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Finding the Value Amongst the AI Hype

Howard Thomas

MIChemE, FIEAust, RPEQ, C Eng, C Sci

Howard.thomas@kentplc.com

ABSTRACT

There is no such thing as Artificial Intelligence, AI is a field of study. Automated knowledge might be a more accurate description.

The marketing of AI has gone into overdrive, conveying enormous power by considering the potential for world domination. We shouldn't be worried about sentient machines, we should be worrying about the dangers of buying into the hype instead of asking, when buying a product or a service: Does it improve productivity?

Australian Bureau of Statistics data shows growth in productivity has declined since the mass adoption of information technology. The theory of constraints remains as relevant as ever: every system has a limiting factor that affects its overall performance. The addition of information technology hasn't made the improvements we hoped because it has been added to constrained processes.

AI risks adding to the flood of data, information and choices. AI has the potential to automate knowledge to provide insight into the data, information and choices, but the current hype to apply AI to everything is being driven by the desire to sell products and services rather than a genuine desire to improve productivity.

Finding the value amongst the AI hype lies in the answers to the theory of constraints: identify the constraint, mitigate the constraint, address the constraint. By deploying machine learning to address constraints we can improve productivity, but first we must understand the constraints in the system we are addressing.

As the level of complication in systems rises to the level of complexity the system itself requires engineering. Systems engineering provides a toolset to understand systems allowing us to identify constraints. Mitigations in the form of automation and integration can then be deployed to address these constraints. It is important to note that automation and integration, the products of technical revolutions 3.0 and 4.0, are necessary precursors to machine learning. Otherwise, the machine has no process to learn from.

Systems engineering shows us that the productivity gains from automation and integration alone, often reduce any perceived gain in the use of AI such that AI is no longer necessary.

Of course, there are cases where AI adds enormous value, in which case, the acts of mapping, automating and integrating have succeeded in laying the foundations for the efficient, and much more cost-effective deployment of AI.

We have therefore gained real value from AI without subscribing to the hype that AI is the answer for everything.

KEY WORDS

AI, Hype, Productivity, Systems Engineering, Theory of Constraints, Automation, Integration

BIOGRAPHY

For the last 37 years, Howard has worked on process plant all over the world, from downstream petrochemicals and refining through midstream to upstream onshore and offshore, from roles as a technician to executive consultancy.
Throughout his career, which has spanned the arc of digital technology, he has been applying digital technology to the different aspects of chemicla engineering.
Howard is known for his book 'Simplicity from Complexity' and providing clarity where others struggle.

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