

## RESEARCH PROJECT 2024



# Navigating the “Barrier of Meaning” in Corporate Applications of AI

A research project exploring current roll-out trends of AI in organisational development<sup>1</sup>, attitudes, ethics and the polarity of the promises and fears of AI.

We are a team of experienced organisational development consultants with backgrounds in the complexity sciences (e.g. Cynefin, narratives sensemaking) and developmental psychology. We have identified a significant need in the market for an independent review of current experience and future attitudes in the application of AI in organisational contexts - in particular based on a clearer understanding of the fundamental design principles behind competing AI architectures.

The term “Barrier of Meaning” in the context AI is being used more and more as research centres such as the Santa Fe Institute grapple with the exponential scope of AI deployment (e.g. codifying human culture) whilst realisations of AI’s limitations come into ever clearer focus (e.g. based on miscarriages of justice when AI is left to make value judgements).

We will be also investigating the cutting edge of speculation within the AI community with regards the horizons beyond the leading LLM platforms such as GPT-4 (Open-AI), Gemini (Google) and Llama 3 (Meta) and the laws of diminishing rates of return of performance in spite of increased data sets and processing power.

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<sup>1</sup> For example in applications such as collective decision making, sensemaking, governance, compliance, organisational planning, distributed decision making, strategy formulation and human resource management

The primary research questions:

- What are the **latest learnings from actual deployment of AI** in complex applications in organisational development?
- What are the **planned investment trends for AI** in organisational applications?
- What **frameworks can help organisations navigate the design choices of applying AI** and better understand the underlying AI architectures (for example understanding the critical differences between Large Language Model AI vs. Symbolic AI)

We will be carrying out interviews Q3 and Q4 2024 with organisations from a range of industries and the financial sector, to capture the actual and practical current implementations of artificial intelligence

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**To participate in the research and receive information on accessing the final report findings please contact:**

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Anticipated Report Insight Areas:

- What are the best strategies for ethical application of AI?
- What do we need to know about the key technological choices - making organisations informed buyers of AI’s capabilities, beyond the hype.
- How might the complexity frameworks such as [Cynefin](#) apply to the strategic choices of where and how to apply AI?

Research References:

- **John Oliver LinkedIn Posts:**
  - [Mapping AI across the spectrum of cognition](#) - LLM and Symbolic AI as representations of the polarity between abstraction and codification - April 2024
  - [Understanding the “Barrier of Meaning” in AI from the perspective of the complexity sciences](#) - February 2024
- **Video Resources:**
  - [Workshop on AI and the Barrier of Meaning](#) 2, April 24-26, 2023 Santa Fe Institute

- **Research Papers:**

- [LLMs Can't Plan, But Can Help Planning in LLM-Modulo Frameworks](#)  
Proceedings of the 41 st International Conference on Machine Learning, Vienna, Austria. PMLR 235, 2024
  - Comparing LLM and Symbolic AI designs to Daniel Kahneman’s “System 1” (intuitive abstraction cognition) and “System 2” (analytical codified cognition)
- [What are human values, and how do we align AI to them?](#) Oliver Klingefjord, Ryan Lowe, Joe Edelman. Meaning Alignment Institute 17 Apr 2024
- [Large Language Models Need Symbolic AI](#) - Northwestern and Indiana Universities NeSy 2023, 17th International Workshop on Neural-Symbolic Learning and Reasoning, Certosa di Pontignano, Siena, Italy