Constructing Excellence

How do we harness the potential of AI?

Constructing Excellence Annual Conference 2026
Wednesday 21 January 2026
BMA House, London

This paper aims to inform your roundtable discussions at the Constructing Excellence Annual Conference on 21 January 2026. Throughout 2026, Constructing Excellence will investigate how its members across the movement can get ahead of the AI revolution and harness the potential of Artificial Intelligence.

Discussion Questions

During this roundtable, we want you to discuss the aspects of AI and report back via Sli.do:

- What do we want AI to do for us?
  - As individuals?
  - As suppliers?
  - As clients?
- How do we set ourselves up to successfully harness AI?
  - Do we focus on collaboration or competitive edge?
  - Do we look to constrain or see where are creativity takes us?
  - Do we leave it to the next generation? Or train to level the playing field?
- How do we deliver success using AI?
  - What's your personal New Year's resolution if 2026 is the year of AI?
  - As businesses, what can we commit to share for the greater good?
  - What can CE do to support your AI journey?

Background & Definition

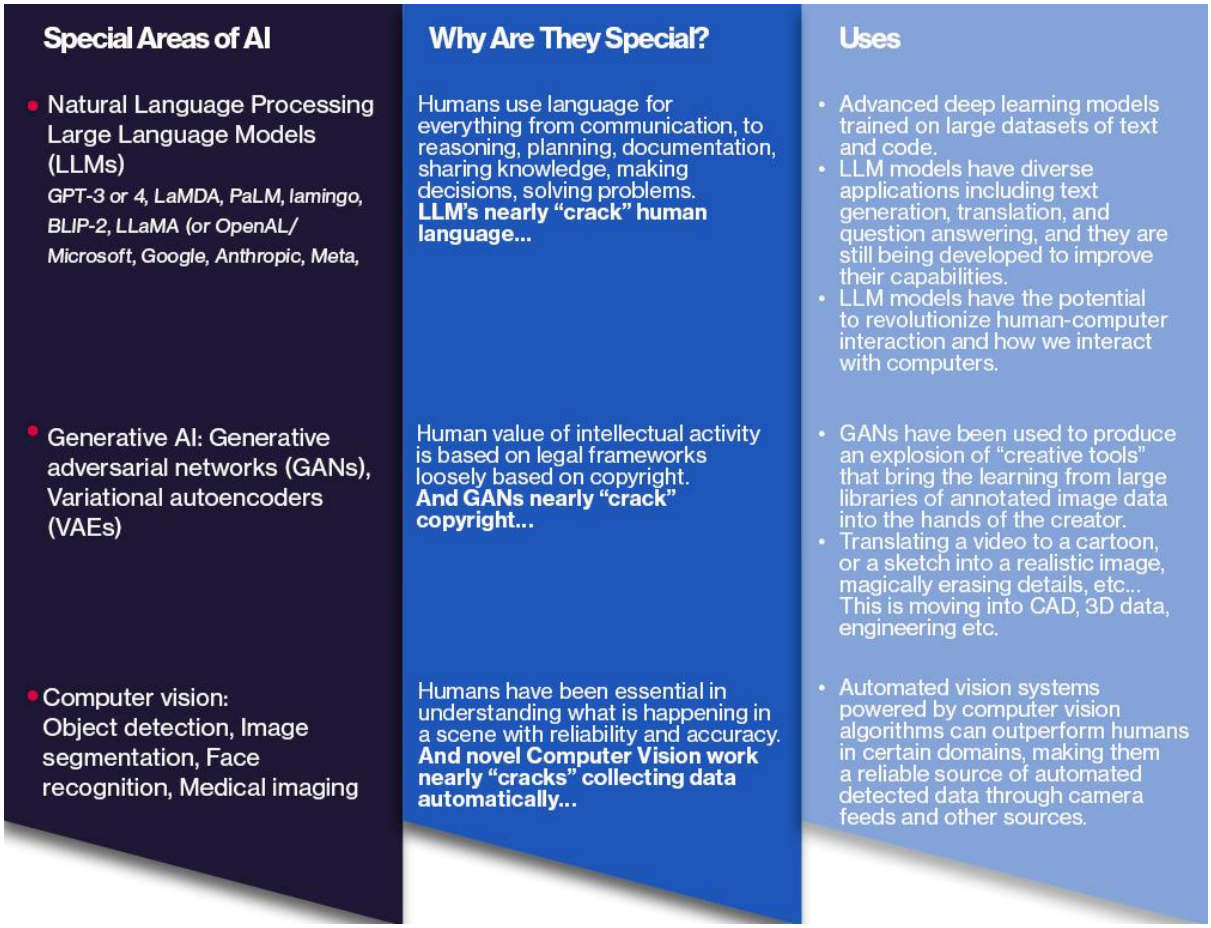
The Constructing Excellence Digital by Default Group held a workshop, in collaboration with BRE, looking at the role of AI in and its potential applications. Throughout the session, the group gained a better understanding of how AI can be applied and how we can move forward in building trust in the technology.

What is AI?

AI is a set of techniques that analyse data to model real-world patterns and automate processes with minimal human input.

Different Types of AI

- Programmable AI (expert systems, natural language processing, vision, etc.)
- Machine Learning (ML): statistical techniques to give computers the ability to learn with data. It can further be categorised into supervised learning, unsupervised learning, semi-supervised learning and reinforcement learning.
- Specialised new areas that combine techniques, such as LLMs, GANs and computer vision.



Challenges & Opportunities

There are challenges that highlight the work that needs to be done around AI for the construction industry to embrace the technology and successfully employ AI practices. Without data security, resources and recognition of the limitations, AI cannot be implemented effectively.

- Production problems:
  - Unexplainable- lack of transparency around AI's decision-making/reasoning process.
  - Bias- this can be reflected in AI systems if imperfect training data is used.
  - Data privacy- need to protect personal data as AI will collect more human data for improved training.
  - Data dependence- relying on large data sets which may not represent real world.
  - Regulation- determining regulations and standards for ethical AI use.
  - Safety- creating AI that is safe, secure, and aligned with human ethics and values to prevent harm.
  - Technical complexity- such complex technology can be hard for even the experts to understand.
- Social problems:
  - Job displacement- AI taking over for human workers.
  - Limits of AI- recognising AI limitations in emulating humans- not anthropomorphising.
- Civilisation factors:
  - AI 'pseudo-intelligence'- overestimating AI capabilities and challenges to achieving general intelligence.
  - High resource needs: need for extensive computing power, data storage and energy for complex AI development and deployment.

How can we build trust?

Trustworthy AI needs to allow for human intervention, e.g. a Super User who can step in and make an overarching decision if the AI's suggestion is deemed unsuitable. This puts responsibility with the decision

maker, who can provide a rationale for any actions taken- AI is unable to do that. However, AI can offer multiple options which humans may not be able to see, which would support the decision-maker. Enabling ultimate decision-making for the human will support the building of trust over time. A history of accuracy will build, proving that AI can and does get it right and enabling humans to rely more on such solutions.

Where Can AI Make the Biggest Impact?

By tackling problems that the industry already has. The next generation of AI will be interesting as it'll begin to identify and solve problems that we, as humans, were not even aware of. This means it will be able to prevent problems before they actually occur.

How Do We Get People in Industry to Embrace AI?

Generally, people welcome things that make their lives easier. In life, we hand over a certain level of decision-making to technology, i.e. Google Maps or Sat Nav, technology will eventually be used in a similar manner.

Join the conversation

Your insights will shape CE's 2026 AI strategy and inform collaborative projects."
Share your ideas on Sli.do, talk to the team about further engagement and help shape the future of AI in construction.