

ai@work

How artificial intelligence contributes to competitiveness and workforce planning

AI & Workforce planning

Part 1 of 2 (AI@Work survey results)

Fact sheet #17

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Introduction - AI & Workforce planning

Artificial Intelligence (AI) can reshape the way companies manage their workforces. The AI@Work business case series from the AI@Work project illustrates that **AI is gaining in importance as a tool to facilitate workforce management** through better workforce allocation and decision making, relief of administrative burdens and move to higher-value activities, as well as using AI for upskilling and reskilling initiatives (also see here). The AI@Work Survey aims to complement these findings using a quantitative online survey.

Please note that, while the survey data has been weighted to accurately represent companies across the EU-27 based on company size and economic sectors on an aggregate level, all reported results are estimates and may vary considerably, especially between subsectors within each EU Member State.

Objectives

Artificial intelligence (AI) is of a high priority on the European level and worldwide. For European and national social partners in general and their potential future exchanges within their different European sectoral social dialogue committees, it is of the utmost importance to **know more about the challenges, opportunities and needs of companies regarding Artificial Intelligence at work**. Therefore, the AI@Work project aims to gain knowledge and information on the effects of AI on the workplace, its potential to change and improve workforce planning, and to reduce the shortage of skilled labour, as well as its effects on the employees. The project will support European (and national) sectoral employers' representatives to obtain a better understanding of the impact of AI on people and business management.

Scope

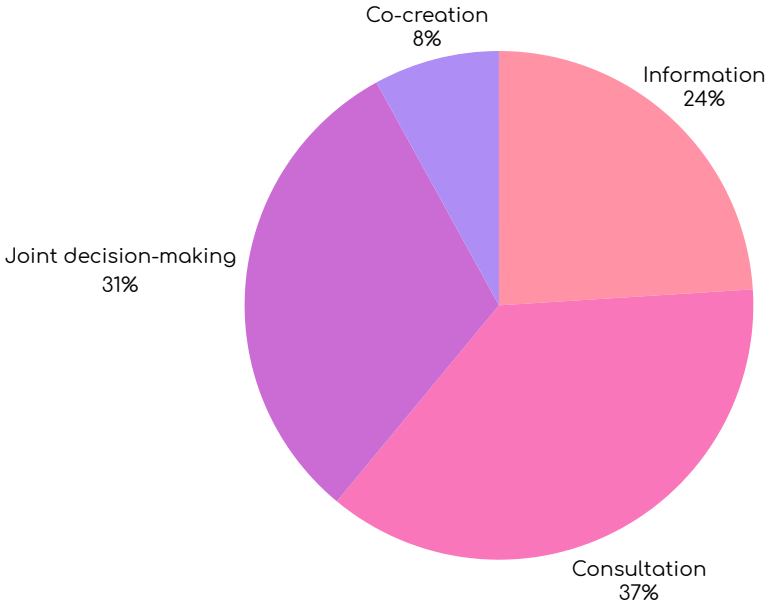
For AI applications to generate tangible benefits in terms of productivity and workforce planning, it is essential that employees are involved in the deployment process. Moreover, while AI can improve working conditions by automating repetitive tasks, it holds the challenge that the workforce needs to build adequate skills to use the technology. Based on data from the AI@Work survey, a key question addressed in the present fact sheet, therefore, is whether companies in the EU involve employees in the AI adoption process and to what extent, and whether they provide organised training to employees.

Beyond the facilitation of workforce planning, AI is also being considered by companies as an alternative to address the lasting shortage of skilled labour. The present fact sheet examines, whether companies introduced AI with the specific goal of addressing the shortage of skilled labour and whether AI has had a measurable impact on the number of jobs at company level.

Finally, to implement AI effectively, companies may turn to external expertise. In the AI@Work survey, companies were asked whether they recruited new staff to deal with the introduction of AI including difficulty in finding suitable professionals, time to hire, and the specific skills that companies (and different sectors) are looking for. Where appropriate, statistical tests of significance (pairwise pooled z-tests) are reported for comparisons between (unweighted) comlumn proportions with Bonferroni adjusted p-values.

Employee voice in AI implementation decisions

How employees are involved in the AI adoption process can be a decisive factor for success. In the AI@Work survey, a quarter of companies reported relying on **informing employees** about new AI initiatives (**Figure 1**). Most commonly, however, employees are **consulted** during the implementation process or involved in **joint decision-making**, whereas some companies pursue a **co-creation** process instead.



Please note: This chart reflects respondents' perceptions, and their answers are not based on European legal concepts or national legal systems related to information, consultation or co-determination with employees' representatives. The information and consultation obligations followed by respondents may vary, at least in part, depending on the national legislation of the Member States and the size of the company. However, joint decision-making and co-creation, in practice, also typically include consulting employees due to their nature.

Figure 1. How would you describe employee involvement in AI adoption? *Proportions represent weighted percentages (N = 2,632)

Among survey respondents who selected "Consultation" as their company's primary form of engaging employees in AI adoption (**Figure 2**), the majority indicated that employees are consulted **either before or during** adoption, with at least one in five companies doing both. Smaller companies (i.e, < 50 employees), which represent 99% EU-wide, are significantly more likely to consult employees before adoption compared to large companies ($z = 3.17$, $p < .01$), whereas the latter are significantly more likely to consult employees during adoption compared to small and medium size companies ($z = -2.38/-2.46$, $p = 0.05/0.04$).

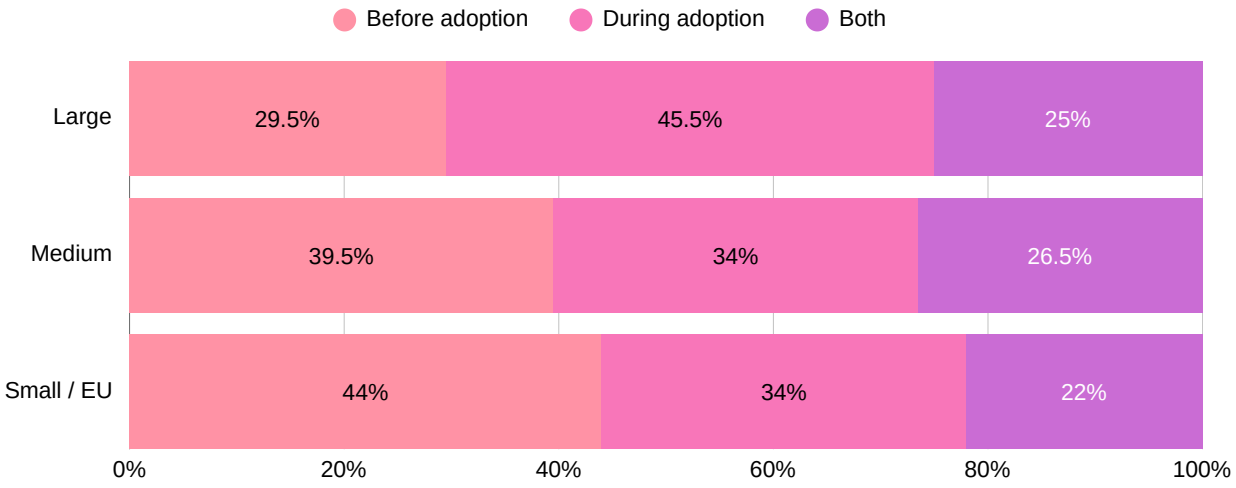


Figure 2. Do you consult your employees before and/or during the adoption process of AI applications? *Proportions represent weighted percentages (unweighted N = 1,019, i.e., only respondents who indicated their company primarily relies on "Consultation" for AI adoption)

Organised training

Nearly half of companies in the EU already provide AI related training opportunities to their employees, while another two in five companies are either planning or preparing relevant training (**Figure 3**). Yet, there are substantial differences based on company size: medium and large comapnies are significantly more likely to provide training compared to small companies ($z = -11.44/-6.11$, $p < .001$), while large companies are also significantly more likely to provide training than medium size companies ($z = -4.88$, $p < .001$).

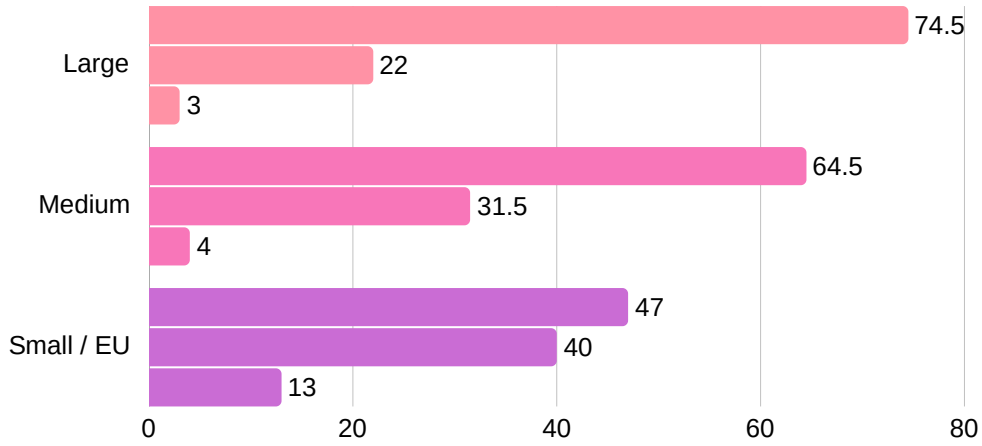


Figure 3. Has your company organised training to deal with the introduction of AI? (from top to bottom: Yes; No, but planned/in preparation; No, and not planned) *Proportions represent weighted percentages (N = 2,632). Please note: This figure reflects respondents' actions solely towards training and not to other supportive measures that companies may offer to their employees.

AI effect on number of jobs

A central question posed to respondents was how AI has affected the number of jobs in their company (**Figure 4**). Here, the majority of respondents indicated that the number of jobs has not changed due to AI adoption. However, medium and large companies reported greater variation compared to small companies.

In particular, medium to large companies were significantly less likely than small companies to indicate no effect of AI on jobs (i.e. "Stayed the same"; $z = 5.38/4.82$, $p < .001$) and, in turn, reported both greater job increases, as well as greater job decreases.

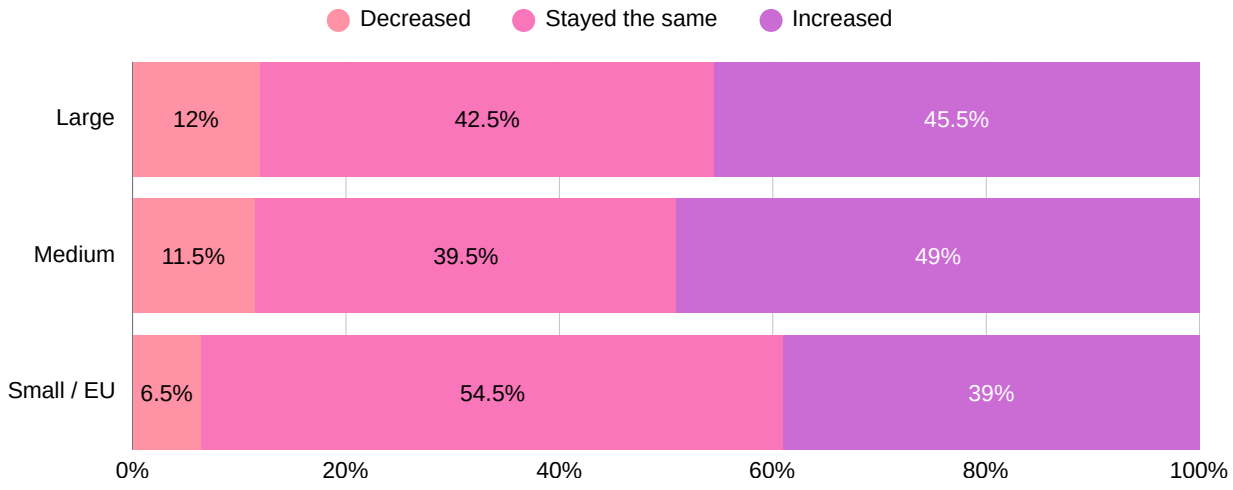


Figure 4. How has AI affected the number of jobs in your company?
*Proportions represent weighted percentages (N = 2,632)

Addressing the shortage of skilled labour

AI offers companies the opportunity to address the shortage of skilled labour, for instance, by increasing productivty, securing knowledge or automating certain tasks. In the AI@Work Survey, at least every third company indicated that they had introduced AI with the specific goal of addressing the shortage of skilled labour (**Figure 5**). This share rose to 46-48% for medium to large companies, representing statistically significant differences compared to small companies (z = -4.26/-5-59, ρ < .001).

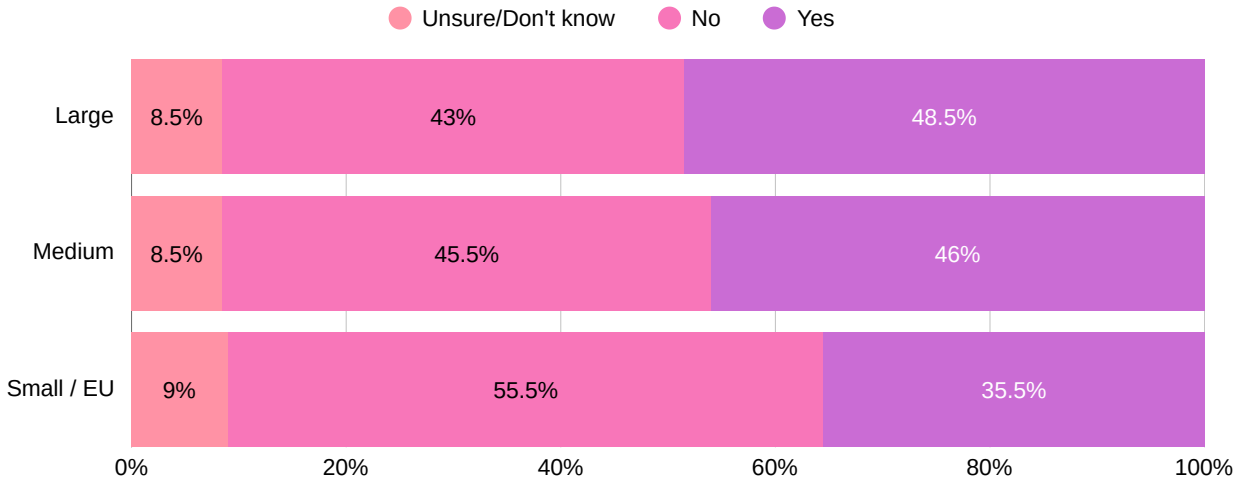


Figure 5. Has your company implemented AI with the specific goal of reducing the shortage of skilled labour? *Proportions represent weighted percentages (N = 2,632)

Recruitment of new staff for AI introduction

Nearly every third company reported having recruited new staff to deal with the introduction of AI (**Figure 6**). Respondents of medium-size (i.e., 50-249 employees) and large companies were significantly more likely to indicate that their company had recruited new staff for AI compared to small companies (z = 6.35/10.19, ρ < .001), whereas the difference between medium and large companies was also statistically significant (z = -3.42, ρ < .01).

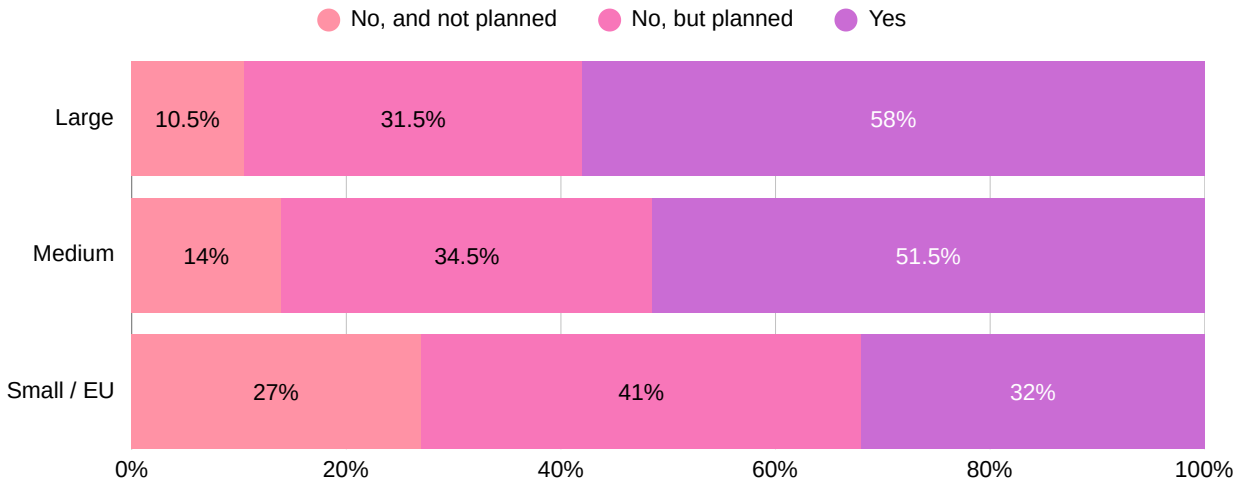


Figure 6. Has your company recruited new staff to deal with the introduction of AI? *Proportions represent weighted percentages (N = 2,632)

Difficulty hiring new staff and time to hire

Among the companies which hired new staff for the introduction of AI, the majority of companies found it slightly difficult to find suitable candidates - approximately one in ten companies even very difficult (**Figure 7**). Only a quarter of companies reported no difficulty in recruiting new staff for AI implementation. There were no significant differences in the difficulty of recruiting AI professionals between small, medium, and large companies.

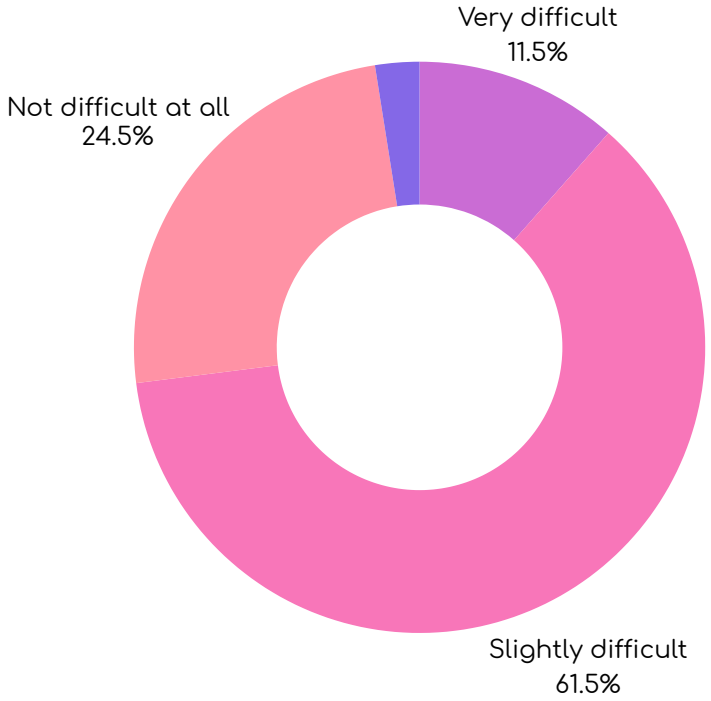


Figure 7. Over the past 24 months, how difficult was it for your company to find and hire staff with AI skills?

*Proportions represent weighted percentages (valid N = 1,317, i.e., only respondents who indicated their company hired new staff for AI)

In terms of time to hire, the majority of companies in the EU manage to hire new staff for AI within five months (**Figure 8**). One in five companies take 6-12 months, whereas less than 5% of companies take more than a year to find suitable candidates for AI implementation.

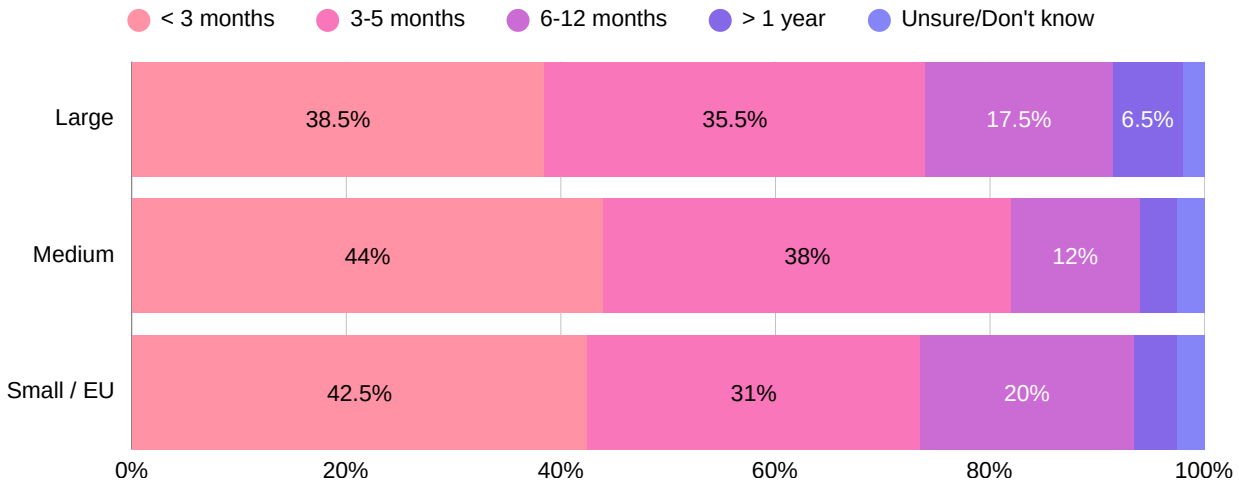


Figure 8. How long - on average - does it take for your company to hire someone with AI skills from the date the vacancy has been publicised? *Proportions represent weighted percentages (valid N = 1,317, i.e., only respondents who indicated their company hired new staff for AI)

Most sought-after AI skills by companies

Core AI and data technical skills are the most sought-after AI skills by companies of all sizes (**Figure 9**). Compared to small and medium companies, large companies place a greater emphasis on **Engineering and infrastructure** ($z = -4.50/-2.62$, $p < .001/.03$) as well as **Problem-solving and analytical thinking** skills ($z = -4.69/-2.49$, $p < .001/.04$). Responsible AI, ethics, privacy, and governance skills are generally less sought after with 38% of small and medium companies looking for such skills compared to almost half of large companies (48%), representing statistcally signifcant differences ($z = -3.02/-3.00$, $p < .01$).

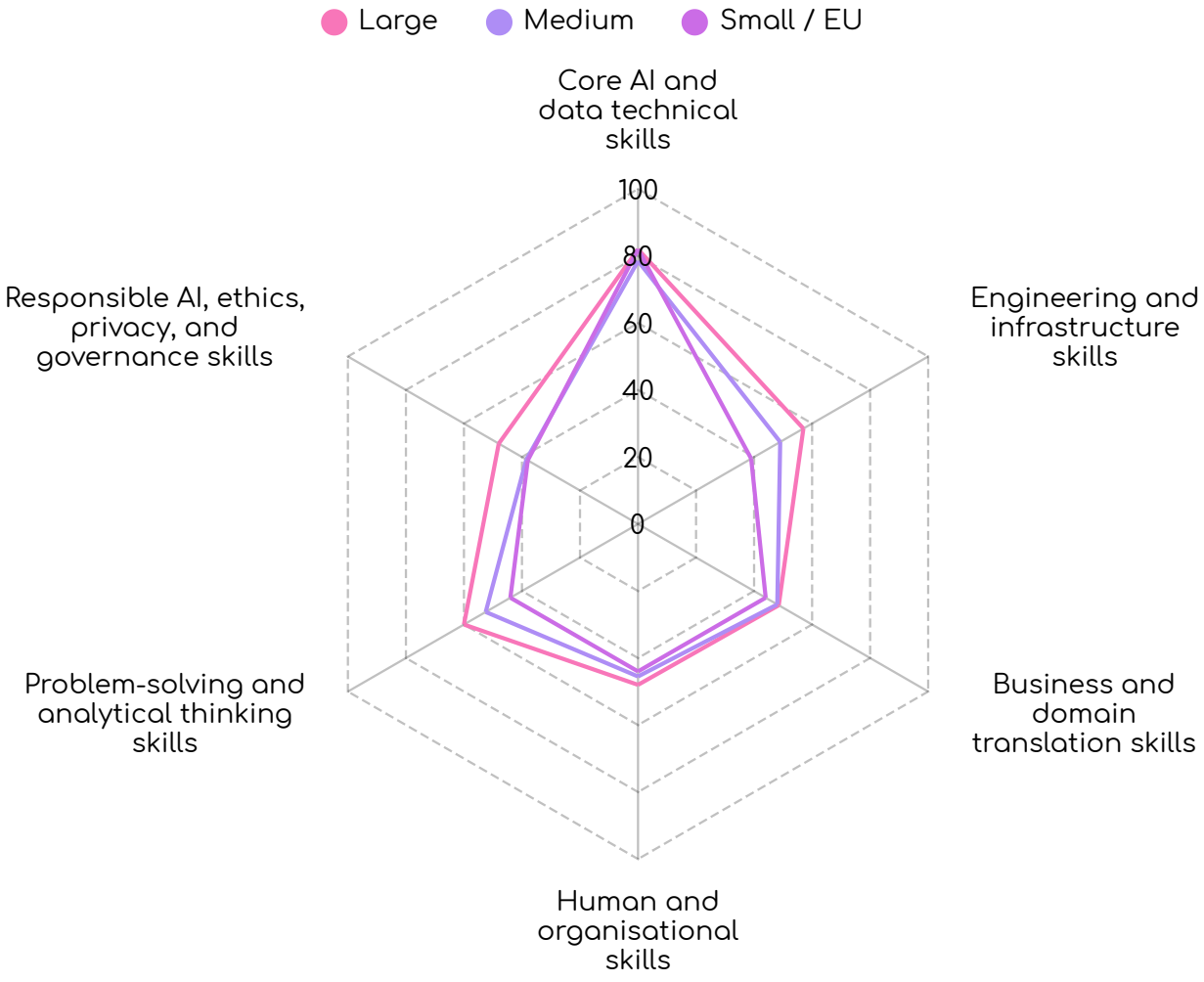


Figure 9. What skills do you look for when recruiting for AI positions? (by company size)
*Note: This item is a multiple-response question and percentages do not sum to 100%. Proportions represent weighted percentages (valid N = 1,317, i.e., only respondents who indicated their company hired new staff for AI)

Most sought-after AI skills by sector

In terms of economic sectors, several differences can be observed (**Figure 10**). Overall, core AI and data technical skills still dominate the most sought-after skills across sectors, while there is some variation among other skills:

- **Industry**: In this sector, companies are especially looking for business and domain translation skills (54%).
- **Construction**: In the construction sector, problem-solving and analytical thinking skills are the second most sought after skills (51.5%).
- **Trade**: For companies in the Trade sector, human and organisational skills are more important compared to other sectors, whereas engineering and infrastructure skills are least important.
- **Services**: The Services sector largely overlaps with the Industry and Construction sector in terms of the relative importance of the various AI related skills. Notably, responsible AI, ethics, privacy, and governance skills were most sought after by Services companies.

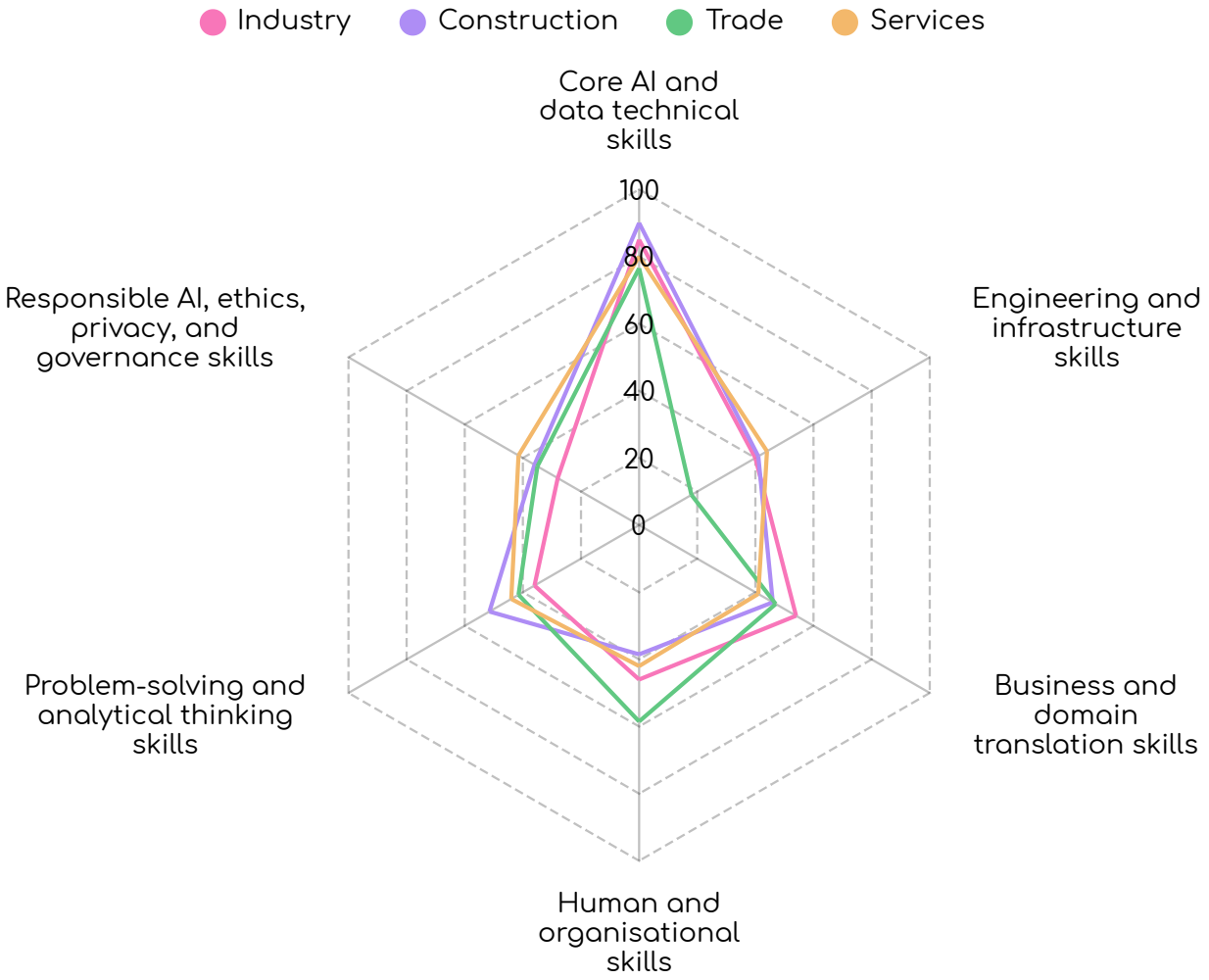
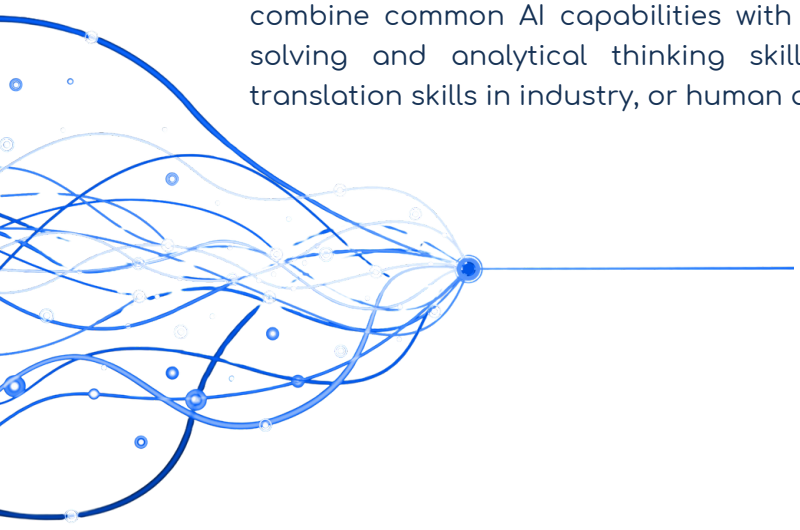


Figure 10. What skills do you look for when recruiting for AI positions? (by sector)
*Note: This item is a multiple-response question and percentages do not sum to 100%. Proportions represent weighted percentages (valid N = 1,317, i.e., only respondents who indicated their company hired new staff for AI)

Conclusion

Based on the above findings, several key conclusions emerge:

1. **Consultation and joint decision-making lead employee voice in AI adoption**
   - The most frequently cited ways of engaging employees in the AI adoption process by respondents, in ascending order, are co-creation, information, joint decision-making, and consultation. Overall, these findings suggest that a clear majority of companies prefers consulting employees over providing information only.
2. **Organisational maturity influences AI adoption practices**
   - Larger companies are more likely to provide AI training, recruit AI-related talent, and prioritise governance skills. This indicates that larger companies generally have more structured AI adoption processes and greater human and financial resources to manage workforce transformations brought about by AI.
3. **AI is complementing rather than replacing jobs**
   - Overall employment levels remain relatively stable despite AI adoption. At the same time, medium and large companies report both job creation and job reductions, suggesting that AI is reshaping job profiles and skill requirements rather than causing widespread workforce reductions.
4. **Skills development is becoming a strategic necessity**
   - The strong demand for AI and data skills across all sectors highlights a growing need for workforce upskilling and continuous learning. The increasing provision of AI training shows that companies are beginning to invest in internal capability building rather than relying solely on external recruitment.
5. **AI is increasingly used to address workforce shortages**
   - Around one-third of companies adopted AI partly to mitigate labour shortages. This suggests that AI is often perceived as a response to demographic and recruitment challenges rather than only a productivity-enhancing technology.
6. **AI talent is difficult but not impossible to recruit**
   - Most firms are able to fill AI-related positions within five months, indicating a constrained but functioning labour market. The challenge is therefore less a complete lack of talent and more competition for qualified professionals.
7. **Sector-specific skill needs require tailored approaches**
   - While AI and data skills form the foundation everywhere, sectors require different complementary competencies. Successful AI workforce strategies should therefore combine common AI capabilities with sector-specific expertise, such as problem-solving and analytical thinking skills in construction, business and domain translation skills in industry, or human and organisational skills in trade.



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