

# Use of AI Tools and Its Impact on the Future of Work

**Authors**

Arash Hajikhani<sup>1</sup> , Carolyn Cole<sup>1</sup>

**Affiliations**

1. Quantitative Science and Technology Studies, VTT Technical Research Centre of Finland, Tekniikantie 21, 02044 Espoo, Finland.

## Table of Contents

<i>Introduction.....</i>	<i>3</i>
<i>Navigating the AI Impact: A Consolidated View from Global Surveys and Studies .....</i>	<i>4</i>
<i>Our Survey Design: Investigating the Application and Perception of Artificial Intelligence in the Workforce.....</i>	<i>5</i>
<i>Examination of hypotheses through survey analysis.....</i>	<i>6</i>
<i>Evolution of AI integration: trends and insights from a comparative study in time.....</i>	<i>6</i>
<i>What is the relationship between engagement in learning on generative AI and perceived productivity enhancement? .....</i>	<i>8</i>
<i>What is the relationship between an individual’s position and perceived need for skill enhancement in the face of increasing AI use?.....</i>	<i>9</i>
<i>Is there variation in the types of tasks that individuals in different job roles are utilising generative AI for?.....</i>	<i>10</i>
<i>Do individuals that believe AI will replace a significant portion of their tasks in coming years feel the need for skill enhancement? .....</i>	<i>11</i>
<i>What is the relationship between the visibility of AI adoption in the workplace and the perceived need for skill enhancement? .....</i>	<i>12</i>
<i>Do companies’ that formally encourage the use of AI tools also provide more training and guidance on its use?.....</i>	<i>13</i>
<i>Do companies’ that have a clear policy formally encourage the use of AI tools? .....</i>	<i>14</i>
<i>What is the relationship between engagement in learning on generative AI and confidence in job security? .....</i>	<i>15</i>
<i>What is the relationship between companies’ integration of AI solutions and employee’s confidence in job security? .....</i>	<i>16</i>
<i>Report on survey open question: reasons for not using AI tools .....</i>	<i>17</i>
<i>Report on survey open question: AI concerns.....</i>	<i>18</i>
<i>Reflective analysis of the findings from the 1st and 2nd survey on AI integration in the workplace</i>	<i>18</i>
<i>References.....</i>	<i>20</i>
<i>Annex 1.....</i>	<i>22</i>
<i>Annex 2.....</i>	<i>28</i>
<i>First survey descriptive statistics.....</i>	<i>28</i>
<i>Second survey descriptive statistics .....</i>	<i>29</i>

## Introduction

The rapid advancement of artificial intelligence (AI) capabilities in recent years has sparked considerable interest in how these technologies may transform work and organisations. While AI has been an area of research since the 1950s (McCarthy et al., 2006), major breakthroughs in machine learning and neural networks over the past decade have led to AI systems that can perform a wide range of tasks, from image and speech recognition to language translation and strategic gameplay (Brynjolfsson & McAfee, 2017). The release of large language models like GPT-3 in 2020 represented a qualitative leap in AI's ability to generate human-like text (Bommasani et al., 2021). Most recently, the launch of ChatGPT in late 2022 provided a publicly accessible demonstration of advanced natural language capabilities, fuelling intense speculation about AI's potential impacts on labour markets and professions.

These developments have raised longstanding questions about the relationship between automation and human work. While some argue that AI will lead to widespread technological unemployment (Frey & Osborne, 2017), others suggest it will primarily change the nature of work by automating routine tasks and augmenting human capabilities (Autor, 2015). Acemoglu and Restrepo (2018) propose a nuanced perspective where automation displaces workers performing automatable tasks but also creates demand for new human jobs involving less automatable work. Empirical research documents how earlier waves of IT automation drove labour market polarisation by displacing routine middle-skill jobs (Autor & Dorn, 2013). There are open questions about whether AI automation will follow similar patterns or have distinct effects.

Understanding AI's impact requires examining how it alters task content and productivity at the level of individual workers and teams (Brynjolfsson et al., 2018; Dell'Acqua et al., 2023; Noy & Zhang, 2023; Yang, 2022). Studies find AI can improve worker performance on narrowly-defined tasks like cancer diagnosis and sales forecasts (Sohrabpour et al., 2021; Stone et al., 2022). However, benefits may be limited if humans overly rely on imperfect AI or neglect developing their own skills (Huang & Rust, 2018; Vorobeva et al., 2022; Wang et al., 2023). Firms are beginning to grapple with challenges of integrating AI into organisational processes and job routines (Aunimo et al., 2023; Hunt et al., 2022; Raisch & Krakowski, 2021). Additional research is needed to provide rigorous evidence on if, when, and how AI technologies complement and augment human work versus substituting for labour (Agrawal et al., 2023).

This study aims to contribute unique empirical evidence on the productivity and displacement effects of AI adoption in a crucial knowledge-intensive industry. To approach this topic, a large-scale survey was conducted in the Finnish workforce to comprehend how Finland and its employees are reacting to AI penetration in work. The survey's aim was to investigate the application and perception of AI in the workforce by capturing multifaceted insights from utility to ethics. The topics covered included AI usage and proficiency, applications and outcomes, impact on job security, organisational support and policies, and ethical risks and future prospects. As development in AI is very rapid, the survey has been run twice in 2023 to capture the continuous change in perceptions. This endeavour was made possible through collaboration with Tekniikan akateemiset TEK. By utilising their member poll, we were able to engage the insights of Academic Engineers and Architects in Finland. The next section provides an overview of survey analysis on AI in the workplace over the past three years. The following section presents the results of our study, highlighting the analysis and findings from the survey's second deployment and providing insights into the differences observed from the responses to the first deployment. Lastly, a high level summary of the findings is presented with insights derived from the studies.

## Navigating the AI Impact: A Consolidated View from Global Surveys and Studies

Recent surveys, including those from notable organisations like BCG, Checkr, Pew Research Center, McKinsey, and the OECD, present a multifaceted view of sentiments and impacts relating to AI in the workplace. These assessments explore various aspects such as AI usage, value derivation, concerns about job displacement, and requisite policy measures. The synthesised findings offer a comprehensive understanding of both the opportunities and challenges AI presents in the context of employment, skills, productivity, and worker sentiments across different countries and sectors.

**BCG's** (2023) survey suggests an optimistic tone, noting that respondents today have a generally more positive view of AI than in the previous five years. However, such optimism is not ubiquitous, with frontline employees being notably less upbeat. Similarly, **Checkr's** (2023) survey indicates substantial use of AI tools in the workplace, with notable apprehension related to job security, remuneration, and the responsible usage of AI technologies. **McKinsey's** (2023) survey highlights that while regular AI users derive notable value, transparency and training are paramount to fostering trust and understanding amongst employees.

In a more sector-specific study, the **OECD** (2023) survey of over 5,000 workers and 2,000 firms in the manufacturing and financial sectors across seven countries offered pivotal insights. Approximately 80% of workers using AI reported improvements in their job performance, aligning with the general optimism noted in other surveys. Nonetheless, the OECD findings also echo concerns unearthed in the aforementioned surveys, particularly relating to employment and wages, with around 20% of workers indicating familiarity with someone who had lost their job due to AI.

The OECD study emphasises that AI is catalysing a profound metamorphosis in work structures by automating tasks and altering skill demands - over 50% of workers using AI had received company training to use the technology. This resonates with concerns and observations from the **BCG** and **Checkr** surveys about job displacement, underscoring the necessity of training and skill development in the contemporary AI-driven work environment.

Contradictions and complexities emerge in these analyses. For instance, **BCG** projects a potentially higher occupational transition rate for women due to AI, while other surveys, like **Pew**, find women currently having greater AI exposure. Furthermore, while **Checkr** identified cybersecurity as a paramount concern, **Pew** (2023) found uncertainty about personal impacts to be more dominant over specific risks such as bias or misinformation. The unified call from all studies, however, orbits around the need for regulation, albeit with differing views on the extent to which employers have shouldered responsibility.

Moreover, the **OECD** survey underscores that consultation with workers regarding the introduction of new technologies like AI associates with more positive outcomes from both employee and employer perspectives. Interestingly, while most workers in this survey expressed trust in their employers to use AI aptly, apprehensions about controversial AI applications, such as in hiring and firing decisions, were evident, hinting at the necessity of policy frameworks and ethical considerations.

In summary, these studies collectively unfold a scenario where AI presents both promising prospects and tangible anxieties across various worker demographics and occupational categories. With the optimistic view of improved productivity and performance comes the undeniably significant apprehension regarding job security, wage impacts, skill demands, and ethical considerations of AI applications. Responsible AI adoption, continuous training, clear

**beyond the obvious**

communication, and a synergistic dialogue between employers, employees, and policymakers emerge as imperative elements to navigate the complexities and contradictions unearthed through these surveys. This may inform strategies and policies to ensure that the transition towards increasingly AI-integrated workplaces is equitable, ethical, and constructive.

## Our Survey Design: Investigating the Application and Perception of Artificial Intelligence in the Workforce

In an era where Artificial Intelligence (AI) inexorably infiltrates various facets of the work environment, deciphering its deployment and its perceived and actual impacts on job roles and workflows becomes imperative. This section delineates the findings from a survey titled "Use of AI in Work," crafted with the aid of the Questback Experience Management platform. The survey considered adoption, utility, and apprehensions pertaining to general AI, and the specific case of Generative AI, across diverse professional avenues.

### Methodology and Target Respondents

The survey harnesses a combination of categorical, Likert-scale, and open-ended questions, engaging participants in an in-depth exploration of their interactions and viewpoints concerning AI in their professional work. Participants varied in terms of job roles, sectors, and demographic characteristics. The survey questions covered the following topics:

- **AI Usage and Proficiency:** Gauging the prevalence and frequency of AI tool application, and the proficiency and learning pathways associated therein.
- **Applications and Outcomes:** Identifying the ways AI, particularly Generative AI, has been harnessed in tasks such as data analysis, content creation, and automation, and understanding the impacts of AI use on work hours and efficiencies.
- **AI and Job Security:** Exploring perceptions and attitudes towards job security, adaptability to change, and the augmentation or substitution of tasks by AI tools.
- **Organisational Support and Policies:** Evaluating the prevalence and effectiveness of organisational policies, training, and support in AI adoption.
- **Ethical, Risks, and Future Prospects:** Delving into conversations, perceptions of risks, and ethical considerations surrounding AI tool implementation and future scenarios.
- **Background Information:** Collating information regarding the demographic and professional backgrounds of respondents to enable a comprehensive analysis.

Through open-ended inquiries, respondents are invited to expand on their answers, providing additional qualitative insights.

For an exhaustive view of the survey content, please refer to Annex 1 at the end of this report.

### Preliminary Descriptive Statistics

- **First Round Survey (13.6.2023 - 29.6.2023):** Out of the 334 respondents who participated, 283 provided full responses.
- **Second Round Survey (19.9.2023 - 7.10.2023):** Out of the 548 respondents who participated, 418 provided full responses.

Further descriptive statistics covering, e.g., demographics, response rate, etc., for both rounds of surveys can be found in Annex 2.

Through open-ended inquiries, respondents are invited to expand on their answers, providing additional qualitative insights.

In consolidating the results of this survey, our aim is to shed light on the intricate aspects, possibilities, and difficulties associated with the incorporation of AI within professional environments. The insights gathered here may serve as an informative tool to assist stakeholders in navigating and establishing AI's future role in the workplace.

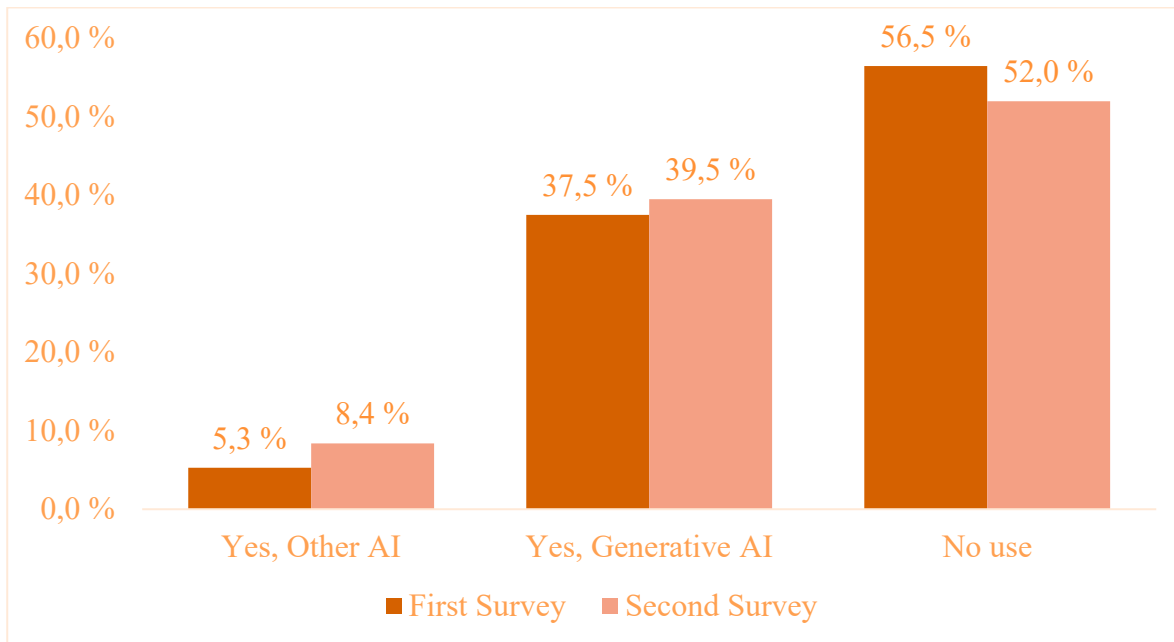
## Examination of hypotheses through survey analysis

The survey can be used to unpack multiple hypotheses on the multifaceted relationship between AI adoption, skill enhancement, and workplace dynamics. The following hypotheses are highlighted from the analysis:

1. **Independent Learning and Productivity Enhancement (H1):** We examined whether individuals who took the initiative to engage in learning around generative AI experienced a noticeable enhancement in their productivity compared to those who didn't.
2. **Management Position and Skill Enhancement Perception (H2):** We looked at whether individuals in managerial positions felt a stronger necessity to enhance their skills in order to maintain their job security in the face of increased AI use.
3. **Job Role and Generative AI Use Cases (H3):** We considered AI utilised across different job roles as a way to comprehend how occupational responsibilities influenced AI utilisation.
4. **AI Task Replacement Perception and Reskilling/Upskilling Belief (H4):** The linkage between the belief in imminent AI task replacement and the urgency to reskill or upskill was investigated to understand preparedness and adaptive strategies among individuals.
5. **Visible AI Adoption and Reskilling/Upskilling Belief (H5):** We examined if employees, witnessing a significant adoption of AI in their workplaces, exhibited a stronger inclination towards reskilling or upskilling for job security.
6. **Organisational AI Policy, Training, and Guidance (H6):** The correlation between the presence of clear organisational policies on AI usage and the provision of training and guidance was explored to gauge institutional support towards AI adoption.
7. **Engagement in Generative AI Learning and Job Security Confidence (H7):** Individuals who actively engaged in learning about generative AI through courses or experimentation were analysed to ascertain if they felt more secure in their job roles compared to those who did not.
8. **Rapid AI Adoption in Companies and Employee Job Security Confidence (H8):** The survey aimed to discern if a swift adoption of AI within companies instilled a higher level of job security confidence among employees as opposed to slower or non-adopting companies.

The responses provided a nuanced understanding of the attitudes, experiences, and perceptions towards generative AI in the contemporary workplace setting, laying a foundation for shaping future policies and educational frameworks.

## Evolution of AI integration: trends and insights from a comparative study in time



The chart captures the adaptation of artificial intelligence (AI) tools in workplaces between two distinct time frames: June and September 2023.

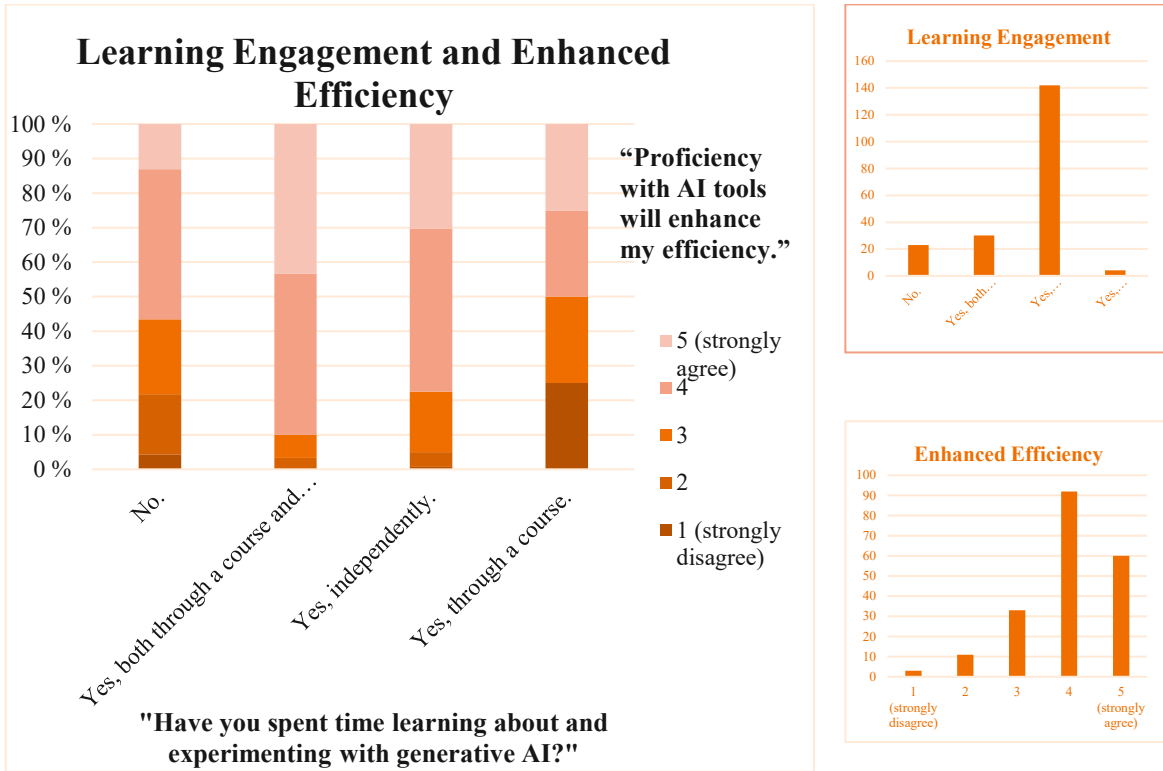
#### Key Observations:

1. **Overall Increase in AI Usage:** Over the span of three months, there has been a significant increase in the adoption of AI tools in work environments. The use of AI tools grew by 5.1% between June and September 2023.
2. **Penetration Growth:** The penetration rate, likely representing the proportion of non-AI tool users to adapting AI tools, expanded by 4.5% during the same period.
3. **Breakdown by Type of AI:**
  - **Yes, Other AI:** This category represents the use of AI tools that are not explicitly generative AI tools. The adoption in this category rose from 5.3% in June to 8.4% in September, indicating a 3.1% growth over the three months.
  - **Yes, Generative AI:** Generative AI tools, a distinct subset of AI, witnessed a modest increase from 37.5% in June to 39.5% in September, marking a growth of 2%.
  - **No use:** The percentage of entities refraining from using any form of AI tools dropped from 58.5% in June to 52.0% in September. This suggests a 6.5% decline in non-adopters during this period.

The data underscores an upward trend in the integration and adoption of AI tools in professional settings. While generative AI tools claim a significant portion of the AI usage, there's a notable movement among individuals previously not using AI, highlighting the growing importance and reliance on AI's capabilities in the workplace.



## What is the relationship between engagement in learning on generative AI and perceived productivity enhancement?

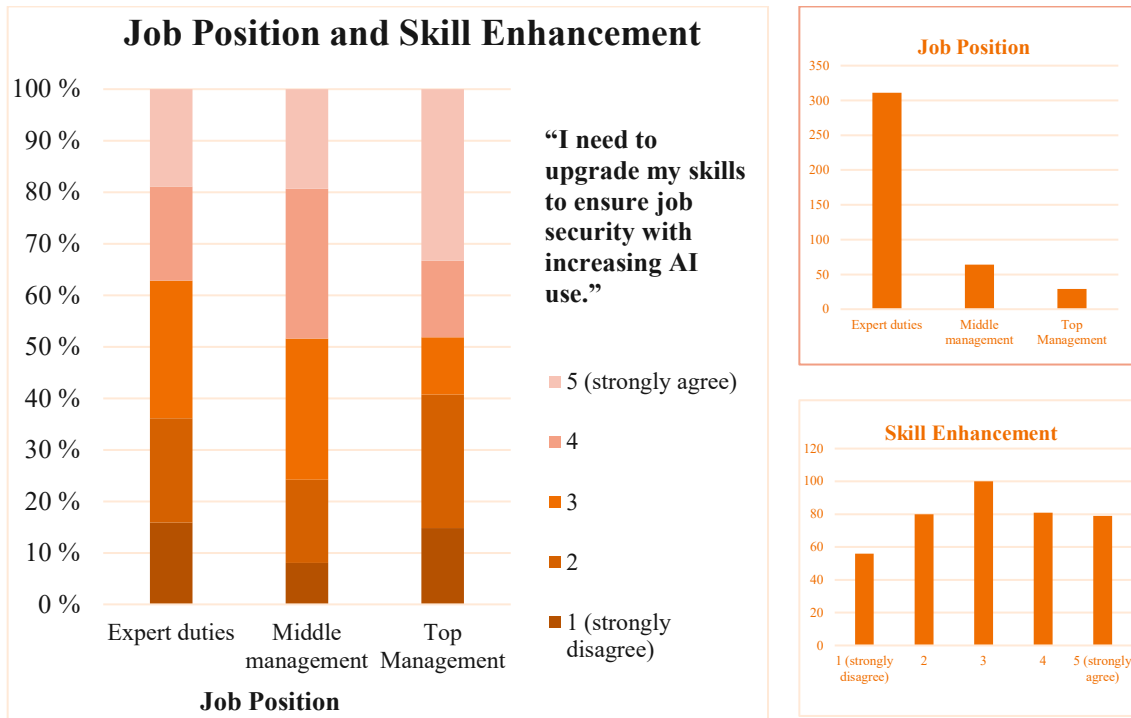


The figure above maps the correlation between the degree of engagement in learning about generative AI and the perceived improvement in productivity. This graph is limited to individuals who responded that they do use AI or generative AI.

- 1. Positive Correlation Between Learning and Productivity Perception:** The bar graph demonstrates a clear trend where those who have engaged in learning, be it through a course, independently, or both, manifest a stronger belief in the productivity enhancements offered by AI tools. Particularly, the group that learned both through courses and independently shows a dominant inclination towards strongly agreeing that proficiency in AI tools can enhance efficiency. This trend underscores that individuals investing time in understanding and experimenting with generative AI tools have a more affirmative perspective on its impact on their work productivity, in comparison to their counterparts who haven't delved as deeply.
- 2. Disparity in Learning Engagement:** The 'Learning Engagement' graph shows that the majority of individuals who use AI have engaged in some form of learning, either independent, through a course or both. However, independent learning is clearly dominant, with most individuals choosing to explore these tools on their own rather than committing to formal learning.
- 3. Overall Positive Perception of AI's Impact on Productivity:** There is an overarching positivity regarding the potential of AI tools for productivity enhancement. Even the least engaged group showcases a considerable proportion of individuals who believe in the efficiency-enhancing capabilities of AI, indicating an optimistic trend on the transformative power of AI in the workforce.



## What is the relationship between an individual’s position and perceived need for skill enhancement in the face of increasing AI use?



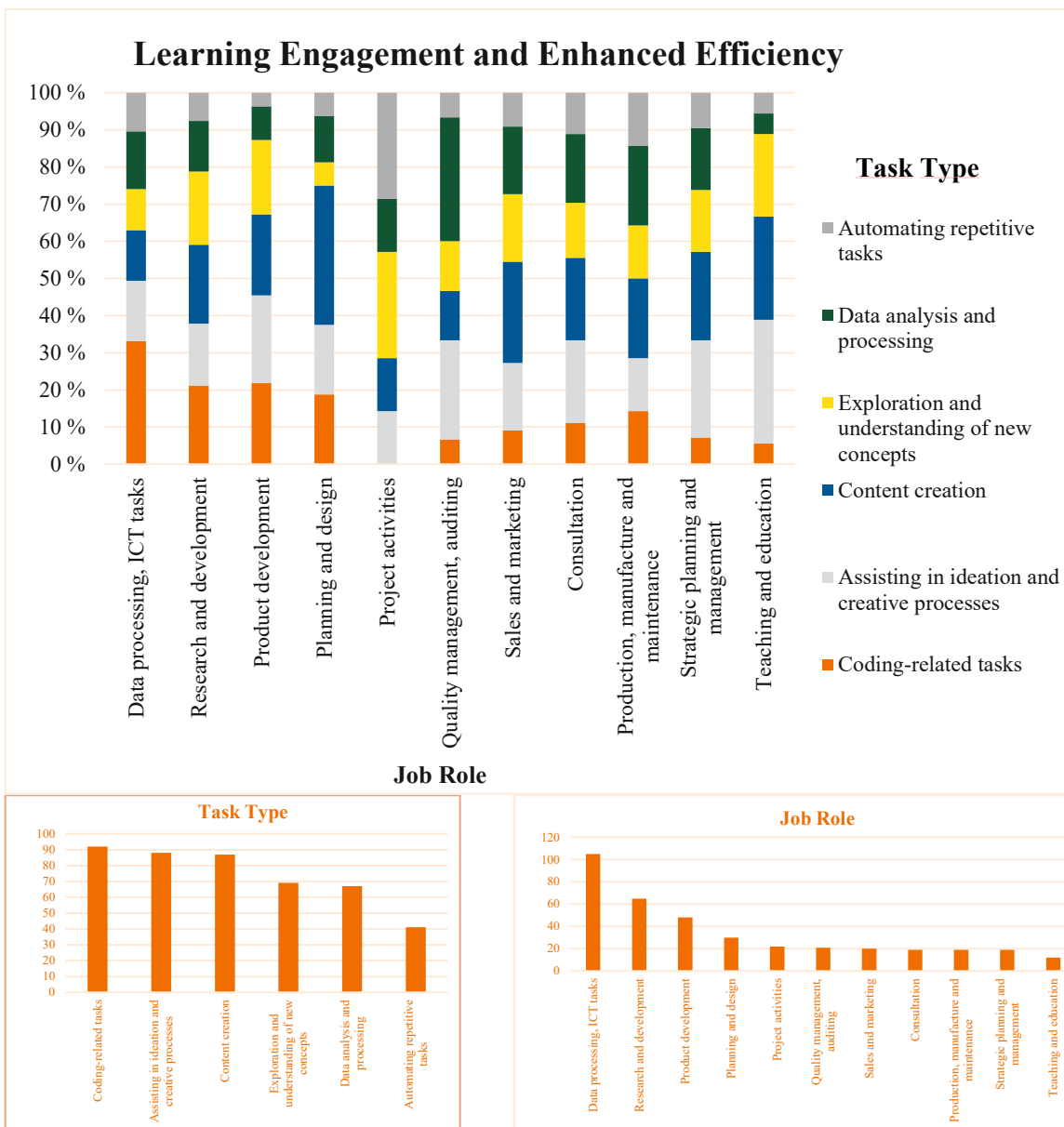
The figure above offers insights regarding the perspectives of different job roles concerning the necessity to enhance skills due to AI's growing prominence.

- Management's Perception of Skill Upgradation:** A notable observation is the amplified sentiment among management regarding the importance of skill enhancement. Both middle and top-tier management seem to strongly concur with the idea of honing their skills to ensure job security in the face of escalating AI use. Awareness of technological trends may be more pronounced for these roles, who use such information not only to understand their domain but to make well-informed decisions, potentially heightening their perceived urgency for skill enhancement.
- Highlight on Management's Responses:** It's important to acknowledge a potential bias with management responses. The survey had fewer observations reflecting participants in managerial roles. This is expected as managers are typically fewer in number compared to the general workforce. Additionally, managerial time constraints may lead to stronger self-selection bias into this survey for those in management positions compared to other positions.
- Expert Duties and Their Comfort with Specialisation:** Contrarily, those in expert duties seem less inclined to perceive a pressing need for skill augmentation. Given their specialised nature of work, they might believe that their expertise offers some immunity against the broad changes AI promises. Their direct engagement with AI tools might further bolster their confidence in their current skill set.
- Normal Distribution of Skill Enhancement Perception:** There is a fairly normal distribution concerning the perceived urgency for skill enhancement. This indicates a mixed sentiment within the workforce – a sizable segment seems undecided about the immediate necessity for upskilling.

- Observation from the First Survey:** Compared to the first survey, there is a shift in sentiments regarding skill enhancement. In the second period, individuals seem less concerned with the need for skill enhancement. This could be due to initial trepidation many had about AI, which may have gradually subsided as AI becomes more mainstream and many job roles remain to be significantly disrupted.

As AI transforms industries and job roles, the urgency to upskill resonates differently across job designations. While managerial roles sense an intensified need to evolve, specialised roles exude more confidence in their current proficiency. The overarching sentiment, nonetheless, presents a blend of preparedness and wariness.

## Is there variation in the types of tasks that individuals in different job roles are utilising generative AI for?

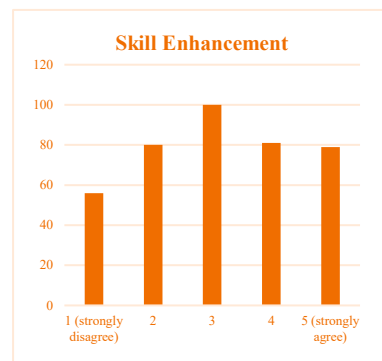
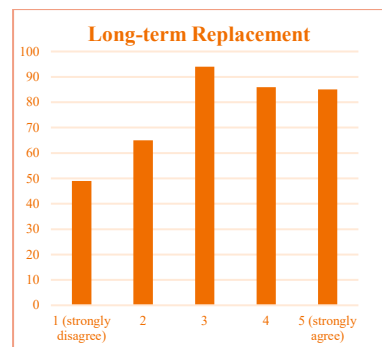
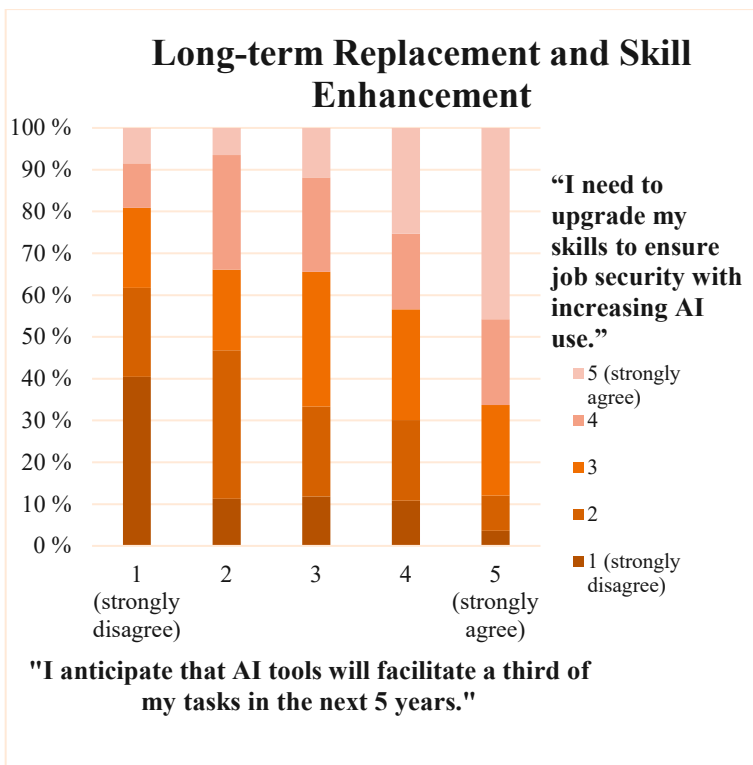


The figure above provides a detailed overview of the ways various job roles are harnessing the generative AI to augment their tasks. Here are the notable insights:

**beyond the obvious**

1. **High Variation in Tasks:** The adaptability of generative AI is evident from the diverse range of tasks they assist with. From mundane repetitive tasks to innovative endeavors, from strategic decision-making to intricate technical operations, there is high utilisation across task types.
2. **Dominance in Specific Tasks and Roles:** While generative AI is used across task types, the highest utilisation is seen over assistance with coding, ideation and creative processes, and content creation. Compared to the first survey, utilisation of generative AI for coding increased substantially.

## Do individuals that believe AI will replace a significant portion of their tasks in coming years feel the need for skill enhancement?

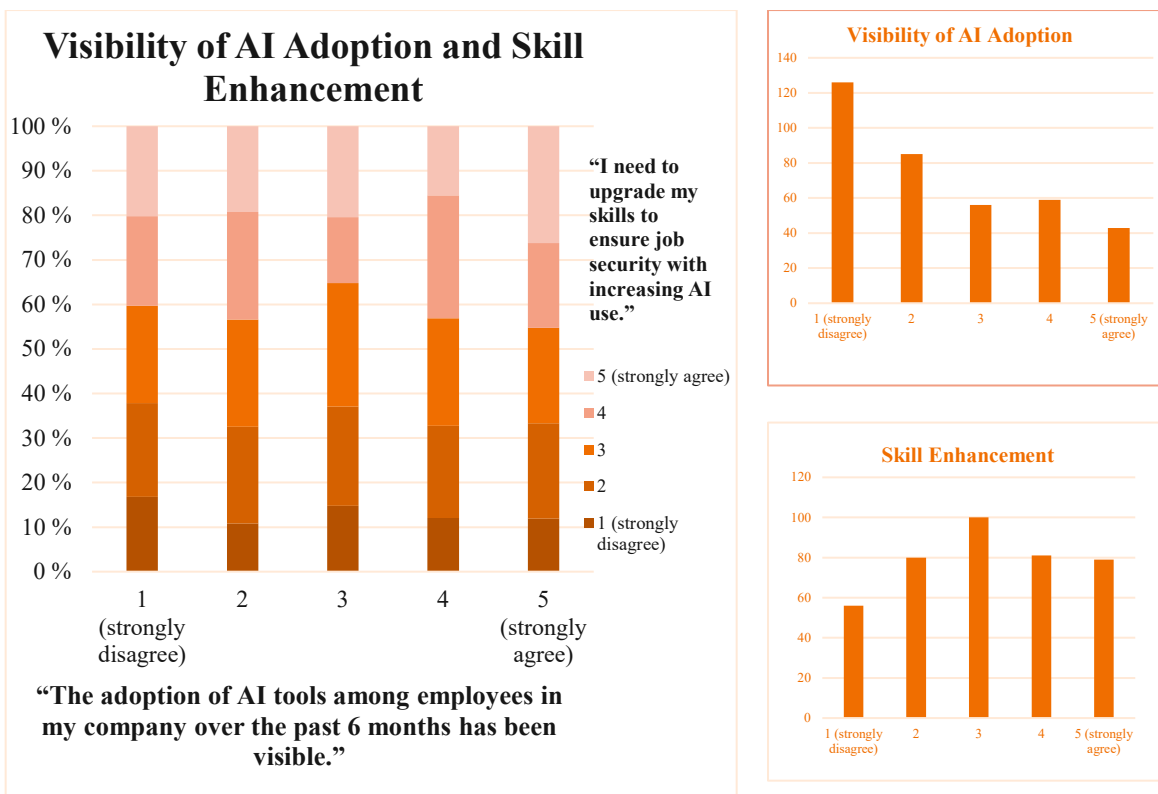


The figures above provide an exploration of professional sentiments concerning the future of AI impact on individuals' work.

1. **Correlation Between AI Integration and Skill Enhancement Perception:** An insight from the comparison is the distinct correlation between the acknowledgment of AI's prospective influence and the perceived imperative of skill enhancement. Professionals foreseeing a significant chunk of their responsibilities transitioning to AI in the upcoming five years are more likely to feel the need to bolster their skill set. This trajectory suggests a growing perception that skill enhancement will become increasingly necessary as AI tools become more integrated into the workplace.
2. **Strengthened Expectations of Long-term Task Replacement:** Contrasted against the first survey, there's a heightened sentiment among participants that AI will have a more pronounced role in long-term task replacement. Although views span a broad range, there's active perception that AI is not a passing phenomenon but will play a role in shaping future occupational roles.

In summary, the slide clarifies personalised expectations of AI's immediate impact on careers while also hinting at a broader narrative concerning the future of work. It's evident that despite general belief in AI's transformative potential, the strategies to navigate this change are diverse. Nevertheless, the emphasis on skill improvement emerges as a common principle.

## What is the relationship between the visibility of AI adoption in the workplace and the perceived need for skill enhancement?



The figure presents data on the relationship between the visibility of AI adoption in workplaces and employees' perceived need for skill enhancement. The following are detailed breakdowns based on the given findings:

- 1. Employees' Perceptions of AI Visibility:** The graph on the left displays the percentage of respondents who have noticed AI adoption in their workplace over the past six months. It's clear that the majority of respondents haven't found AI adoption to be significantly visible, with a considerable number strongly disagreeing that they've noticed it. This observation confirms the finding that the visibility of AI adoption in the workplace is generally low.
- 2. Lack of Direct Correlation:** Even if employees notice more AI being used in their workplace, it doesn't directly translate to a heightened sense of urgency to upgrade their skills. This might be because employees feel that their roles are distinct from the tasks AI is handling, or they believe that the current AI implementations aren't advanced enough to threaten their job security.

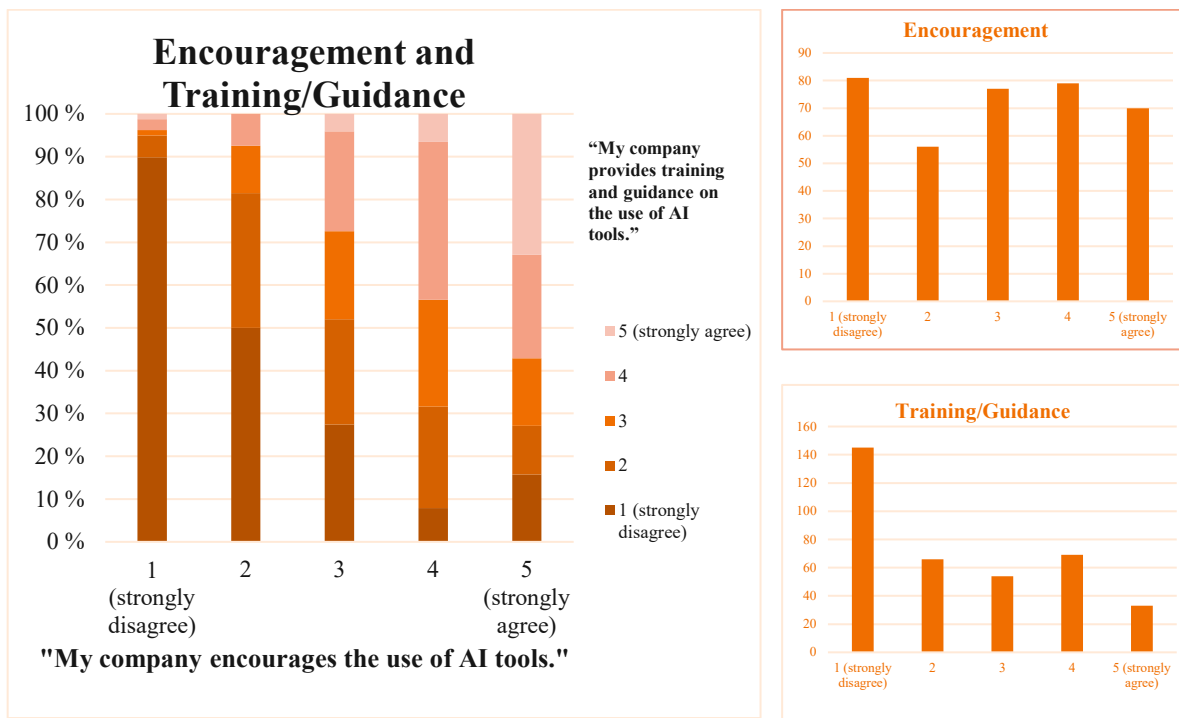
**Observation on First and Second Survey Results:** The visibility of AI adoption in the workplace has seen a higher portion of agreement compared to the first survey. This could imply a few things:

- **Increased Awareness:** Employees might have become more aware of AI implementations around them, even if they don't feel the immediate need to upskill.

- Growing Comfort with AI:** The fact that there isn't a direct correlation between increased AI visibility and the perceived need for skill enhancement might mean that employees are getting more insight into how AI is used, leading to less worry. They may understand tools' limitations better, as well as where AI fits into their workplace ecosystem, and thus don't see it as an immediate threat to their roles.

In summary, while the adoption of AI in workplaces is becoming more visible to employees, it hasn't necessarily resulted in an increased sense of urgency to enhance skills. Over time, as employees become more familiar with AI implementations, they may be feeling less threatened and more informed about its role and implications.

## Do companies' that formally encourage the use of AI tools also provide more training and guidance on its use?



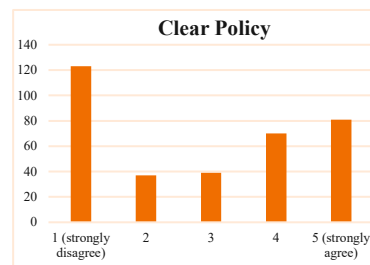
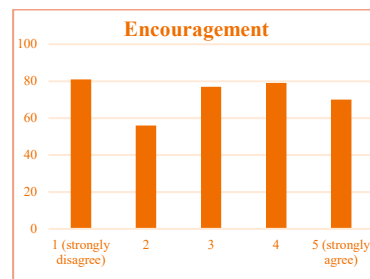
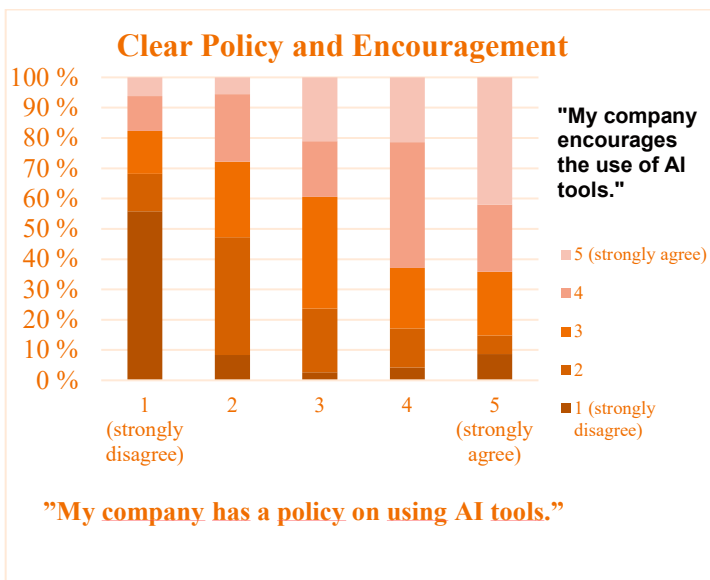
The figure illustrates the comparative analysis between companies' encouragement and their provision of training and guidance for AI tool adoption. Here's a detailed breakdown based on the depicted findings:

- Companies' Encouragement for AI Tool Adoption:** The graph on the left portrays the percentage of respondents agreeing with the statement, "My company encourages the use of AI tools." The results indicate a predominant shift towards companies emphasising the importance and utility of AI tools, with a majority leaning towards agreement. This suggests an increasing trend in businesses acknowledging the potential benefits of integrating AI into their operations.
- Provision of Training and Guidance:** The histogram on the right delineates the distribution of respondents regarding the statement, "My company provides training and guidance on the use of AI tools." It is evident that while there is an uptick in companies offering training, it's not as pronounced as the encouragement trend. The data underscores a potential gap between recognising the value of AI and actually investing in the training needed to harness its capabilities effectively.
- Comparative Insights Between Surveys:** The observed trends indicate that over time, there has been a more pronounced shift towards companies encouraging AI tool adoption **beyond the obvious**

compared to the results from the first survey. However, when it comes to providing necessary training and guidance, the increase, though present, is more modest. This disparity could arise from various challenges, ranging from implementation difficulties, financial constraints, or perhaps a belief that AI tools are intuitive enough not to warrant extensive training.

In summation, the corporate sector showcases a burgeoning interest and encouragement in AI tool adoption, but there remains a discernible gap when it comes to equipping employees with the necessary training and guidance. This observed trend underscores the importance of not just advocating for AI integration but also ensuring that teams are adequately prepared to leverage these tools to their maximum potential.

## Do companies' that have a clear policy formally encourage the use of AI tools?



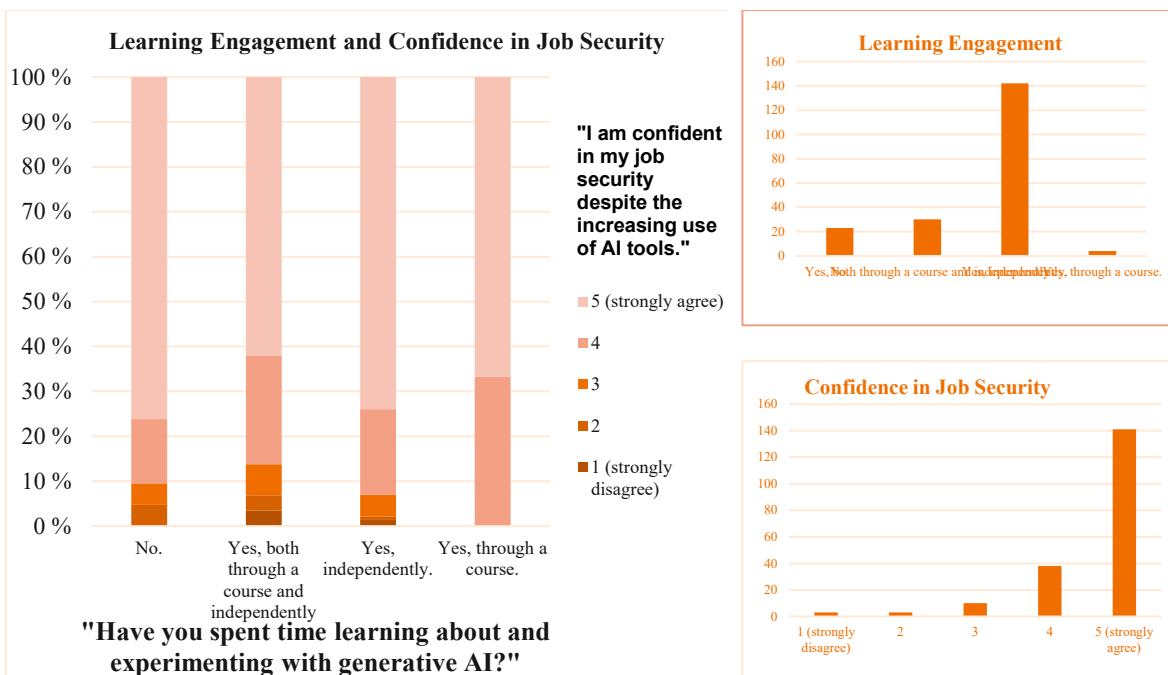
- Ambiguous Sentiments about AI:** The data reveals that the sentiment surrounding the encouragement of AI is mixed among companies. While certain organisations lean heavily into AI adoption, others remain reserved. Such a dichotomy might stem from reasons ranging from industry-specific needs, resource availability, to perceived utility and risks associated with AI tools.
- Polarity in Responses for Clear Policy Companies:** For companies that have clear AI policies, there's a split between respondents who agree and those who totally disagree about encouraging the use of AI tools. This might suggest that while having a clear policy aids in taking a stance on AI tools, the direction of that stance (for or against) can vary significantly. It's possible that in some organisations, a clear policy is in place to curtail AI use due to associated risks, while in others, it's to promote its robust integration.
- Shift in Clear Policy Over Time:** Based on the comparative analysis with the first survey, there's a noticeable shift towards clearer policies on AI in this second round. An increasing number of companies are delineating their stance on AI, leading to either a stronger encouragement or discouragement. The fact that the policy is becoming clearer over time is a testament to the evolving nature of corporate understanding of AI. It showcases a maturing landscape where companies are gradually moving away from ambiguity, taking definitive positions based on their evaluations of AI's implications.

In conclusion, the data underscores the dynamic nature of corporate perspectives on AI. As companies become more familiar with AI's potential and pitfalls, they are increasingly opting for

**beyond the obvious**

well-defined policies. Such policies, in turn, are shaping whether AI tools are embraced or eschewed within these organisations. The trajectory suggests a future where companies might be more decisive about AI, influenced heavily by their individual experiences, industry demands, and evolving global AI trends.

## What is the relationship between engagement in learning on generative AI and confidence in job security?



Two key findings can be inferred from the correlation between engagement in learning about generative AI and individuals' confidence in job security:

### 1. Engagement vs. Confidence Paradox:

- At first glance, one might expect that those who invest time in understanding and learning about generative AI would exhibit higher confidence in their job security, given that they are upskilling and staying current with technological advancements. However, the data presents a contrasting view.
- Individuals who have been actively involved in courses or have taken out time for hands-on experimentation with generative AI technologies demonstrate either similar or marginally reduced confidence levels about their job security compared to their counterparts who haven't dedicated similar time. This could possibly be attributed to a deeper understanding of the technology's capabilities and potential implications, which may lead to a more cautious outlook. Alternatively, it might be that as individuals dive deeper into the technology, they become more aware of the transitional phase that industries might undergo due to AI's rise, which might entail some job displacements or transformations.

### 2. Overall High Confidence Despite AI Proliferation:

A notably positive insight from the data is the consistent high confidence in job security across all respondent categories, regardless of their familiarity with generative AI learning. Several potential reasons underpin this sentiment:

- **Optimism About Job Market's Resilience:** Many may believe in the adaptability and robustness of the job market even with rapid technological advancements. They



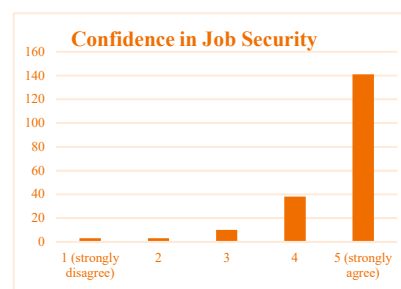
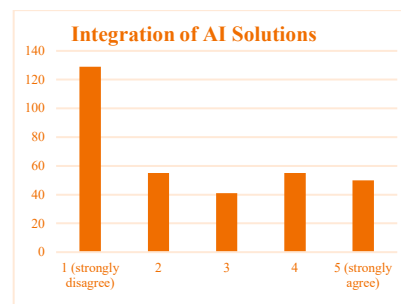
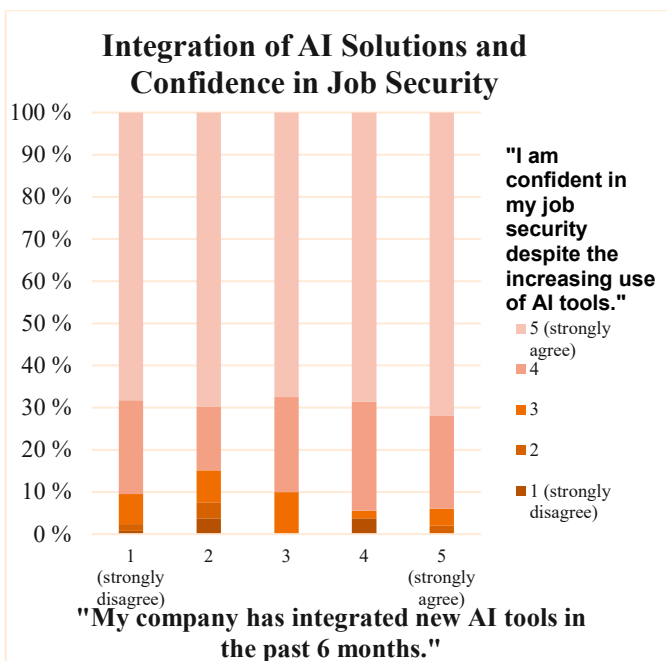
might think that the job market can evolve and adjust to the introduction of new technologies, thus maintaining or even increasing job opportunities.

- **Belief in AI's Positive Impact:** There's a possibility that respondents feel AI will pave the way for more job opportunities than it may phase out. This sentiment aligns with the belief that while AI may replace certain tasks, it will lead to the creation of new roles and job sectors.
- **Limited Immediate Impact:** Another scenario could be that a significant portion of respondents hasn't felt a direct impact of AI integration on their current job roles. This lack of immediate effect can give them a sense of security, thinking that their jobs remain unaffected by AI's proliferation.
- **Perception of AI as a Passing Trend:** Some might view AI integration as a fleeting trend that won't have lasting consequences on the job market, hence maintaining their confidence levels.
- **Relevance to Their Job:** It's also plausible that many respondents believe AI technologies aren't directly applicable or pertinent to their specific job roles, leading to maintained confidence in their job security.

**Comparison with Previous Survey Results:**

- These results are consistent with the previous survey, showing little shift in sentiment on this front between the two periods.

## What is the relationship between companies' integration of AI solutions and employee's confidence in job security?



The presented data provides insights into the perception of job security among employees in relation to their company's integration of AI solutions. Three primary findings emerge from the visual data:

**1. Confidence Regardless of AI Integration:**

- Interestingly, whether a company rapidly integrates AI solutions or not, it doesn't seem to heavily influence an employee's confidence in their job security. This observation challenges the notion that rapid technological integration might lead to apprehensions among employees about their job stability.

- Employees in companies that have rapidly integrated AI solutions in the past 6 months express a confidence level about their job security that is almost identical to that of employees in companies slower to integrate AI. This could suggest that other factors, perhaps organisational culture, communication, or reskilling opportunities, might be influencing their confidence more than the integration of technology.
2. **Distribution of AI Integration:**
    - It's notable that a majority of companies have reported a low level of AI integration in the past 6 months. However, for the remaining companies, the distribution is fairly even across different levels of AI integration. This may hint at a varied pace of technological adoption across sectors or the consideration of other strategic factors by companies when deciding on the speed of AI integration.

## Report on survey open question: reasons for not using AI tools

After analysing the responses to the question, "If you do not use AI tools, can you explain why?", several common themes emerged. Below is a summary of the reasons provided by the participants:

1. **Lack of Familiarity or Knowledge (32%):**
  - Many respondents mentioned that they are unaware of how to use AI tools or where they would be most beneficial.
  - Some participants expressed that they do not know of the existence of suitable tools for their work.
2. **No Perceived Need (25%):**
  - A significant portion felt that they didn't have a need for AI tools in their current job roles.
  - Several respondents indicated that traditional methods and tools are still more reliable for them.
3. **Organisational Restrictions (15%):**
  - Some participants cited company policies or restrictions as a barrier. This included concerns about data privacy, security, and licensing issues.
  - A few mentioned that AI tools are not yet adopted or approved by their organisation.
4. **Lack of Training and Support (12%):**
  - Respondents expressed that they have not been trained or encouraged by their employer to use AI tools.
  - Some feel they lack the time to learn and implement new tools.
5. **Distrust or Skepticism (8%):**
  - A smaller segment showed skepticism towards the capabilities and reliability of AI tools.
  - Some feel that AI-generated content or advice might not be trustworthy, comparing it to generic online advice.
6. **Job Nature and Relevance (5%):**
  - Some participants believe that AI tools are not relevant to their job nature, especially those involved in specialised or human-centric roles.
  - Others mentioned that they are in professions where AI applications are still in the experimental phase.
7. **Future Consideration (3%):**
  - A few participants are open to using AI tools in the future but have not yet found the right opportunity or application for them.

In conclusion, while there is interest in AI tools among the respondents, barriers like lack of knowledge, organisational restrictions, and the nature of certain jobs are major factors preventing their widespread adoption. Organisations can address this by providing training and creating

awareness about the benefits of AI tools, as well as ensuring that any concerns about privacy and data security are addressed.

## Report on survey open question: AI concerns

1. **Data Security and Privacy (67%):** The most common concern among participants is data security and privacy. Many respondents worry about the risk of sensitive information leaking to unauthorised parties due to the use of AI. This includes concerns about data breaches, data misuse, and GDPR compliance.
2. **Reliability of AI (53%):** Participants expressed concerns about the reliability of AI. They worry about AI making mistakes, providing incorrect information, or leading to wrong decisions. Over-reliance on AI without human oversight was also highlighted.
3. **Ethical and Legal Considerations (34%):** Ethical issues related to AI were raised, including concerns about bias, transparency, and accountability. Participants were also concerned about legal aspects, such as intellectual property rights and GDPR compliance.
4. **Job Displacement (23%):** Some respondents are concerned about job displacement due to AI automation. They expressed worries about the potential loss of jobs and the need for retraining or reskilling.
5. **Practical Implementation (15%):** Practical concerns included issues like understanding AI-generated code, the need for proper training and education on AI, and the risk of AI being used inappropriately or maliciously.
6. **Industry-Specific Concerns (9%):** In certain industries, such as healthcare and defense, participants highlighted specific concerns related to patient safety, regulatory compliance, and restrictions on AI usage.
7. **Positive Outlook (7%):** While most concerns revolved around risks, a small percentage of respondents expressed a positive outlook. They believe that AI can be a valuable tool if used wisely and that it may lead to improved efficiency and job optimisation.

## Reflective analysis of the findings from the 1st and 2nd survey on AI integration in the workplace

The comparative analysis of the first and second surveys offers a nuanced look into the evolving dynamics of AI integration in the workplace, and how these changes impact employees across different spectra.

1. **Job Position & Skills:** Relative to the first survey, the second survey observed stability in skill enhancement requirements and a significant rise in AI's involvement, especially in tasks such as coding. This evolution underscores the increasing integration of AI tools in specialised tasks.
2. **AI Task Replacement:** The second survey emphasised an acceptance of AI's long-term potential in task replacement. This could signify a slight shift from initial apprehension to increased acceptance.
3. **AI Adoption Visibility:** Initially, high visibility of AI adoption didn't necessarily equate to a perceived need for skill enhancement. However, the second survey indicates an increased alignment between AI visibility and its acceptance, reflecting a possible decrease in apprehension.
4. **Corporate Training:** The initial findings underscored a lag in both policy and training support for AI, even in firms that encouraged its use. In the second survey we see an increase in AI-related training, coupled with a clearer application of AI usage policies. This

could be attributed to organisations beginning to recognise the importance of establishing guidelines on their employee's use of these tools.

In summary, the comparative insights from both surveys delineate a trend of growing acceptance, comprehension, and assimilation of AI in the workplace. Yet, the extent of integration is still limited, and the arena is anticipated to evolve swiftly as AI tools become more commonplace in professional settings.

## References

- Acemoglu, D., & Restrepo, P. (2018). The Race between Man and Machine: Implications of Technology for Growth, Factor Shares, and Employment. *American Economic Review*, 108(6), 1488–1542. <https://doi.org/10.1257/AER.20160696>
- Agrawal, A., Gans, J. S., & Goldfarb, A. (2023). Do we want less automation? AI may provide a path to decrease inequality. *Science*, 381(6654), 155–158. [https://doi.org/10.1126/SCIENCE.ADH9429/SUPPL\\_FILE/SCIENCE.ADH9429\\_SM.PDF](https://doi.org/10.1126/SCIENCE.ADH9429/SUPPL_FILE/SCIENCE.ADH9429_SM.PDF)
- Aunimo, L., Kauttonen, J., Lahtinen, A., Lagstedt, A., & Alamäki, A. (2023). *Factors Affecting the Adoption of AI by Organizations - From the Perspective of Knowledge Workers*. 467–481. [https://doi.org/10.1007/978-3-031-42622-3\\_33](https://doi.org/10.1007/978-3-031-42622-3_33)
- Autor, D. H. (2015). Why Are There Still So Many Jobs? The History and Future of Workplace Automation. *Journal of Economic Perspectives*, 29(3), 3–30. <https://doi.org/10.1257/JEP.29.3.3>
- Autor, D. H., & Dorn, D. (2013). The Growth of Low-Skill Service Jobs and the Polarisation of the US Labor Market. *American Economic Review*, 103(5), 1553–1597. <https://doi.org/10.1257/AER.103.5.1553>
- Bommasani, R., Hudson, D. A., Adeli, E., Altman, R., Arora, S., von Arx, S., Bernstein, M. S., Bohg, J., Bosselut, A., Brunskill, E., Brynjolfsson, E., Buch, S., Card, D., Castellon, R., Chatterji, N., Chen, A., Creel, K., Davis, J. Q., Demszky, D., ... Liang, P. (2021). *On the Opportunities and Risks of Foundation Models*. <https://arxiv.org/abs/2108.07258v3>
- Boston Consulting Group. (2023). *AI at Work: What People Are Saying | BCG*. <https://www.bcg.com/publications/2023/what-people-are-saying-about-ai-at-work>
- Brynjolfsson, E., & McAfee, A. (2017). The Business of Artificial Intelligence. *Harvard Business Review*, 95(4), 139–141. <https://hbr.org/2017/07/the-business-of-artificial-intelligence>
- Brynjolfsson, E., Rock, D., & Syverson, C. (2018). *The Productivity J-Curve: How Intangibles Complement General Purpose Technologies*. <https://doi.org/10.3386/w25148>
- Dell'Acqua, F., McFowland, E., Mollick, E. R., Lifshitz-Assaf, H., Kellogg, K., Rajendran, S., Kraymer, L., Candelon, F., & Lakhani, K. R. (2023). Navigating the Jagged Technological Frontier: Field Experimental Evidence of the Effects of AI on Knowledge Worker Productivity and Quality. *SSRN Electronic Journal*. <https://doi.org/10.2139/SSRN.4573321>
- Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? *Technological Forecasting and Social Change*, 114, 254–280. <https://doi.org/10.1016/J.TECHFORE.2016.08.019>
- Huang, M. H., & Rust, R. T. (2018). Artificial Intelligence in Service. *Journal of Service Research*, 21(2), 155–172. [https://doi.org/10.1177/1094670517752459/ASSET/IMAGES/LARGE/10.1177\\_1094670517752459-FIG4.JPEG](https://doi.org/10.1177/1094670517752459/ASSET/IMAGES/LARGE/10.1177_1094670517752459-FIG4.JPEG)
- Hunt, W., Sarkar, S., & Warhurst, C. (2022). Measuring the impact of AI on jobs at the organisation level: Lessons from a survey of UK business leaders. *Research Policy*, 51(2), 104425. <https://doi.org/10.1016/J.RESPOL.2021.104425>
- Korolevich, S. (2023). *Insights from American Workers: A Survey on AI in the Workplace | Checkr*. <https://checkr.com/resources/articles/ai-workplace-survey-2023>
- Kweilin, E., Sanghvi, S., Singh Dandona, G., Madgavkar, A., Chui, M., White, O., & Hasebe, P. (2023, July 26). *Generative AI and the future of work in America*. McKinsey. <https://www.mckinsey.com/mgi/our-research/generative-ai-and-the-future-of-work-in-america>

- Lane, M., Williams, M., & Broecke, S. (2023). *The impact of AI on the workplace: Main findings from the OECD AI surveys of employers and workers* (288; OECD Social, Employment and Migration Working Papers). [https://www.oecd-ilibrary.org/social-issues-migration-health/the-impact-of-ai-on-the-workplace-main-findings-from-the-oecd-ai-surveys-of-employers-and-workers\\_ea0a0fe1-en](https://www.oecd-ilibrary.org/social-issues-migration-health/the-impact-of-ai-on-the-workplace-main-findings-from-the-oecd-ai-surveys-of-employers-and-workers_ea0a0fe1-en)
- McCarthy, J., Minsky, M. L., Rochester, N., & Shannon, C. E. (2006). A Proposal for the Dartmouth Summer Research Project on Artificial Intelligence, August 31, 1955. *AI Magazine*, 27(4), 12–12. <https://doi.org/10.1609/AIMAG.V27I4.1904>
- Noy, S., & Zhang, W. (2023). Experimental Evidence on the Productivity Effects of Generative Artificial Intelligence. *SSRN Electronic Journal*. <https://doi.org/10.2139/SSRN.4375283>
- Raisch, S., & Krakowski, S. (2021). Artificial intelligence and management: The automation–augmentation paradox. *Academy of Management Review*, 46(1), 192–210. <https://doi.org/10.5465/AMR.2018.0072>
- Sohrabpour, V., Oghazi, P., Toorajipour, R., & Nazarpour, A. (2021). Export sales forecasting using artificial intelligence. *Technological Forecasting and Social Change*, 163, 120480. <https://doi.org/10.1016/J.TECHFORE.2020.120480>
- Stone, P., Brooks, R., Brynjolfsson, E., Calo, R., Etzioni, O., Hager, G., Hirschberg, J., Kalyanakrishnan, S., Kamar, E., Kraus, S., Leyton-Brown, K., Parkes, D., Press, W., Saxenian, A., Shah, J., Tambe, M., & Teller, A. (2022). *Artificial Intelligence and Life in 2030: The One Hundred Year Study on Artificial Intelligence*. <https://arxiv.org/abs/2211.06318v>
- Telford, T. (2023, July 26). Workers don't feel AI is a threat to their jobs yet, Pew survey finds. *The Washington Post*. <https://www.washingtonpost.com/business/2023/07/26/ai-worker-attitudes-pew-research-survey/>
- Vorobeva, D., El Fassi, Y., Costa Pinto, D., Hildebrand, D., Herter, M. M., & Mattila, A. S. (2022). Thinking Skills Don't Protect Service Workers from Replacement by Artificial Intelligence. *Journal of Service Research*, 25(4), 601–613. [https://doi.org/10.1177/10946705221104312/ASSET/IMAGES/LARGE/10.1177\\_10946705221104312-FIG1.JPEG](https://doi.org/10.1177/10946705221104312/ASSET/IMAGES/LARGE/10.1177_10946705221104312-FIG1.JPEG)
- Wang, S., Sun, Z., & Chen, Y. (2023). Effects of higher education institutes' artificial intelligence capability on students' self-efficacy, creativity and learning performance. *Education and Information Technologies*, 28(5), 4919–4939. <https://doi.org/10.1007/S10639-022-11338-4/TABLES/6>
- Yang, C. H. (2022). How Artificial Intelligence Technology Affects Productivity and Employment: Firm-level Evidence from Taiwan. *Research Policy*, 51(6), 104536. <https://doi.org/10.1016/J.RESPOL.2022.104536>

## Annex 1

# Survey: Use of AI in Work

## Use of AI in Work

Artificial Intelligence (AI) encompasses systems that simulate tasks usually requiring human intelligence, like learning and decision-making, using algorithms and data to mimic and adapt cognitive functions. A notable subset is Generative AI, which employs machine learning to produce varied content, from text, images, to music. Advanced versions can even emulate human language for communication and creative content. For this survey, consider both general AI and Generative AI applications in your work.

### 1) \* Do you use AI tools or applications at work?

- Yes, generative AI
- Yes, other AI
- Yes, both generative AI and other AI
- No

### This box is shown in preview only.

The following conditions must be fulfilled for this question to be shown:

If the question Käytätkö tekoälytyökaluja tai -sovelluksia työssäsi? contains any of these alternatives

- Yes, both generative AI and other AI
- Yes, other AI
- Yes, generative AI

### 2) How frequently do you use AI tools at work?

- Every day
- Multiple times per week
- Once per week
- Less frequently than once per week

### This box is shown in preview only.

The following conditions must be fulfilled for this question to be shown:

If the question Käytätkö tekoälytyökaluja tai -sovelluksia työssäsi? contains any of these alternatives

- No

### 3) Have you heard of 'generative AI' tools before taking this survey?

- No
- Yes, but I did not know what 'generative AI' tools were
- Yes, and I did know what 'generative AI' tools were

### This box is shown in preview only.



The following conditions must be fulfilled for this question to be shown:

If the question Käytätkö tekoälytyökaluja tai -sovelluksia työssäsi? contains any of these alternatives

- Yes, both generative AI and other AI
- Yes, other AI
- Yes, generative AI

**4) \* Have you spent time learning about and experimenting with generative AI?**

- Yes, through a course.  
 Yes, independently.  
 Yes, both through a course and independently  
 No.

**This box is shown in preview only.**

The following conditions must be fulfilled for this question to be shown:

If the question Käytätkö tekoälytyökaluja tai -sovelluksia työssäsi? contains any of these alternatives

- Yes, both generative AI and other AI
- Yes, other AI
- Yes, generative AI

## AI Adoption and Impact on Processes

**5) What do you use generative AI for in your professional tasks? (Please select all that apply and specify any additional uses in the 'Other' section.)**

- Data analysis and processing  
 Automating repetitive tasks  
 Content creation  
 Assisting in ideation and creative processes  
 Coding-related tasks  
 Exploration and understanding of new concepts  
 Other (please specify):

**This box is shown in preview only.**

The following conditions must be fulfilled for this question to be shown:

If the question Käytätkö tekoälytyökaluja tai -sovelluksia työssäsi? contains any of these alternatives

- No

**6) If you do not use AI tools, can you explain why?**

**This box is shown in preview only.**

The following conditions must be fulfilled for this question to be shown:

If the question Käytätkö tekoälytyökaluja tai -sovelluksia työssäsi? contains any of these alternatives

- Yes, both generative AI and other AI
- Yes, other AI
- Yes, generative AI

Please rate your agreement with the following statement on a scale of 1-5, where 1 represents (strongly disagree) and 5 represents (strongly agree).

**7) Proficiency with AI tools will enhance my efficiency.**

1 (strongly disagree)  2  3  4  5 (strongly agree)

**This box is shown in preview only.**

The following conditions must be fulfilled for this question to be shown:

If the question Käytätkö tekoälytyökaluja tai -sovelluksia työssäsi? contains any of these alternatives

- Yes, both generative AI and other AI
- Yes, other AI
- Yes, generative AI

Please rate your agreement with the following statement on a scale of 1-5, where 1 represents (strongly disagree) and 5 represents (strongly agree).

**8) The use of AI tools has resulted in me working more hours than usual.**

1 (strongly disagree)  2  3  4  5 (strongly agree)

## Job Security

9) \* Please rate each statement on a 1-5 scale, where 1 represents "strongly disagree" and 5 represents "strongly agree". If you're unsure, please select "Cannot say".

	1				5	
	(strongly disagree)	2	3	4	(strongly agree)	Cannot say
I am confident in my job security despite the increasing use of AI tools	<input type="radio"/>		<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

	1 (strongly disagree)	2	3	4	5 (strongly agree)	Cannot say
It has been easy for me to adjust to the changes in the work created by AI tools.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I have used AI tools to facilitate a third of my tasks in the last 6 months.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I anticipate that AI tools will facilitate a third of my tasks in the next 6 months.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I anticipate that AI tools will facilitate a third of my tasks in the next 5 years.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I need to upgrade my skills to ensure job security with increasing AI use.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
I'm concerned about how I'll adapt to work changes due to AI tools.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

## AI Policies, Training, and Adoption in the Workplace

10) \* Please rate each statement on a 1-5 scale, where 1 represents "strongly disagree" and 5 represents "strongly agree". If you're unsure, please select "Cannot say".

	1 (strongly disagree)	2	3	4	5 (strongly agree)	"Cannot say"
My company has a policy on using AI tools.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company encourages the use of AI tools.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company provides training and guidance on the use of AI tools.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My company has integrated new AI tools in the past 6 months.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The adoption of AI tools among employees in my company over the past 6 months has been visible.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
My colleagues are utilising AI tools in their work, regardless of company policy.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

11) Is there anything specific you would like TEK to do with regard to the changes brought about by AI tools? This could for example be about services, labor market negotiations, or affecting legislation on this topic.

## Ethics, Risks, and Consequences of AI Use

On a scale of 1-5, where 1 indicates "never" and 5 indicates "very frequently",

**12) How often are (formal or informal) discussions about the ethical use of AI held in your workplace?**

1 (never)  2  3  4  5 (very frequently)

On a scale of 1-5, where 1 means "no risk" and 5 means "high risk",

**13) Is there any risk associated with the use of AI tools in your workplace?**

1 (no risk)  2  3  4  5 (high risk)

**14) Please elaborate on the risks associated with the use of AI tools in your workplace. For example, do you foresee potential consequences from misuse or over-reliance on AI in your personal work, workplace, or sector? Is there even a possibility that most of your tasks could be replaced by it in the near future?**

## Background information

**15) Labour market situation**

- Employed (with salary)
- Entrepreneur / freelancer
- Unemployed or in training during unemployment
- Student
- Retired (pensioner)
- Other or temporarily out of labour market

**16) Sector of employment**

- Industrial company
- Planning and design company
- Other private sector company (e.g. services, trade)
- University
- Governmental sector
- Municipal sector
- Other

**17) Gender**

- Male
- Female
- Other
- Prefer not to say

**18) Citizenship**

- Finland
- Other EU/ETA country
- Country outside of EU/ETA

**19) Position**

- Top Management
- Middle management
- Expert duties
- Other

**20) What is your age group?**

- Less than 20
- 20-29
- 30-39
- 40-49
- 50-59
- 60 and above

**21) Job role**

- Strategic planning and management
- Administration and finance
- Sales and marketing
- Procurement and logistics
- Production, manufacture and maintenance
- Product development
- Research and development
- Data processing, ICT tasks
- Planning and design (constructive, architecture, etc.)
- Quality management, auditing
- Project activities
- Teaching and education
- Consultation
- Other

## Annex 2

### First survey descriptive statistics

Variable	Category	Count	Percentage
Labour market situation	Employed (with salary)	269	95.1
Labour market situation	Entrepreneur / freelancer	5	1.8
Labour market situation	Unemployed or in training during unemployment	5	1.8
Labour market situation	Student	0	0.0
Labour market situation	Retired (pensioner)	0	0.0
Labour market situation	Other or temporarily out of labour market	4	1.4
Sector of employment	Industrial company	114	40.3
Sector of employment	Planning and design company	50	17.7
Sector of employment	Other private sector company (e.g. services, trade)	51	18.0
Sector of employment	University	18	6.4
Sector of employment	Governmental sector	17	6.0
Sector of employment	Municipal sector	12	4.2
Sector of employment	Other	21	7.4
Citizenship	Finland	253	90.0
Citizenship	Other EU/ETA country	10	3.6
Citizenship	Country outside of EU/ETA	18	6.4
Position	Top Management	17	6.0
Position	Middle management	46	16.4
Position	Expert duties	215	76.5
Position	Other	3	1.1
What is your highest level of education?	MSc (Technology, Engineering)	204	72.1
What is your highest level of education?	MSc (Architecture)	8	2.8
What is your highest level of education?	MSc (Science)	18	6.4
What is your highest level of education?	Post-graduate degree (Lic. or Dr.)	45	15.9
What is your highest level of education?	Other	8	2.8
Work experience	Less than 3 years	18	6.4
Work experience	3 to 7 years	47	16.6
Work experience	8 to 15 years	74	26.1
Work experience	16 to 25 years	81	28.6
Work experience	More than 25 years	63	22.3
Job role	Strategic planning and management	18	6.6
Job role	Administration and finance	7	2.6
Job role	Sales and marketing	13	4.8

Job role	Procurement and logistics	5	1.8
Job role	Production, manufacture and maintenance	9	3.3
Job role	Product development	35	12.9
Job role	Research and development	48	17.7
Job role	Data processing, ICT tasks	44	16.2
Job role	Planning and design (constructive, architecture, etc.)	21	7.7
Job role	Quality management, auditing	3	1.1
Job role	Project activities	25	9.2
Job role	Teaching and education	8	3.0
Job role	Consultation	19	7.0
Job role	Other	16	5.9

## Second survey descriptive statistics

Variable	Category	Count	Percentage
Labour market situation	Employed (with salary)	400	95.9
Labour market situation	Entrepreneur / freelancer	7	1.7
Labour market situation	Unemployed or in training during unemployment	6	1.4
Labour market situation	Student	2	0.5
Labour market situation	Retired (pensioner)	0	0.0
Labour market situation	Other or temporarily out of labour market	2	0.5
Sector of employment	Industrial company	165	39.7
Sector of employment	Planning and design company	75	18.0
Sector of employment	Other private sector company (e.g. services, trade)	77	18.5
Sector of employment	University	32	7.7
Sector of employment	Governmental sector	24	5.8
Sector of employment	Municipal sector	13	3.1
Sector of employment	Other	30	7.2
Gender	Male	304	73.4
Gender	Female	99	23.9
Gender	Other	4	1.0
Gender	Prefer not to say	7	1.7
Citizenship	Finland	376	91.0
Citizenship	Other EU/ETA country	16	3.9
Citizenship	Country outside of EU/ETA	21	5.1
Position	Top Management	29	7.0
Position	Middle management	64	15.5
Position	Expert duties	311	75.1
Position	Other	10	2.4



<b>What is your age group?</b>	Less than 20	1	0.2
<b>What is your age group?</b>	20-29	41	9.9
<b>What is your age group?</b>	30-39	130	31.5
<b>What is your age group?</b>	40-49	114	27.6
<b>What is your age group?</b>	50-59	91	22.0
<b>What is your age group?</b>	60 and above	36	8.7
<b>Job role</b>	Strategic planning and management	19	4.6
<b>Job role</b>	Administration and finance	5	1.2
<b>Job role</b>	Sales and marketing	20	4.9
<b>Job role</b>	Procurement and logistics	7	1.7
<b>Job role</b>	Production, manufacture and maintenance	19	4.6
<b>Job role</b>	Product development	48	11.7
<b>Job role</b>	Research and development	65	15.9
<b>Job role</b>	Data processing, ICT tasks	105	25.6
<b>Job role</b>	Planning and design (constructive, architecture, etc.)	30	7.3
<b>Job role</b>	Quality management, auditing	21	5.1
<b>Job role</b>	Project activities	22	5.4
<b>Job role</b>	Teaching and education	12	2.9
<b>Job role</b>	Consultation	19	4.6
<b>Job role</b>	Other	18	4.4