

Bridging the Accountability and Responsibility Gap: The Voices of SMEs and Local Authorities

Shi Yun Ng
Department of Computing
and Mathematics
Manchester Metropolitan
University
Manchester
0009-0005-0083-8641

Professor Keeley Crockett
Department of Computing
and Mathematics
Manchester Metropolitan
University
Manchester
0000-0003-1941-6201

Dr Annabel Latham
Department of Computing
and Mathematics
Manchester Metropolitan
University
Manchester
0000-0002-8410-7950

Dr Mohammed Kaleem
Department of Computing
and Mathematics
Manchester Metropolitan
University
Manchester
0009-0004-7174-4147

Abstract—Business adoption of artificial intelligence (AI) has become more significant due to the capacity to potentially enhance business productivity and operational efficiency. However, rapid advancement of AI technology also brings the question of “who is accountable when things go wrong?” While current AI legislation such as the EU AI Act and GDPR provide high-level principles, the practical interpretation of accountability in the context of AI decision making varies significantly between stakeholders. This paper presents the findings of a mixed-method study designed to capture and compare the distinct “voices” of two different groups in this ecosystem: the small-medium enterprise (SME) and the local government authority. The study facilitated two workshops, which aimed to (1) trial a prototype of the AI Accountability framework and (2) explore accountability and responsibility gaps within organizations by analyzing a recruitment workflow scenario. The results revealed that SMEs are prioritizing the integration of AI systems into their business workflows to enhance productivity; however, this focus may result in some ethical considerations being neglected. In contrast, local government authorities emphasized the need for systemic oversight, accessibility, and fairness, viewing accountability through the lens of institutional equity to safeguard public trust. The findings highlight the divergence in AI accountability approaches and reinforce the expressed need for practical tools and clear governance structures, so that AI accountability practices can be embedded into SMEs workflows and make responsibility assignments actionable and sustainable.

Keywords— *Accountability, ethics in artificial intelligence, SMEs stakeholder, local government authority*

I. INTRODUCTION

Given the advancing nature of AI technologies, especially in autonomous decision-making processes, it is important to address and establish accountability for the legal, ethical, and societal impacts that may arise. The Oxford Dictionary defines accountability as “the fact of being responsible for decisions or actions and being able to provide an explanation when asked”; responsibility is defined as “something where it is your duty to deal with or take care of someone or something and you may be blamed if something goes wrong” [1]. In a business context, accountability means holding individuals or organizations responsible for their actions, which requires them to acknowledge and accept responsibility, transparently disclose outcomes, and potentially face penalties for failing to fulfil their obligations [2-4]. In the context of AI, accountability refers to the involvement of AI actors who are responsible for ensuring the proper operation of AI systems and the obligation to answer for AI-related actions to ensure transparency, while responsibility encompasses ethical duties, including considering AI’s societal impact and mitigating risks [5]. Therefore, knowing who should be

held responsible for AI outcomes helps ensure that the development, deployment and use of AI align with ethical standards and legal regulations.

The complex interplay between human input and machine autonomy makes assigning responsibility difficult in the context of AI systems. The lack of standardized frameworks and guidelines for AI accountability and responsibility creates ambiguity and makes it challenging to establish consistent practices across different contexts and industries [6-8]. The issues of transparency and interpretability of AI algorithms increase complexity, make it difficult to review and understand decision-making mechanisms, and hinder efforts to hold individual stakeholders accountable for AI-generated outcomes [9, 10]. For example, the increasing use of AI in staff recruitment for tasks like resume screening and preliminary interviews raises transparency concerns because the system may not be able to explain why a candidate was selected or rejected [11]. It is crucial that a designated individual is responsible for providing explanations to applicants who are not selected for a position, especially when no clear reasons have been provided. Failure to do so could lead to questions about the fairness and bias in AI systems’ decision-making.

An example from a recent AI incident occurred when a user asked an Air Canada chatbot for information about Air Canada’s bereavement travel policy - the chatbot provided misleading information, and the user’s refund request was rejected because the airline’s policy contradicted the chatbot advice, resulting in the user not being satisfied with the outcomes [12]. The AI system implemented by Air Canada was intended to assist in customer service support, but the lack of human oversight and the provision of inaccurate information resulted in a negative customer experience. Following a legal investigation, the airline was found accountable, despite trying to claim the chatbot was its own entity. It is crucial to identify the party responsible for investigating AI incidents and for providing clear explanations to the public for decision made by the AI system.

The ongoing challenge with AI ecosystems is determining who should be held accountable and responsible for AI systems output, and how to raise awareness of AI accountability and responsibility among business stakeholders. For example, Ghosh, et al. [13] mentioned that current AI governance is hindered by a complex intersection of data management and interoperability hurdles, transparency and accountability gaps arising from algorithmic opacity, significant infrastructure barriers such as high computational costs and a scarcity of specialized expertise, and an overarching

regulatory lag. As a result, this could lead to an erosion of public trust, the exacerbation of systemic socioeconomic disparities and the emergence of uncontrollable risks to public safety unless current AI governance paradigms shift from static legislative models to adaptive, hybrid frameworks capable of providing the dynamic oversight required by increasingly autonomous AI systems [14].

This paper aims to explore accountability and responsibility in practice through the perceptions of two different types of organization: private sector small-medium enterprises (SMEs) and public sector local government authorities. The study presented in this paper builds on previous work [15, 16] that provided the guidance necessary for designing a prototype AI Accountability framework. Through a series of workshops, this study investigated the following research questions:

- RQ1. How do business stakeholders identify accountability and responsibility gaps when comparing workflows that incorporate AI with those that do not?
- RQ2. How do local authorities identify accountability and responsibility gaps when comparing workflows that incorporate AI with those that do not?
- RQ3. What are the differences in how business stakeholders and local authorities interpret AI accountability and oversight across workflows?
- RQ4. Can an AI Accountability framework support public and private organizations in operationalizing accountability in their workflows?

The main contributions in this paper are:

- An initial prototype AI accountability framework designed for SMEs.
- Empirical evidence highlighting the divergence in AI accountability approaches between SMEs and local government authority.

The structure of this paper is as follows: Section II describes the related work. Section III illustrates the initial prototype of the AI accountability framework. Section IV presents the research study methodology. Section V presents the results obtained from the workshops. Section VI discusses each RQ. Section VII concludes the paper and outlines future work.

II. RELATED WORK

A. Accountability and Responsibility in AI

Based on the previous studies, accountability includes both answerability (transparent justifications for algorithmic decisions) and auditability (accessible records and oversight of system behavior) [4, 17, 18]. In the context of accountability, answerability refers to the obligation or willingness of a person or organization to provide explanations or justifications for one's actions, decisions or responsibilities, to the public, stakeholders, authorities or other relevant parties. Auditability is usually associated with accountability to ensure transparency in the process and ensure that the decision made by the AI system is traceable and can be verified in the event of an incident.

To achieve AI accountability and responsibility requires transparency, stakeholder engagement, ethical

integration, and continuous monitoring, along with clear definition of system purpose, decision-making criteria, responsible parties, traceability, and redress mechanisms for unforeseen issues [4, 19]. The transparency of the AI development and deployment process ensures that individuals or users understand the capabilities and limitations of AI systems. Transparency should exist across the entire AI lifecycle, such as by infusing accountability within data management or human-centered design and understanding individual roles and tasks [4, 19, 20]. However, some researchers argue that excessive transparency of datasets or detailed explanations of algorithms could lead to the loss of private data and commercial intellectual property, or the risk of targeted hacking attacks [9]. Xia, et al. [21] mentioned the challenge with transparency in AI, particularly around the “Many Hands” problem, the involvement of multiple stakeholders in AI development and deployment, makes accountability difficult to establish. Despite the excessive transparency drawback, transparency can help people understand how AI makes decisions, know the intentions and mechanisms of the system, and help people build confidence and trust in using the AI systems [9]. To ensure *appropriate* transparency of AI systems, ethical implications should be understood throughout the design process and ethical considerations should be included in every stage of AI development to guide developers Sanderson, et al. [10]. For instance, designing an ethics model by illustrating a Unified Modelling Language (UML) diagram to represent AI systems with ethical aspects. Alternatively, designing a use case diagram can help define stakeholders and explain the functions that are implemented in the AI systems [22].

Accountability in AI lies in the decisions made by AI systems, which require stakeholder engagement. The multi-stakeholder approach covers a range of issues from designers, regulators and other stakeholders with different perspectives and shared commitments to common standards in the design, development and deployment of AI systems [23]. Lu, et al. [22] suggested that to implement the multi-stakeholder approach, interviews can be conducted during the design process to capture the requirements of different stakeholders in addition to organized workshops to provide consultation or training to stakeholders during the design and development stages of AI systems.

Previous studies have suggested that implementing auditability to assess the algorithms and design processes can examine the actions or decisions taken by AI systems, thereby enabling transparency and minimizing harm by reporting negative impacts and consequences in accordance with legal principles [4, 6, 18]. Researchers have also explained that algorithmic testing and redress mechanisms are crucial for resolving issues and maintaining user trust in cases where the AI system's results are deemed incorrect [8, 18]. Although continuous monitoring is an important aspect, Haakman, et al. [24] also emphasized the importance of interdisciplinary skills and interactive development to ensure accuracy, security and interpretability. Therefore, the purpose of AI accountability and responsibility is to ensure accountable development and deployment of AI systems, to help promote trust, to provide benefits for protecting citizens' rights, and to promote social and environmental well-being.

III. PROTOTYPE OF AI ACCOUNTABILITY FRAMEWORK

A systematic literature review of responsibility and accountability in data-driven and AI systems [15] revealed a significant gap pertaining to the lack of standardized governance frameworks for AI systems and unclear guidance on which organizational roles should enforce accountability measures. Previous work in surveyed 107 participants in the United Kingdom to examine how age and education influence public perceptions of AI accountability in the domains of healthcare and autonomous vehicles (AVs) [16]. The survey revealed that individuals with lower education levels are significantly less confident in assigning responsibility to the person that caused the AI failures in the case studies and, along with older age groups, exhibited lower overall trust in AI technologies. The outcomes of the survey [16] and review lead to the design of a prototype AI Accountability Framework shown in Figure 1. The aim of the framework is to enable SMEs to identify, assign and fulfill responsibility and accountability in the context of data and AI-driven systems.

The framework distinguishes between internal and external stakeholders in terms of who should be held accountable and responsible for AI systems. The *Internal Stakeholder* refers to the people whose interest in a company comes through a direct relationship such as employment, ownership and investment. While the *External Stakeholder* refers to the people who do not directly work or with company but are affected by actions and outcomes of the organizations. Internal stakeholders possess a clearer understanding of the intention and purpose of the AI project's implementation. Conversely, the identification of external stakeholders is necessary to ensure compliance, build trust, and align the AI system with broader societal and business expectations.

To fully address accountability, the application of the 'Why, Who, What, When and How' (4Ws and H) questions must be considered dynamically across the entire AI lifecycle. By addressing the (4Ws and H) questions, the

framework seeks to achieve transparency, explainability, responsibility, and auditability. The (4Ws and H) questions are essential for ensuring that AI systems are not only technically sound but also ethically grounded, facilitating trust through clear decision-making logic and ensuring long-term alignment with organizational and social values.

IV. STUDY METHODOLOGY

The aim of the study was to investigate how SMEs and local government authorities address AI accountability in their respective organizational workflows. The study comprised two separate workshops with representatives from SMEs and local government authority. The objectives of the workshops were firstly to trial the initial prototype of the AI accountability framework (Figure 1). Secondly, to explore how such a framework could potentially be embedded into organizational workflows by working through a scenario to compare AI-driven recruitment processes with traditional methods.

A. Workshop Structure

Participants were recruited through two channels. First, invitations were extended to individuals who provided explicit consent for follow-up contact from previous survey [16]. Second, additional workshop participants were recruited through LinkedIn advertisements or collaborator networks.

The SMEs workshop took place in person at Manchester Metropolitan University. The workshop for local government authority participants was conducted online via Microsoft Teams. To ensure consistency, both the SMEs and local government authority workshops followed the same structure. The session began with a pre-survey to rate participants' level of confidence in AI accountability (Table I). Following this, the initial prototype of the AI Accountability framework (Figure 1) was introduced. Participants then engaged in an activity based on an HR recruitment process scenario with one workflow that did not use AI (Figure 2) and one that did (Figure 3).

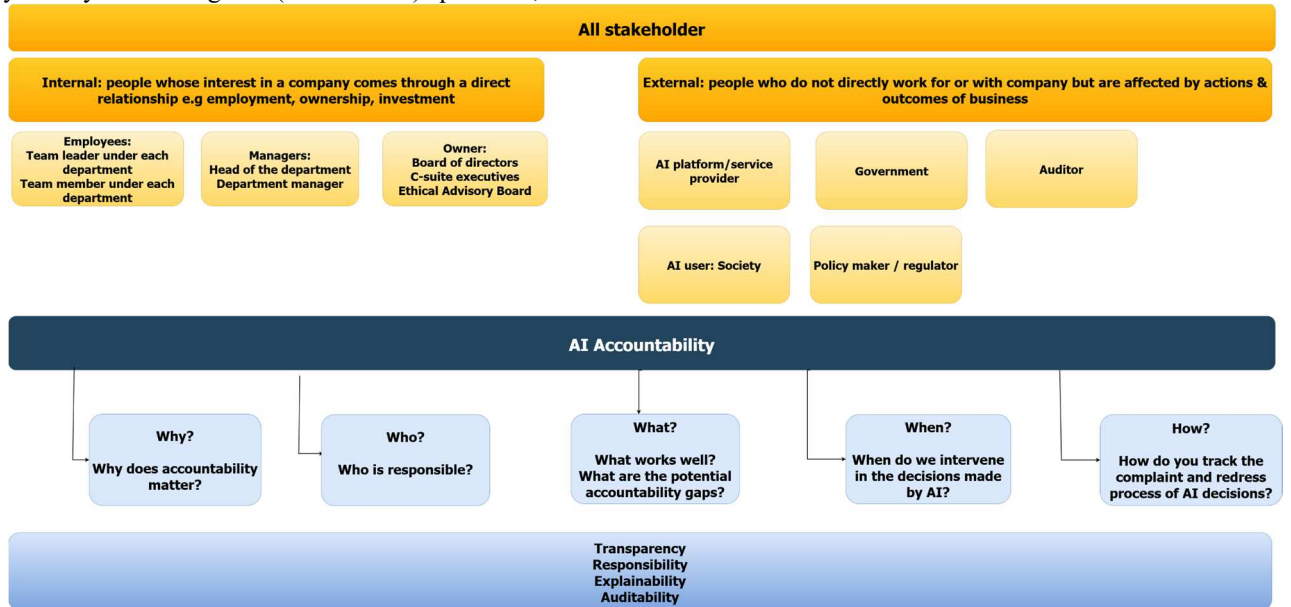


Fig. 1. Initial Prototype of AI Accountability Framework

During this activity, discussions were structured around the key questions from the AI Accountability framework (Figure 1), enabling participants to apply the framework and identify the accountability and responsibility gaps in AI decision-making processes. Finally, participants completed a post-survey (Table I) to reassess their level of confidence in AI accountability to measure the gain in their AI accountability literacy. The pre- and post-surveys comprised Likert scale questions, as shown in Table I.

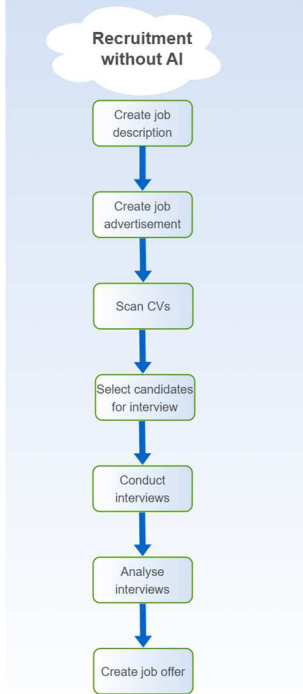


Fig. 2. Recruitment Workflow without AI

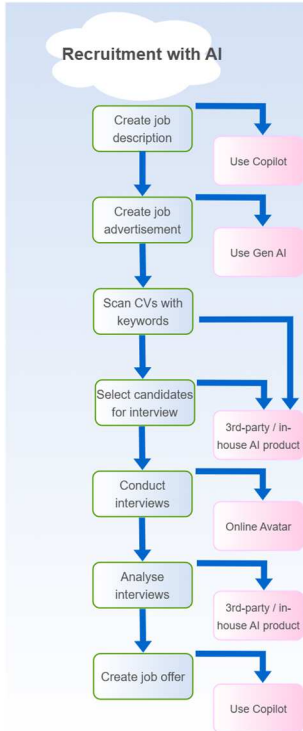


Fig. 3. Recruitment Workflow with AI

Figure 2 illustrates that without the use of AI, the recruitment process typically starts with creating a job description, followed by creating a job advertisement, scanning CVs, selecting candidates for interviews, conducting interviews, analyzing interview results, and creating a job offer (all aspects of the process completed by a human).

By leveraging agentic AI, recruitment workflows can become fully integrated and automated across multiple stages, as shown in Figure 3. Unlike traditional AI systems that perform isolated tasks, agentic AI systems act as autonomous agents capable of coordinating and executing complex processes end-to-end. For example, in HR recruitment an AI agent can generate tailored job descriptions using tools like Copilot, then seamlessly transition to screening and ranking CVs through third-party platforms or in-house AI solutions. AI agents could also interact with other systems, schedule interviews, and provide candidate insights without constant human intervention, enabling a more efficient, consistent, and scalable recruitment process.

TABLE I. LIKERT SCALE QUESTIONS

Q-no	Questions
1	I feel confident explaining the importance of AI accountability to others.
2	I feel confident identifying roles and responsibilities within the AI process.
3	I feel confident identifying potential accountability gaps in AI systems.
4	I feel confident in knowing when to integrate human-in-the-loop in AI systems.
5	I feel confident managing accountability issues related to AI systems.

The Manchester Metropolitan University granted ethical approval for this research (EthOS number: 80155).

B. Recruitment of Participants

The workshops aimed to recruit 3 to 8 participants, as this size allows for more in-depth conversations and meaningful individual contributions. Larger groups can be more difficult to manage and may limit the opportunity for detailed input from each participant [25].

For the workshop, the inclusion criteria for participation by SME and local government authority stakeholders was individuals who were working in organization that either actively use, have previously used or are planning to use AI technologies within their businesses activities. Alternatively, their organization utilises third-party solutions that incorporate AI. The participants were required to provide explicit consent to participate in the workshop after reading the participant information sheet that was provided to them at the beginning of the workshop.

C. Mixed-methods approach

A mixed-methods approach was employed to provide an evaluation of the workshop's impact, integrating both quantitative and qualitative data. Pre- and post-survey results were analyzed to measure the shift in participants' knowledge and capture measurable gains in AI accountability literacy. To complement the qualitative findings, the discussions were either audio-recorded or documented through manual notetaking and analyzed using

thematic analysis. This qualitative layer was designed to elicit participant perspectives on identifying accountability and responsibility gaps in AI decision-making when comparing AI-driven recruitment with traditional methods.

V. RESULTS

The study comprised two workshops involving a total of 10 participants: 7 from the SMEs and 3 representatives from local government authorities. This section presents the results from the qualitative analysis of the workshop discussions and the quantitative analysis of the pre- and post-surveys.

A. SMEs workshop

From the HR recruitment process discussion, participants believe that accountability is important because AI can make mistakes when scanning job applicants' CVs or analyzing interview results. However, the participants highlighted the pros and cons of using tools like Copilot to create job descriptions is useful when refining the context rather than generating the context because the job description needs to be tailored to the specific job. Hence, one of the participants expressed concern that people without recruitment experience might rely on the information produced by AI systems and they argued that the person using the prompt to generate the job description should bear the primary responsibility for the AI-generated outcomes.

The use of Generative AI (GenAI) in the hiring process may lead to a gap, according to one participant, since no one is held responsible for copyright issues resulting from the training data used to create job descriptions. Moreover, participants agreed that bias appears when AI is used to analyze interviews, so a human reviewer should step in during the analysis of the interview results. One of the participants stated that "the procedure needs to fit human-in-loop, like checkpoint, in order to recover the mistake done by AI." Another participant said, "It is difficult to pinpoint the problem during analysis of the interview results and it is subjective as that could be biased and when it is biased, you don't even know. The bias is already there." As a result, the participants emphasized the importance of having review capacity, which always requires humans to review the decision made by AI in order to maintain a level of fairness.

Furthermore, when discussing approaches to intervene in the decisions made by the AI agents, participants suggested using methods like credit-score or credit-rating to help standardize processes, for example, by using resumes and CVs provided by candidates to capture their job experience or background, which then automatically signposting them to roles that match their qualifications. As a result, this approach aims to enhance transparency and consistency in outcomes. This aligns with observations that reputable recruitment firms often provide explanations upon request to ensure procedural transparency for unsuccessful candidates. Participants also offered another suggestion: when multiple candidates apply for the same job, the recruitment agency should implement a time-stamping mechanism to record the exact submission date and time. This would ensure proper traceability, so that if a candidate requests feedback about why their application

was unsuccessful, the recruitment firms can trace back the exact submission time and date recorded on the application to provide an auditable record for the AI-driven screening process. While for the redress process, they emphasized the importance of involving a human reviewer, as one participant summarized "humans are emotional beings and are better equipped to handle sensitive and nuanced situations."

B. Local government authority workshop

According to the local authority participants, accountability matters in their organization because it ensures that individuals are protected from harmful or biased outcomes, and strengthens public trust, especially if the services may affect residents' rights and wellbeing and ensures decisions are traceable and compliant with legal and organizational standards, preventing gaps where no one takes responsibility when AI makes errors.

One participant mentioned having experience as both a recruiter and a candidate, stating that "I find it can be useful as an iterative process to help in writing a cover letters according to the job specification and things like this. But it's a real red flag and it was also on the application form to not use GenAI. You have your own tone and things." The participant identified a red flag, noting that submitting and processing a job application via AI agents may be risky because individuals have their own authentic tone, which AI technologies may not accurately reflect.

The participant mentioned that "In the visual [Figure 3], there's several different tools of AI being used. When it comes to accountability, if we're using multiple tools, are they all held to the same standard? Do they all have the same rules?" Another participant highlighted that external regulations or internal policies might apply differently depending on whether the organization builds its own AI systems or uses third-party tools. They also posited that developing AI internally gives more control and responsibility to the organization compared to outsourcing (procurement) or using multiple external tools. One participant raised a critical bias and accessibility concern when using AI-driven interviews through an avatar, suggesting that it might disadvantage candidates with accents, speech disorders, or other communication differences. Given the various agentic AI systems employed in the process of recruitment, the participants questioned whether this layered approach complicates accountability.

The participants stated that human intervention is crucial especially when using an AI system to make hiring decisions as this can significantly impact people's lives. Moreover, participants suggested that the governance framework for accountability should include detailed considerations about accessibility, like whether AI-driven processes accommodate for candidates with disabilities, language difference or other needs without bias. The participants also emphasized the notion of inclusivity and fairness when integrating AI systems into recruitment or any process that involved making decisions about humans and that there should be a one-size-fits-all approach.

The participants also suggested monitoring user experience and complaints as part of accountability. This includes qualitative feedback, not just metrics, but

understanding real-world impact. The participants also suggested that the implementation of AI systems in recruitment should be treated as experimental testing ground, emphasizing that people’s lives are at stake. If experimentation is needed, it should happen in sandbox environments, not live hiring processes.

C. Pre- and Post-Survey Results

Table II presents the pre- and post-survey results for the SMEs workshop. While Table III presents the corresponding results for local government authority workshop.

TABLE II. PRE- AND POST-SURVEY RESULTS (SMEs)

Questions	Pre-survey Median	Post-survey Median
I feel confident explaining the importance of AI accountability to others.	3.5	4
I feel confident identifying roles and responsibilities within the AI process.	3	4
I feel confident identifying potential accountability gaps in AI systems.	2.5	4
I feel confident in knowing when to integrate human-in-the-loop in AI systems.	3	4
I feel confident managing accountability issues related to AI systems.	2.5	3

TABLE III. PRE- AND POST-SURVEY RESULTS (LOCAL AUTHORITY)

Questions	Pre-survey Median	Post-survey Median
I feel confident explaining the importance of AI accountability to others.	4	4
I feel confident identifying roles and responsibilities within the AI process.	3	3.5
I feel confident identifying potential accountability gaps in AI systems.	3	4
I feel confident in knowing when to integrate human-in-the-loop in AI systems.	4	3.5
I feel confident managing accountability issues related to AI systems.	3	4

Based on the pre- and post-survey results, SMEs participants showed a slight increase in their overall confidence in operationalizing AI accountability using the prototype of the AI Accountability framework. Similarly, for local government authority participants, pre- and post-survey results also showed slight increase in the operational aspects; however, the confidence in knowing when to integrate human-in-the-loop in AI systems slightly decreased after the workshop.

VI. DISCUSSION

This section discusses research questions based on results gathered from the workshops with local government authorities and business representatives.

A. (RQ1) How do business stakeholders identify accountability and responsibility gaps when comparing workflows that incorporate AI with those that do not?

The theme of ambiguous ownership in the SMEs workshop discussion stems from a tendency to assign accountability and responsibility to the most visible point of interaction: the end-user. Specifically, participants

argued that the individual who generates the job description using tools like Copilot should be held accountable for the results. Participants acknowledged that a user without deep recruitment experience might rely on the AI-generated outputs, potentially accepting flawed or biased output. This focus on the end-user’s action effectively sidesteps a more systemic inquiry, as participants did not question who was accountable for the AI system’s design, training data, or underlying model reliability. As a result, business stakeholders mainly see AI as a tool to help them work more efficiently and to explore new possibilities. This finding aligns with the insight mentioned by Fraser and Suzor [26] that the end-users of the AI system are often absorbing blame when things go wrong with AI systems, especially when it’s hard to pinpoint fault upstream. This happens because they are the last link in the causal chain, and their actions are more visible and narratively simple than the complex technical factors that led to the harmful output. This theme revealed a pattern that the end-users often lack insight into how the model was developed, including the reliability of the data and its training data. Hence, this further emphasized the tension between user responsibility and organizational accountability.

Another theme that emerged from the workshop is that human oversight is essential when AI-generated decisions can impact individuals or emotional support is needed. Business participants expressed that human intervention is necessary during the review of recruitment interview results because this is where the AI system may reflect existing biases, especially if those biases could impact individuals. However, when AI is used for tasks like processing job descriptions or advertisements, human oversight is generally not required, as these functions are less likely to cause harm. This theme revealed another critical issue, which is that the general public, who are the ones being affected by the use of AI, are often unaware that AI systems are being used internally within organizations to automate processes, which limits their ability to question or even understand the decision-making process.

B. (RQ2) How do local authorities identify accountability and responsibility gaps when comparing workflows that incorporate AI with those that do not?

Local government authority participants demonstrate a strong openness to adopting AI technologies and are actively considering how to integrate them into public services. While they recognize the potential benefits, they remain mindful of critical issues such as data ownership and long-term sustainability. In particular, they aim to uphold consistent standards when procuring AI technologies from different sources, acknowledging that the use of multiple systems could complicate responsibility and oversight. Furthermore, they emphasized the importance of accessibility and fairness, ensuring that AI solutions serve diverse demographics without disadvantaging minority groups during implementation. This approach reflects a commitment to using AI thoughtfully and responsibly in ways that enhance public service while safeguarding equity and trust. As a result, these considerations reflect a responsible and accountable approach to AI adoption, aimed at enhancing public service

efficiency while safeguarding fairness, transparency and trust.

C. (RQ3) What are the differences in how business stakeholders and local authorities interpret AI accountability and oversight across workflows?

The interpretation of AI accountability varies between SMEs and local government authority participants, moving from a focus on individual efficiency in the private sector to institutional equity in the public sector. Business participants view AI primarily through the lens of utility and innovation. The goal is to streamline workflows like creating job descriptions and explore new possibilities. Their adoption is pragmatic if a task is low-risk, AI is used autonomously to save time. While for local authorities, they value efficiency, their positioning is anchored in accessibility and fairness which is rooted in local authorities being accountable to the general public they serve and strict government guidelines on their day-to-day operations. Because they serve diverse demographics, their interpretation of AI is inseparable from its impact on minority groups. They prioritize long-term sustainability and the safeguarding of equity over time saving.

Additionally, accountability in the business sector is frequently characterized by a blame-shifting culture where the end-user is often the last link in the causal chain and absorbs the fallout of AI errors. This creates a tension where the user is responsible for a system they didn't build and don't fully understand. Local authorities adopt a more structured approach by focusing on consistent standards and organizational oversight to maintain public trust. They treat AI as a systemic integration that requires organizational due diligence to adhere to the legislation that governs their day-to-day modus operandi.

The perspectives of SMEs and local government authority participants also diverge in their approach to human intervention, moving from selective oversight in business to systemic oversight in local authorities. Business participants employ human review is only deemed essential for high-impact or emotionally sensitive tasks, such as interview evaluations, while leaving lower-stakes workflows like the creation of job advertisements unmonitored. In contrast, local authorities interpret oversight as an overarching comprehensive institutional duty; their focus on transparency and public trust necessitates a more structured, end-to-end monitoring process to ensure that the use of multiple AI systems does not lead to hidden biases or a loss of democratic accountability.

D. (RQ4) Can an AI Accountability framework support public and private organizations in operationalizing accountability in their workflows?

The initial prototype AI Accountability framework supports public and private organizations to embed accountability into their workflows by providing the components (4Ws and H questions) needed to translate abstract ethical principles into the practical application. The pre- and post-survey results demonstrated a slight increase in confidence among SME participants in areas like identifying accountability gaps in AI systems, indicating that the prototype framework can help provide the essential

components to begin the operationalization of AI accountability within their organization. Conversely, the slight decrease in confidence among local government authority participants regarding their ability to determine when human-in-the-loop in AI systems may suggest that further development of the prototype framework could strengthen its capacity to address this aspect. The prototype framework is also limited to a single recruitment workflow scenario and the perspectives of two stakeholder groups. These limitations highlight that participants from both SMEs and local government authorities agreed that most organizations would require dedicated tools and a robust AI accountability framework to support them in operationalizing AI accountability. This need was specified through calls for more case studies on AI accountability implementation scenarios and a demand for practical tools or actionable outputs that can guide them in drafting and implementing AI accountability policies within their organizational processes.

VII. CONCLUSIONS AND FURTHER WORK

The study concludes that while both SMEs and local government authorities recognize the growing role of AI in decision-making processes such as recruitment, they differ in how they interpret and assign accountability for AI outputs, with SMEs prioritizing efficiency and productivity and local authorities emphasizing fairness, transparency, and accessibility. The findings highlight that accountability becomes blurred and more complex when multiple AI technologies are used, reinforcing the need for clear governance structures and human oversight, especially in high-impact decisions that significantly affect individuals. While the initial prototype of the AI Accountability framework provides essential components, stakeholders expressed the need for more practical tools, clearer guidelines, and real-world case studies to support responsible AI adoption. In conclusion, the paper underscores that AI accountability requires a combination of human-in-the-loop mechanisms, transparent processes, stakeholder awareness, and frameworks that translate ethical principles into actionable organizational practice. Future work involved refining the AI accountability framework based on the insights gathered from the workshops. Additionally, a toolkit will be developed to guide organizations in implementing and adopting AI accountability practices within their organizations.

REFERENCES

- [1] A. Stevenson, *Oxford dictionary of English*. Oxford University Press, USA, 2010.
- [2] T. H. Bivins, "Responsibility and accountability," *Ethics in public relations: Responsible advocacy*, pp. 19-38, 2006.
- [3] S. K. McGrath and S. J. Whitty, "Accountability and responsibility defined," *International Journal of Managing Projects in Business*, vol. 11, no. 3, pp. 687-707, 2018.
- [4] C. Novelli, M. Taddeo, and L. Floridi, "Accountability in artificial intelligence: what it is and how it works," *AI & SOCIETY*, pp. 1-12, 2023.

- [5] OECD, "Advancing accountability in AI," 2023, doi: <https://doi.org/10.1787/2448f04b-en>.
- [6] E. Hohma, A. Boch, R. Trauth, and C. Lütge, "Investigating accountability for Artificial Intelligence through risk governance: A workshop-based exploratory study," *Frontiers in Psychology*, vol. 14, p. 1073686, 2023.
- [7] V. Qiang, J. Rhim, and A. Moon, "No such thing as one-size-fits-all in AI ethics frameworks: a comparative case study," *AI & SOCIETY*, pp. 1-20, 2023.
- [8] A. K. Raja and J. Zhou, "AI Accountability: Approaches, Affecting Factors, and Challenges," *Computer*, vol. 56, no. 4, pp. 61-70, 2023.
- [9] B. Li *et al.*, "Trustworthy AI: From principles to practices," *ACM Computing Surveys*, vol. 55, no. 9, pp. 1-46, 2023.
- [10] C. Sanderson *et al.*, "AI ethics principles in practice: Perspectives of designers and developers," *IEEE Transactions on Technology and Society*, 2023.
- [11] S. Ayoub. "Recruitment by robot: how AI is changing the way Australians get jobs." *The Guardian*. <https://www.theguardian.com/technology/2023/oct/23/ai-recruitment-job-search-artificial-intelligence-employment> (accessed 11th March 2023).
- [12] A. Belanger. "Air Canada must honor refund policy invented by airline's chatbot." <https://arstechnica.com/tech-policy/2024/02/air-canada-must-honor-refund-policy-invented-by-airlines-chatbot/> (accessed 16th February 2023).
- [13] A. Ghosh, A. Saini, and H. Barad, "Artificial intelligence in governance: recent trends, risks, challenges, innovative frameworks and future directions," *AI & SOCIETY*, pp. 1-23, 2025.
- [14] G. Uk. "Public attitudes to data and AI: Tracker survey (Wave 4) report." <https://www.gov.uk/government/publications/public-attitudes-to-data-and-ai-tracker-survey-wave-4/public-attitudes-to-data-and-ai-tracker-survey-wave-4-report#sampling-and-weighting> (accessed June 2023).
- [15] S. Y. Ng, K. Crockett, A. Latham, and M. Kaleem, "A Systematic Review of Responsibility and Accountability in Data-driven and AI Systems (Submission date: 7th August 2024 - under review)," 2024.
- [16] S. Y. Ng, K. Crockett, A. Latham, and M. Kaleem, "Public Perception of Accountability for AI Systems: The Influence of Age and Education," 2025.
- [17] D. Leslie, "Understanding artificial intelligence ethics and safety," *arXiv preprint arXiv:1906.05684*, 2019.
- [18] N. Díaz-Rodríguez, J. Del Ser, M. Coeckelbergh, M. López de Prado, E. Herrera-Viedma, and F. Herrera, "Connecting the dots in trustworthy Artificial Intelligence: From AI principles, ethics, and key requirements to responsible AI systems and regulation," *Information Fusion*, vol. 99, p. 101896, 2023/11/01/ 2023, doi: <https://doi.org/10.1016/j.inffus.2023.101896>.
- [19] E. Hohma, A. Boch, and M. Pokholkova. "Establishing a Practical Organizational Framework for AI Accountability." https://www.ieai.sot.tum.de/wp-content/uploads/2023/09/IEAI_Whitepaper_Consultation_AccountabilityFramework.pdf (accessed 22th January 2024).
- [20] A. M. Kempton, E. Parmiggiani, and P. Vassilakopoulou, "Accountability in Managing Artificial Intelligence: State of the Art and a way forward for Information Systems Research," 2023.
- [21] B. Xia, Q. Lu, L. Zhu, S. U. Lee, Y. Liu, and Z. Xing, "Towards a Responsible AI Metrics Catalogue: A Collection of Metrics for AI Accountability," in *Proceedings of the IEEE/ACM 3rd International Conference on AI Engineering-Software Engineering for AI*, 2024, pp. 100-111.
- [22] Q. Lu, L. Zhu, X. Xu, J. Whittle, D. Zowghi, and A. Jacquet, "Responsible AI Pattern Catalogue: A Collection of Best Practices for AI Governance and Engineering," *ACM Comput. Surv.*, vol. 56, no. 7, p. Article 173, 2024, doi: 10.1145/3626234.
- [23] J. R. Schoenherr, R. Abbas, K. Michael, P. Rivas, and T. D. Anderson, "Designing AI using a human-centered approach: Explainability and accuracy toward trustworthiness," *IEEE Transactions on Technology and Society*, vol. 4, no. 1, pp. 9-23, 2023.
- [24] M. Haakman, L. Cruz, H. Huijgens, and A. van Deursen, "AI lifecycle models need to be revised: An exploratory study in Fintech," *Empirical Software Engineering*, vol. 26, pp. 1-29, 2021.
- [25] G. Uk. "Researching in small group workshops." <https://www.gov.uk/service-manual/user-research/research-small-group-workshops> (accessed 15th May 2025).
- [26] H. L. Fraser and N. P. Suzor, "Locating fault for AI harms: a systems theory of foreseeability, reasonable care and causal responsibility in the AI value chain," *Law, Innovation and Technology*, vol. 17, no. 1, pp. 103-138, 2025.