Will Publicly Available AI Tools Change Public Participation, and How Should We Respond

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Abstract

In light of the advancement of AI technology, there has been much discussion of applying AI tools to assist Impact Assessment and public participation exercises. Meanwhile, with the rising publicity of AI-based tools, we should also prepare for the challenges that would arise from the widespread use of AI tools among the public. Using an experimental case study, we illustrate that AI tools, particularly LLM AI assistants, could be used for benevolent or malevolent purposes. To address these challenges, we should consider our strategy to engage the public. We need to maintain human interactions and ensure that public participation focuses on its objectives.

Introduction

Many new AI-based applications have been released to the market in recent years. In IA and public participation, researchers and practitioners have been exploring the use of AI in practice. However, it must be pointed out that the recent development of AI has not only advanced in the capacity of using AI in conducting tasks. There has also been a significant increase in the availability of AI tools. In particular, free AI assistants like OpenAI ChatGPT and Google Gemini have become popular for everyday use. A recent news article reported that ChatGPT hit one billion users in April 2025. It is foreseeable that the members of the public would use AI tools to assist their participation in IA. In the new era shaped by AI interventions, we cannot only focus on using AI to push forward their agenda.

In this short paper, we use Large Language Models (LLMs) to demonstrate. The reason of that is not only that these applications are popular, it is because LLM models could be viewed as showcase of current Natural Language Processing (NLP) and Natural Language Generation (NLG) capacity. NLP and NLG enable AI to read consultation documents and assist users in responding and drafting submissions, which could easily find their interventions in public participation exercises. The discussion of the potential intervention of LLMs would also be relevant to the future NLP-based AI applications.

Overview of NLP, NLG and LLMs

Natural Language Processing (NLP) is one of the major subsets of AI. It specialises in the linguistic aspects, enabling AI to understand and process human language. Natural Language Generation (NLG) is a subcategory of NLP, primarily covering the AI content generation. With the latest development of NLP and NLG, AI is able to analyse various forms of human language (i.e. voice and text), retrieve information and use the information to generate written content (for a more detailed explanation, see Belcic and Stryker, 2025).

Large Language Model (LLM) is a type of AI model that is marketed as AI assistance. They are pre-trained with an extensive database behind the scenes and employ advanced technology in NLP and NLG. They are capable of assisting the users with everyday tasks, such as searching for information, summarising documents, and generating text and pictures. LLMs also serve as foundation models that can be used in collaboration with other AI models, for example, Google Vertex AI platform.

LLMs have seen a soaring popularity in recent years. It is reported that ChatGPT has reached 1 billion users (Paris, 2025). There are also several other popular LLM applications on the market, such as Gemini, Claude, Copilot and Deepseek. These applications are made generally available to everyone. They provide a free version (despite being limited) for the users. As the AI models run on cloud servers, they also reduce the hardware requirements for the users to use these models.

With the publicity of AI applications like LLMS, it is expected that members of the public will use AI tools in public participation practice. While it is uncertain how AI would be used and for what purpose, practitioners must prepare for the challenges that would arise, particularly in scenarios where AI tools are being extensively used by the public.

Experimental case study

To facilitate discussions of the subject, we conducted an experimental case study. We uploaded the *SA incorporating EqIA and HIA of the Submission Draft Liverpool Local Plan*¹ report to Google Gemini (2.5 pro) and prompted the AI to extract information, review and prepare submissions for us. The prompts and the overview of AI responses are presented as follows:

Prompt 1:

Read the assessment report and summarise the environmental and health impacts on the residents

Overview of AI response :

Gemini concluded that the assessment suggests numerous policies intended to mitigate negative environmental impacts and promote positive health outcomes for

residents, while there are potential negative effects and tensions. It summarised the key findings of the environmental and health topics described in the report. Overall, the AI-generated summary is in line with the report writing.

Prompt 2:

Further investigate the report about the impacts on air quality, green infrastructure and human health. Then, review whether there are sufficient measures to protect the health of the residents. Also, review whether the impacts would fulfil international standards.

Overview of AI response :

Gemini identified the key policies and regulations that were referenced in the report. It summarised that the impacts and measures would achieve the sustainability goals and fulfil the corresponding policies and regulations despite that not all negative impacts would be mitigated. Gemini also suggested that the report does not demonstrate that the outcomes would meet the stricter, non-binding international health standards like WHO AQGs or specific GI provision metrics.

Prompt 3:

Assume you are a resident, draft a submission to the authority to urge them to address the uneven distribution of green infrastructure and propose some further actions.

Overview of AI response :

Gemini drafted a letter that highlights the attention needed to address the uneven distribution of green infrastructure across Liverpool and its direct link to health inequalities. It also provides suggestions like targeted investment in deficient areas, prioritising GI creation in planning approvals, enhancing connectivity, and monitoring equity.

Prompt 4:

Assume you are an unsatisfied resident, draft a submission and raise a complaint about the assessment report, which failed to adopt the more stringent WHO air quality targets

Overview of AI response :

Gemini drafted a complaint letter that criticised the report failed to benchmark the Local Plan's impacts against the more stringent WHO AQO guidelines. It gives the reasons that, as the Local Plan directs long-term development, it should adopt more stringent criteria as long-term goals to safeguard human health. Gemini's draft also includes demanding a supplementary air quality assessment against the WHO guidelines, as well as additional measures and long-term monitoring.

Discussion

From the above experiment, we could make several observations:

- i. Al assistants can read and summarise the assessment reports for the user
- ii. AI can help highlight the concerned issues.
- iii. Al can help review and argue the IA findings and measures.
- iv. Al can draft submissions on behalf of the user, including providing the reason.
- v. Al can draft a submission in minutes, and the product is similar to a genuine submission by a human.
- vi. Al drafts do not necessarily represent the user's intention or the subject they are actually concerned with.

With the publicity of the AI assistant tools, it is expected that members of the public will use them to participate in IA. The key question we ask here is what kind of scenarios it will create and how we could respond. In conventional consultation formats that rely on the release of documents and public feedback submissions, AI would undoubtedly show its interventions. If AI is extensively used in drafting submissions, it could mask the genuine comments and opinions of the public. Meanwhile, a large volume of AIgenerated submissions could be tricky for practitioners to process.

In the era of AI, a new strategy for public participation is needed to maintain communication among human users. To keep public participation on track with the objectives, we need to differentiate the genuine comments of the public from inputs from AI, and we need to understand the intent of the user behind the prompting of AI. We would raise the discussion and invite comments at the IAIA25 conference and then incorporate them into the final conference paper.

Conclusion

As powerful AI tools become widely available and popular, it is expected that members of the public will use these tools in public participation practices. We demonstrated that AI tools, like LLMs can provide much assistance to the users, including drafting submissiosn on behalf of the users. If that is the case, public participation practice could not rely on the conventional consultation format and requires a new strategy to maintain communications. We look forward to having this discussion at the IAIA25 conference.

Remarks

¹ <u>https://liverpool.gov.uk/planning-and-building-control/plan-making-in-liverpool/the-liverpool-local-plan-2013-2033/</u>

Reference:

Belcic, I., Stryker, C. (2025). What is natural language generation (NLG)? Available at:

https://www.ibm.com/think/topics/natural-language-generation

Paris, M. (2025) ChatGPT Hits 1 Billion Users? 'Doubled In Just Weeks' Says OpenAI CEO. *Forbes*. Available at: https://www.forbes.com/sites/martineparis/2025/04/12/chatgpt-hits-1-billion-users-openai-ceo-says-doubled-in-weeks/