

Canadian Society of Landscape Architects Artificial Intelligence Survey Findings

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The fall 2023 CSLA AI survey, a significant milestone in our field, reveals that one-third of responding members already use AI in practice. Moreover, nearly half of these users feel that AI significantly reduces their time on various tasks. These responses clearly indicate the increasing adoption of AI in our profession. Furthermore, over half of the non-users foresee incorporating AI into their work within the next two years. It is undeniable that AI has made its mark in Canadian landscape architecture.

Survey respondents favouring AI seem to be adopting GPTs (Generative Pre-trained Transformers) for language processing (68%) and generating text or images (75%). Of those respondents, nearly half (47%) felt it was cutting time; however, at the time of the survey, other respondents (36%) were unsure if AI was adding or cutting time, stating that "it really depends on the circumstances." AI appears to be used in landscape architecture in Canada to enhance tasks early in the design process, like responding to proposal requests (48%) and collecting background information (42%). Respondents are beginning to engage with AI to develop concept plans (33%), though AI is used by only one percent of respondents in later phases of design, like construction and post-occupancy reviews or performance evaluations.

Respondents seem hopeful that AI has the potential to improve business operations (55%), stimulate creative processes (55%), analyze complex data (63%), and generate models (60%). However, the same respondents cite uncertainty in modelling and forecasting data accuracy as their most substantial concern (65%) around AI.

The survey answers show that landscape architects in Canada are hearing about tools from colleagues (61%) and social media (55%). It also shows that we are learning to use tools by trial and error (85%) or online videos (60%). These answers suggest that few invest in tools other than their time (60% report exploring tools during non-billable time), which aligns with allied design fields.

The CSLA results parallel the RIBA Artificial Intelligence Report 2024, revealing that 69% of British architects have not invested in AI research and development, and only 41% intend to (<https://www.architecture.com/knowledge-and-resources/resources-landing-page/riba-ai-report-2024>). Landscape architects adopting AI work within the framework of existing tools, like image and sound recognition (48%), and are beginning to experiment with machine learning (Rhino/Grasshopper plug-ins) (16%) and analyzing big data or automating tasks (13%). Nevertheless, research and development of landscape architecture-specific AI tools, such as the RIBA survey findings, are lacking. The CSLA survey indicates that the Canadian landscape architects who answered the survey are hesitant with ethics (45%) and fear diluting or losing control over their intellectual property (45%).

Perhaps those who choose not to use AI avoid its use for the same reasons; however, the survey did not ask non-users to explain their disinclination.

The CSLA developed the AI survey with Philip Fernberg, Brent Chamberlain, Benjamin George at Utah State University, and Heather Braiden at the University of Montreal. The research team designed the 20-question survey to understand how AI is used (or not) and at what stages of the design process. We asked participants to identify their membership status and industry sector to differentiate between use in practice, education, and research. Over half of the respondents (59%) work in private firms, about a quarter (24%) work in government or non-governmental agencies, and the remaining (6%) work in academia or other landscape architecture adjacent industries. The survey goals are to situate Canada's landscape architecture profession with advances in the AI industry and develop support and resources for CSLA members. The CSLA launched an AI Network in May 2024 as a first step in discussing and overcoming barriers to AI in design.

The CSLA launched the Canadian survey through online bulletins sent directly to members' email addresses. It was available in French and English using a link to Survey Monkey from the end of November 2023 until mid-January 2024, and 411 people answered the survey, accounting for approximately 7% of the total membership. During that period, new AI tools became available with the launch of the OpenAI GPT Store, and existing tools, like those offered through ChatGPT, became more accessible through its Team membership pricing. Within days of the survey's closing, Microsoft announced plans to integrate a Copilot key on their keyboards, Google launched Gemini with the capabilities to run with text and image prompts, and Midjourney released a text-to-video generation option. Indisputably, a spring or summer survey would produce different results.

In an exciting development, the ASLA will launch the same survey in the summer of 2024. This comprehensive survey presents a unique opportunity for our research team and profession. We eagerly anticipate comparing the results and detailing the findings, which we believe will play a crucial role in shaping the future of landscape architecture in the AI era.

The survey is part of a larger research project, *Analyse comparative de l'IA dans le domaine de la conception : Quels sont les outils disponibles, qui les utilise et à quelles étapes du processus de conception ?* (Benchmarking AI in design: What tools are available, who uses them and at what stages of the design process?) received funding from the Social Science and Humanities Research Council of Canada.

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