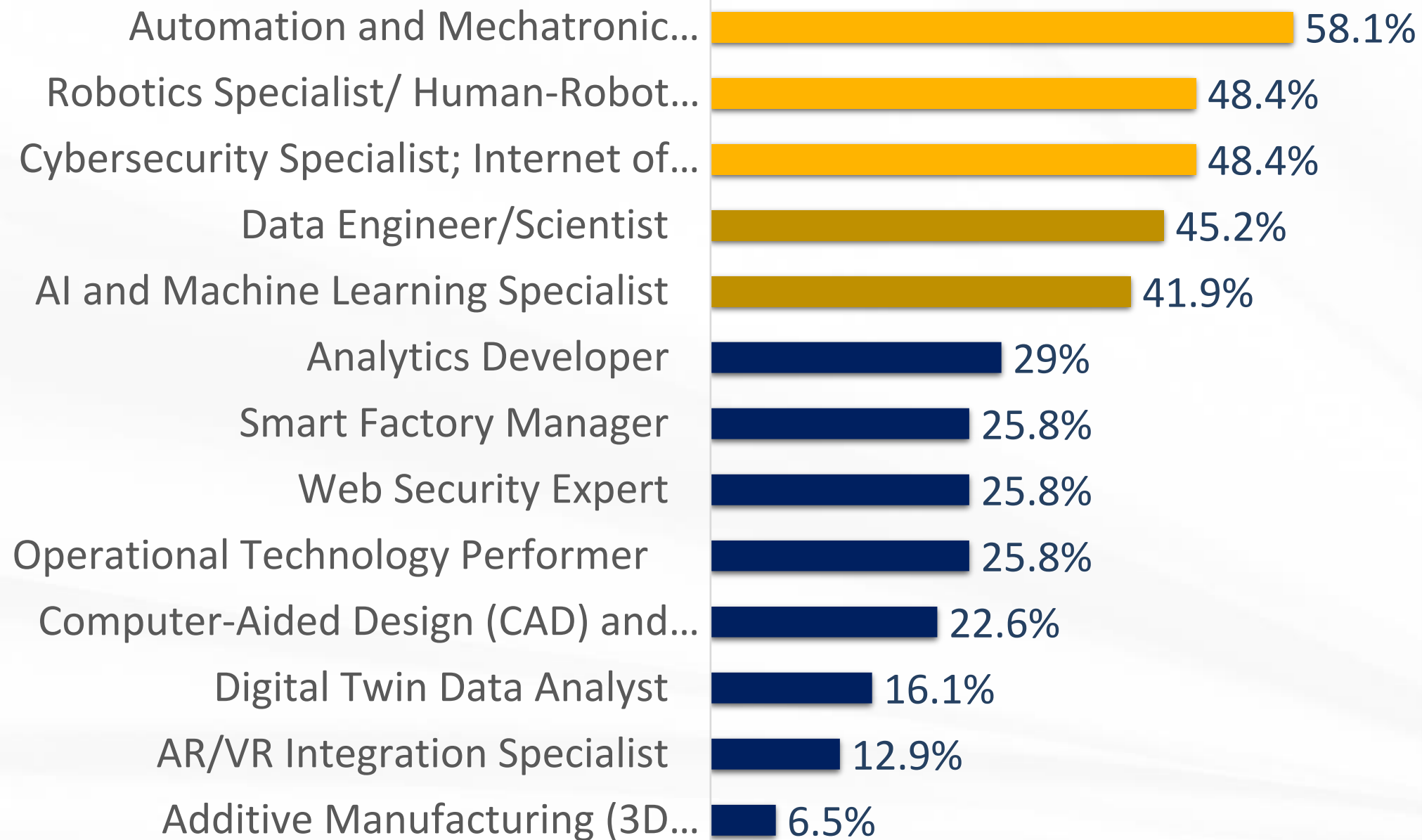
- Nearly **52%** of companies acknowledge the importance of **Environmental and Energy Regulation Awareness** in their operations.
- **48%** of companies recognize the importance of **Life Cycle Assessment (LCA)** for thorough Environmental Impact Analysis
- Almost **38%** companies affirm the importance of **Circular Economy** skills
- Approximately **35%** of companies endorse the incorporation of **Sustainable Design and Green Material Selection** within their business activities.



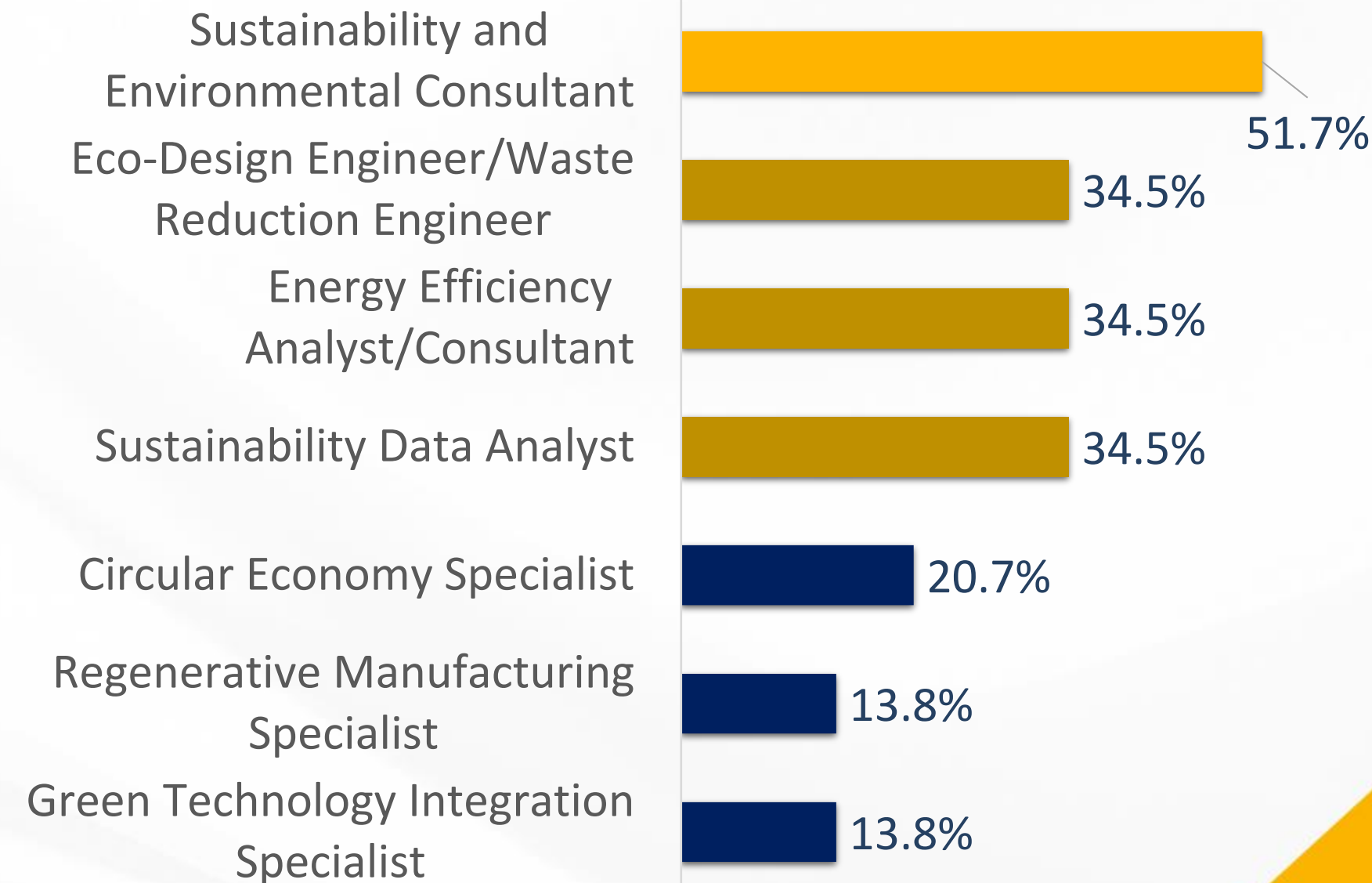
DIGITAL – GREEN PROFESSIONAL PROFILES



DIGITAL



GREEN





KEY TAKEAWAYS



1. Key skills shortages identified in:

- Electrical Engineering,
- Production and
- Mechanical Industrial Engineering across diverse companies.

2. A Dual Shortage is prevalent:

- labour shortages (70%)** due to a **limited pool of qualified applicants** (manufacturing sector is perceived as less attractive and “prestigious” and seen as outdated).
- skills shortages (60%)** due to **mismatches** between market demand and available skill sets.

3. Digital and Hard skills take precedence, while **Soft/Transversal skills** are gaining prominence.

4. The Digitized and Green era has the potential to **reshape existing roles**, positively impacting companies and giving rise to **new complementary roles**.

❖ **The Full Report will be shared with you in January 2024.**

THANK YOU !



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📍 Boulevard Brand Whitlock 165, 1200 Brussels

☎ +32-2-502.70.90

✉ information@cecimo.eu

🌐 www.cecimo.eu

