PROJECT
FORUM

AI in the Room: What Every Project Manager Needs to Know Right Now

James Garner and Yoshi Soornack

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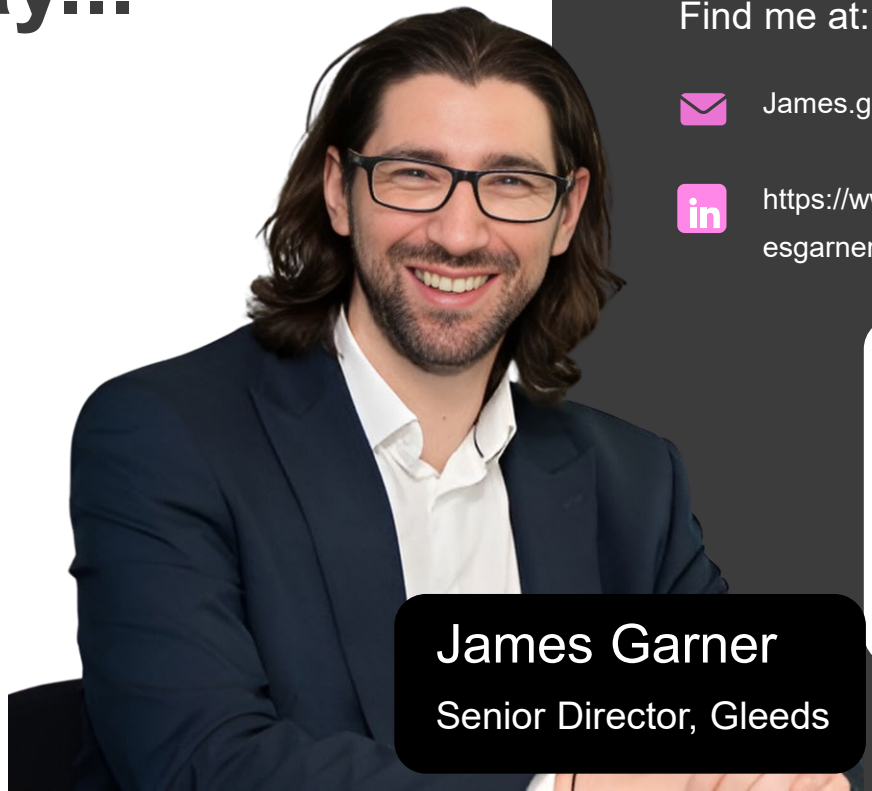
The AI Shift: What Construction PMs Need to Know Now

Transforming your role, future-proofing your skills

With you today...

- Head of AI and Data at Gleeds
- Past Chair of PDA Task Force
- Member of RICS Construction Professional Group Panel
- Founder of Project Flux AI in Project Delivery Newsletter and Podcast – www.projectflux.ai



James Garner

Senior Director, Gleeds

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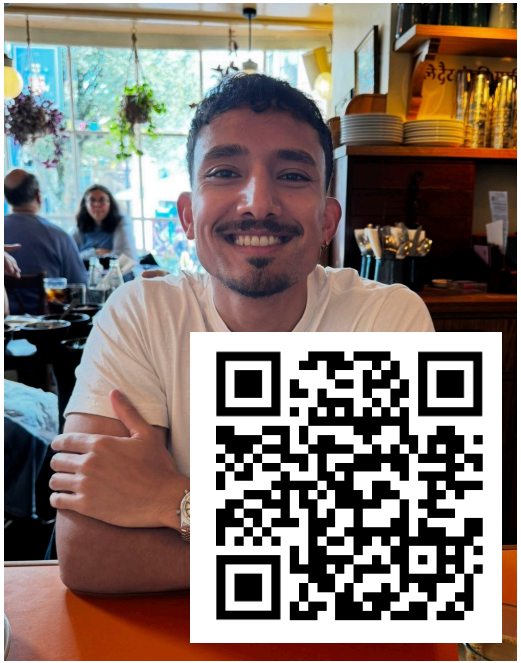
SCAN ME

Yoshi Soornack

What I did and do

Neuroscientist → Project data analytics → Construction

- Associate Director, AI & Data / GLEEDS
- Published in eye-tracking and brain stimulation
- Founding member of the PDATF
- Former digital CoP lead at C&SA
- ½ of Project Flux



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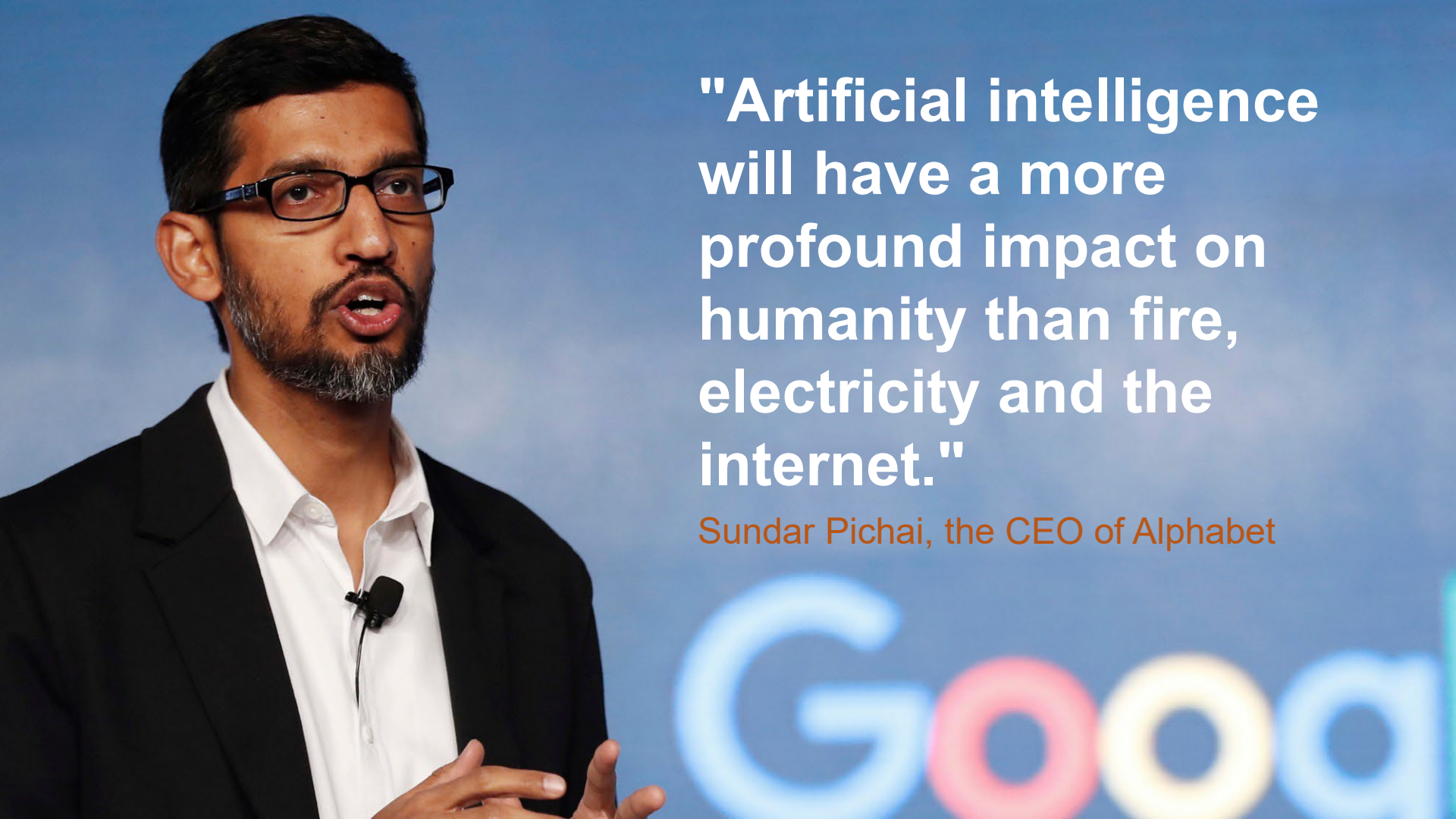
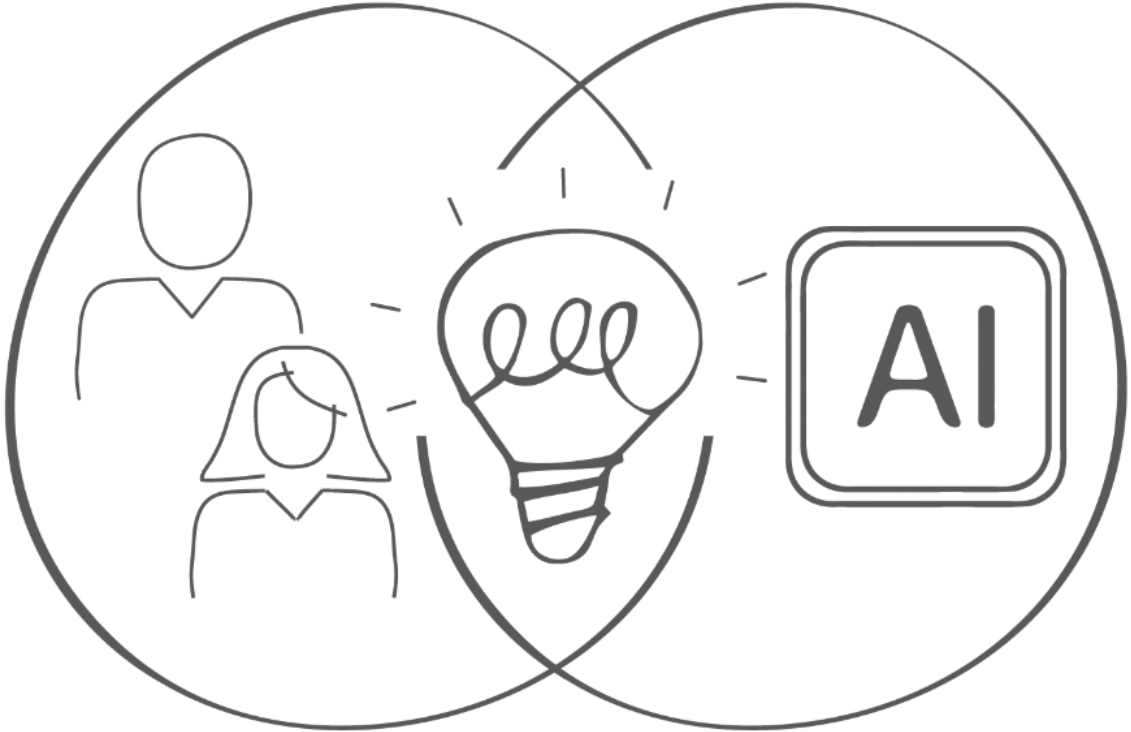
NOT ANOTHER TALK ON AI!

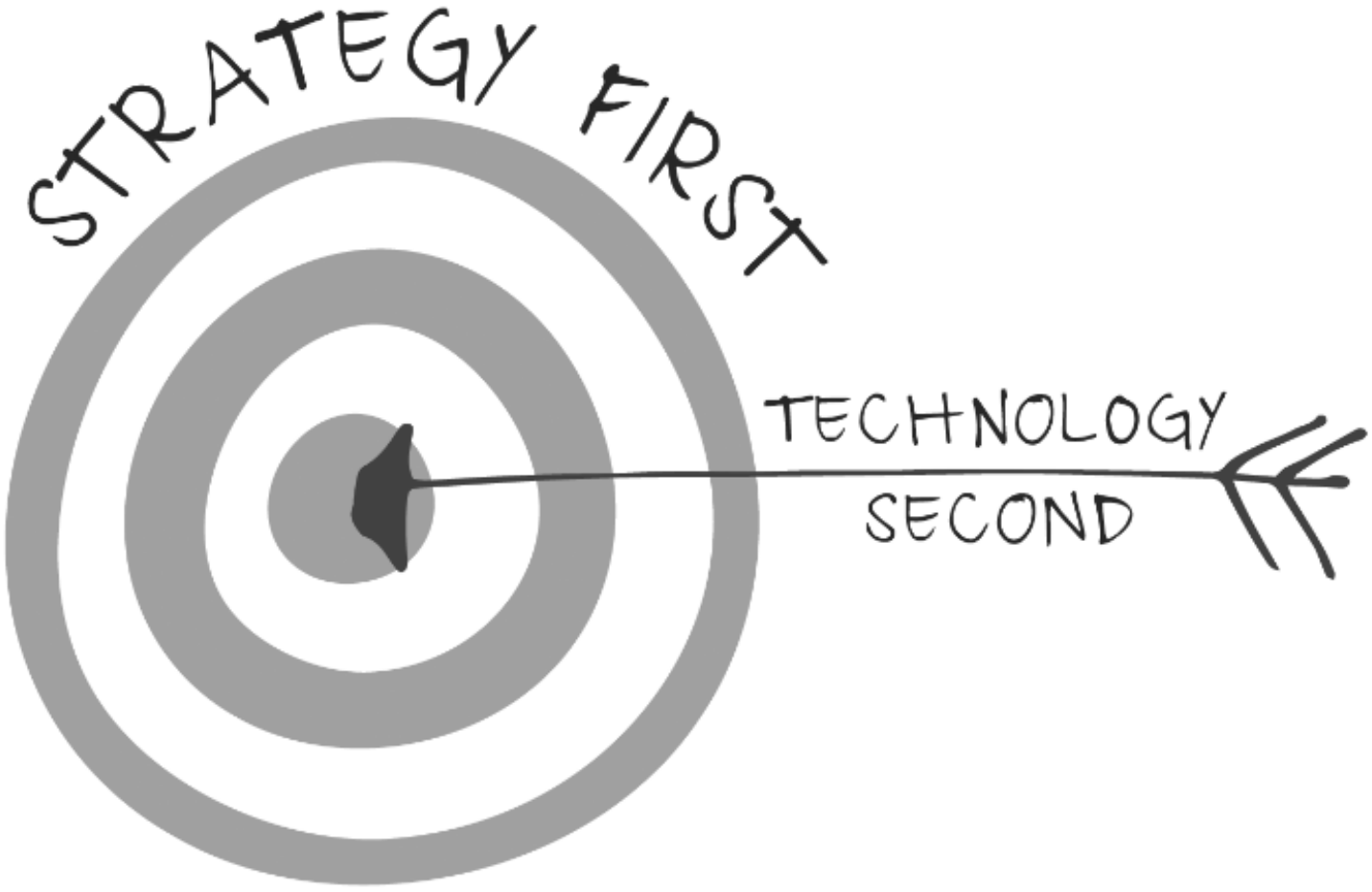

"Artificial intelligence will have a more profound impact on humanity than fire, electricity and the internet."
Sundar Pichai, the CEO of Alphabet

THOUGHT LEADER

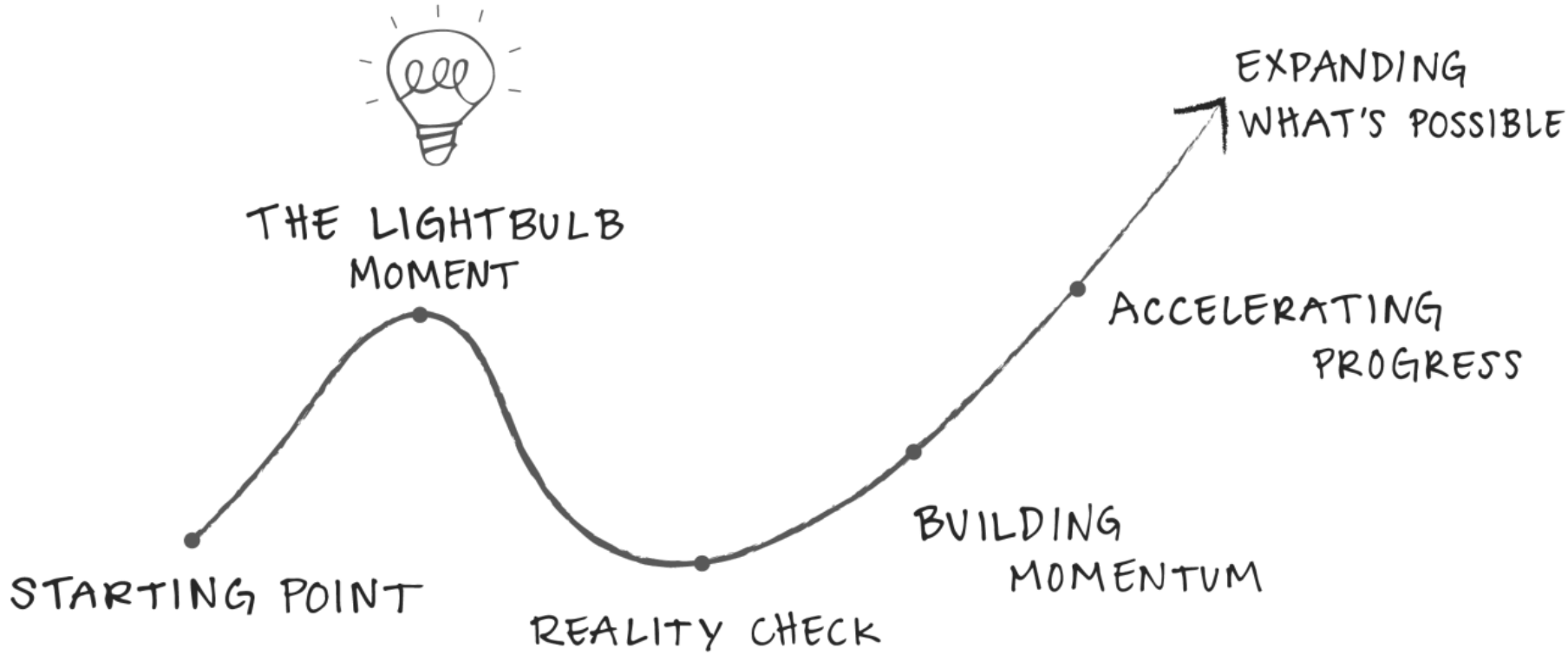


THOUGHT PARTNER

PROJECT FORUM


STRATEGY FIRST
TECHNOLOGY
SECOND

The AI Empowerment Curve

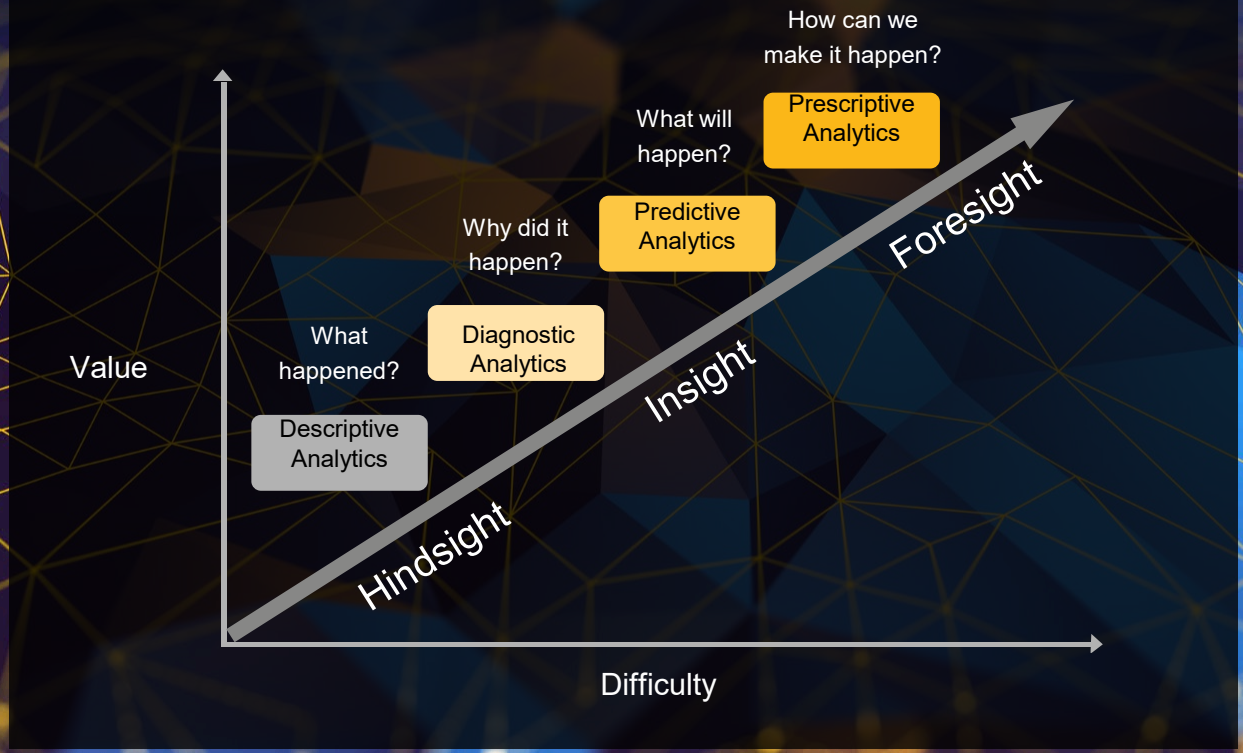


Is Everything Really Fine?

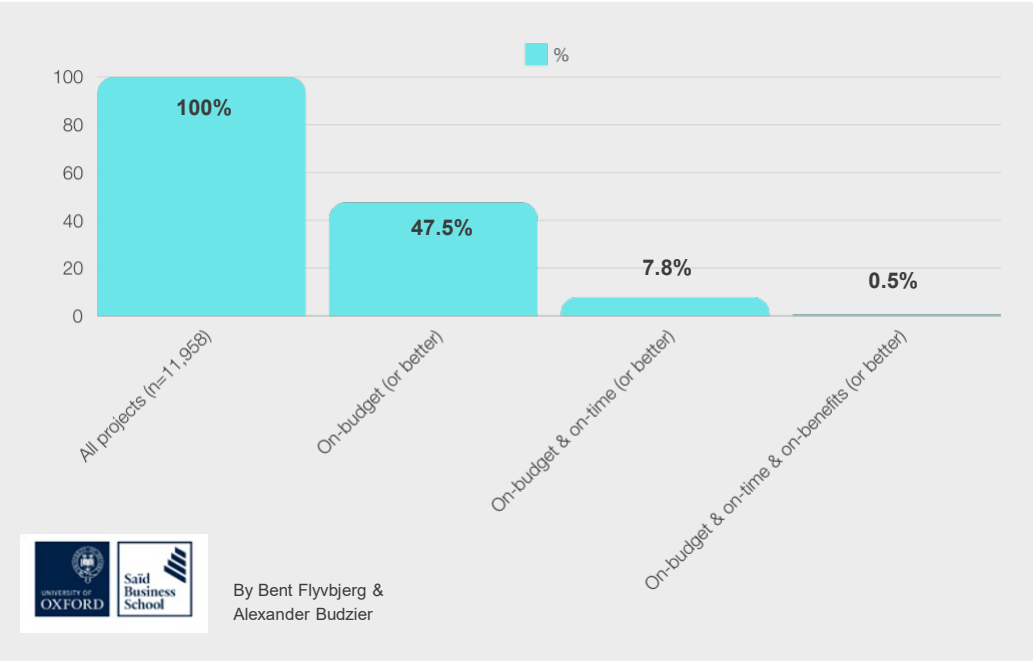
“In times of change learners inherit the earth;
while the learned find themselves beautifully equipped to deal with a world that no longer exists”

Eric Hoffer

REAL TIME DATA DRIVEN DECISIONS



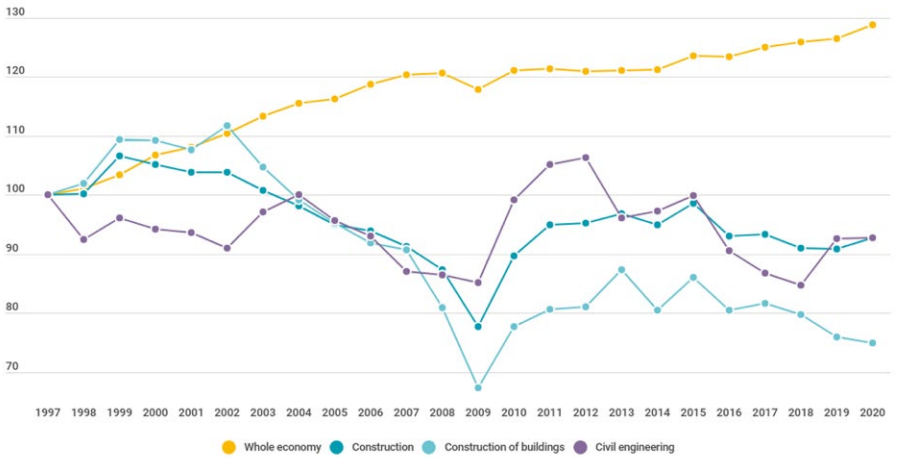
The Iron Law of Projects



Project delivery performance hasn't changed very much in 20 years.

Leveraging digital, data and AI will move the dial.

Output per hour worked, UK, 1997 to 2020, index 1997 = 100 — ONS



September 2008: 2,371,000 workers

March 2019: 2,365,000 workers.

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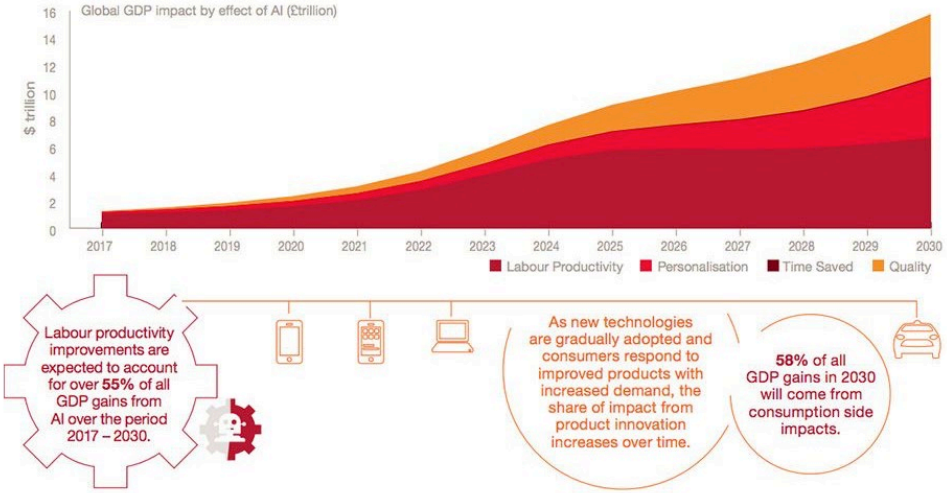
Where will the value gains come from with AI?



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The Pace of Change

AI is the New Electricity

From Light Bulbs to Unimagined Futures

The Past/Present

Early Electricity: Just for lighting.

The Future

Future Potential: Unimagined Transformation.

Just as early electricity users couldn’t foresee the internet,
we are only in the ‘light bulb phase’ of AI.

Nikolai Kondriatev

Russian economist (1892-1938)

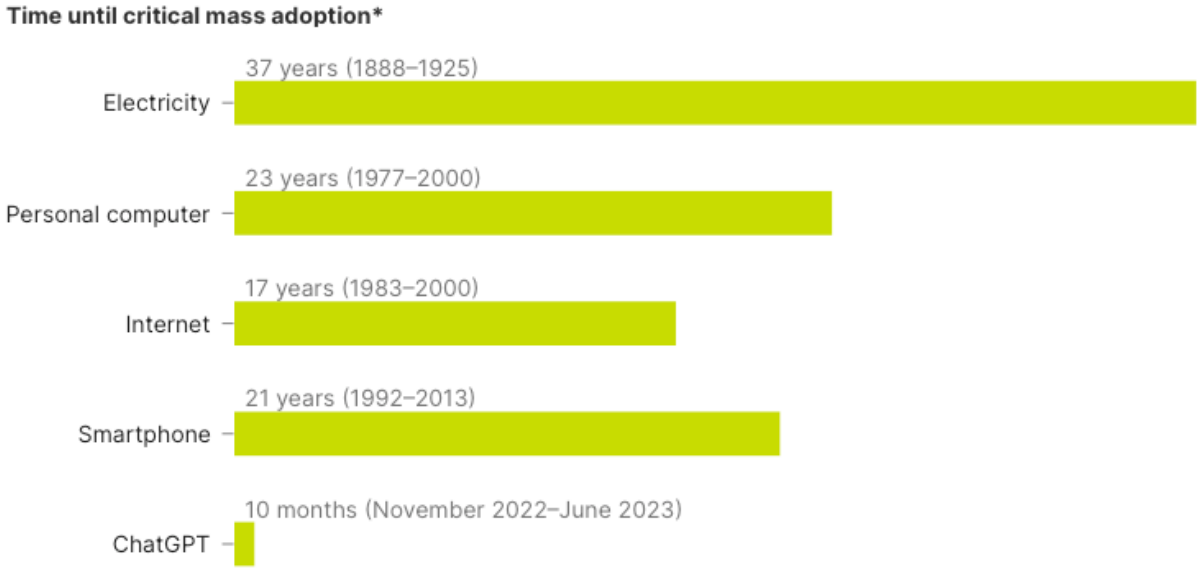
Posited long-term economic movements in 1925 in his book, "The major economic cycles" based on historical data on grain and copper prices

Each wave: 40-60 years

- 1st = steam power (1780-1830)
- 2nd = steel and rail (1830-1880)
- 3rd = electricity and mass production (1880-1930)
- 4th = oil and gas (1930-1970)
- 5th = silicon chip (1970-)

From inception to integration

ChatGPT has reached critical mass adoption faster than other modern innovations



Note: Mass adoption is based on more than 50% adoption in the US, ChatGPT adoption data is from Oliver Wyman Forum Generative AI Survey regarding use of generative AI tools (for example, ChatGPT)
Source: Oliver Wyman Forum analysis

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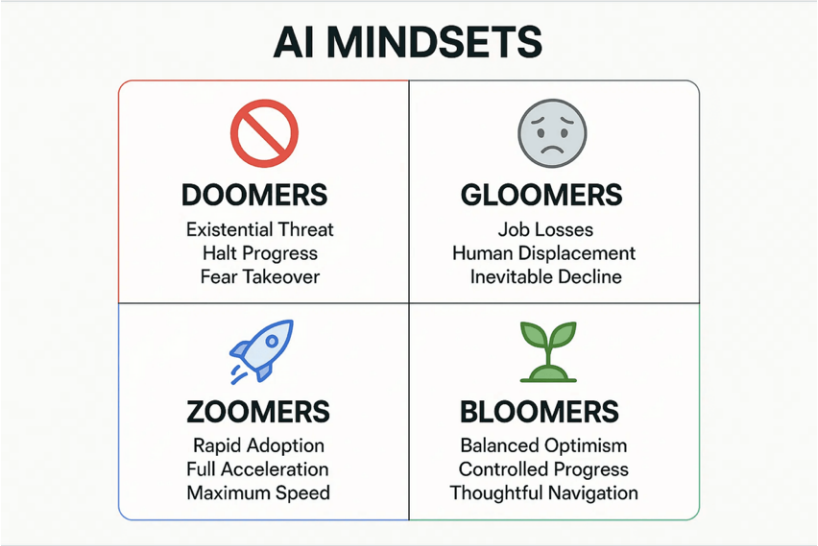
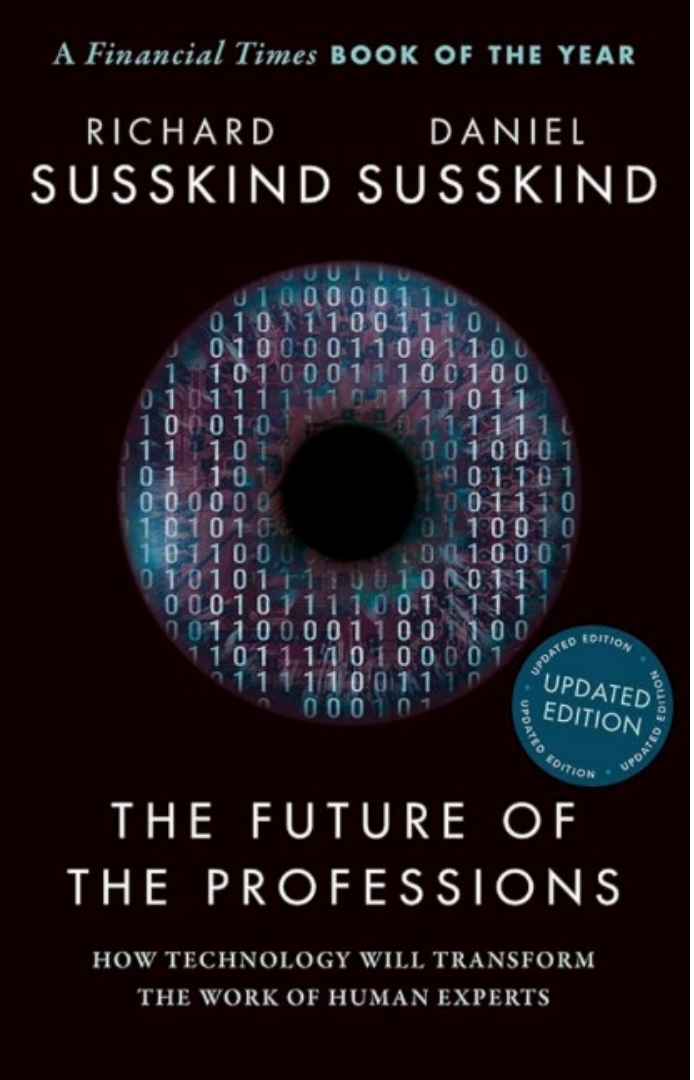
The Four AI Mindsets

Reid Hoffman's Framework

Understanding How We Respond to Artificial Intelligence





The future of the profession

Focus:

- Impact of AI on professional services.

Two Futures:

- Enhanced professionals with technology.
- Decline of traditional roles, replaced by AI.

Implications:

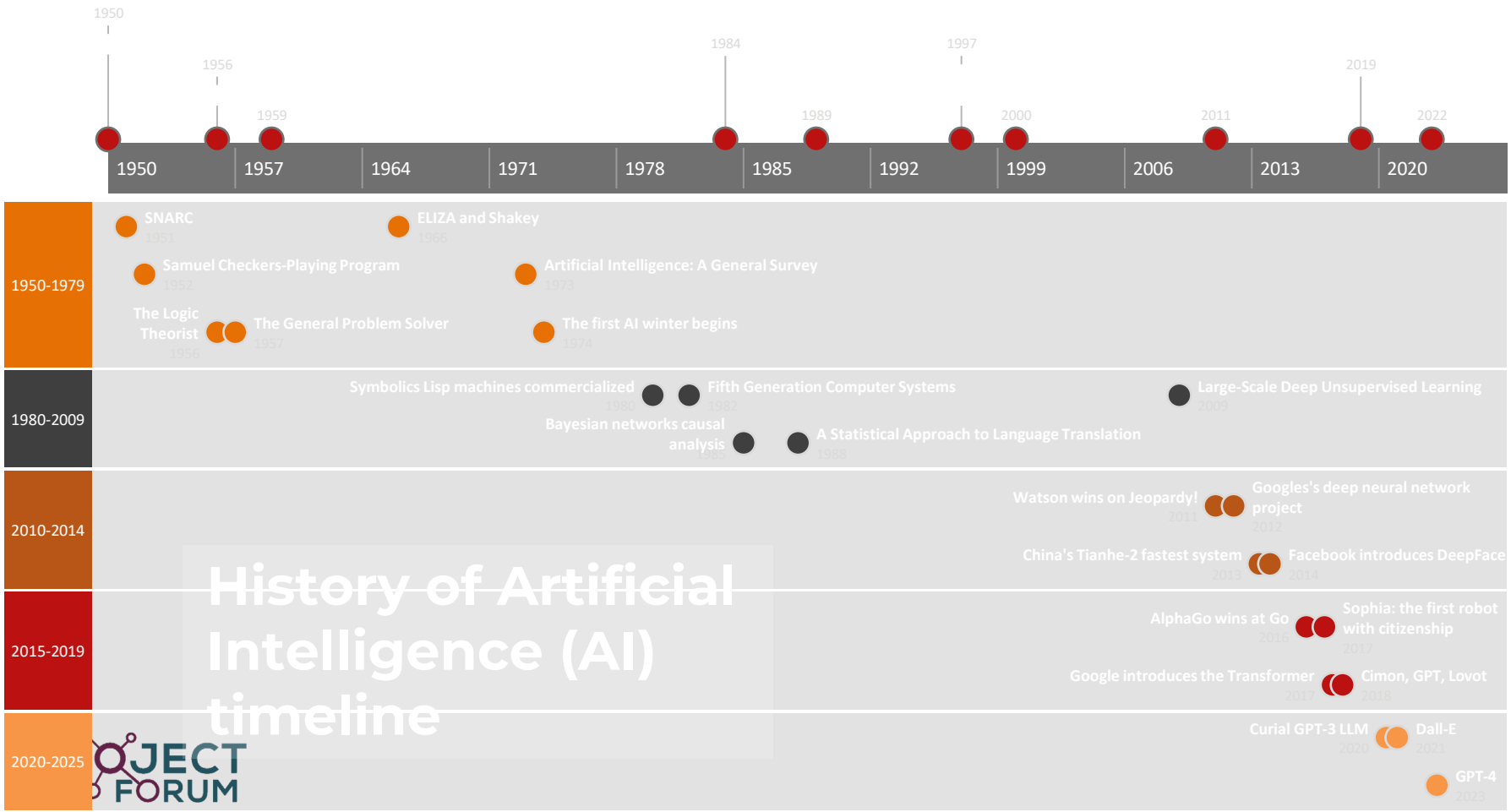
- Need for adaptation in education, firm structures, and ethics.

Conclusion:

- Embrace technology's central role.

'How in the future will we solve the problems to which Project Managers (or x) are currently our best answer?'

GenAI – The Opportunity to Improve


1950
1956
1959
1984
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1997
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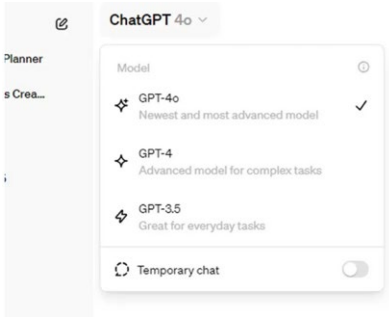
2022
1950
1957
1964
1971
1978
1985
1992
1999
2006
2013
2020
1950-1979
SNARC
1951
ELIZA and Shakey
1966
Samuel Checkers-Playing Program
1952
Artificial Intelligence: A General Survey
1973
The Logic Theorist
1956
The General Problem Solver
1957
The first AI winter begins
1974
1980-2009
Symbolics Lisp machines commercialized
1980
Fifth Generation Computer Systems
1982
Large-Scale Deep Unsupervised Learning
2009
Bayesian networks causal analysis
1988
A Statistical Approach to Language Translation
1988
2010-2014
Watson wins on Jeopardy!
2011
Googles's deep neural network project
2012
China's Tianhe-2 fastest system
2013
Facebook introduces DeepFace
2014
2015-2019
AlphaGo wins at Go
2016
Sophia: the first robot with citizenship
2017
Google introduces the Transformer
2017
Cimon, GPT, Lovot
2018
2020-2025
Curial GPT-3 LLM
2020
Dall-E
2021
GPT-4
2023
History of Artificial Intelligence (AI) timeline
OJECT FORUM
Made with Office Timeline

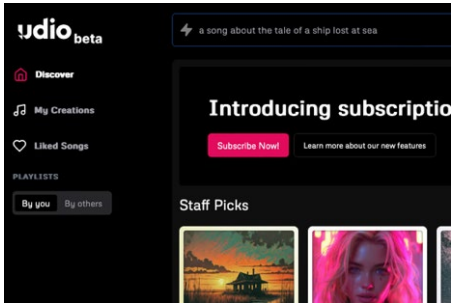
What is generative AI?

Generative AI is artificial intelligence that **generates** content, such as text, image or audio



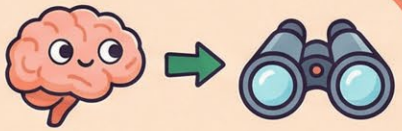
Chatbots

Dall E-3 & Mid Journey etc



Udio

Computer Vision:
Building with Intelligent Eyes



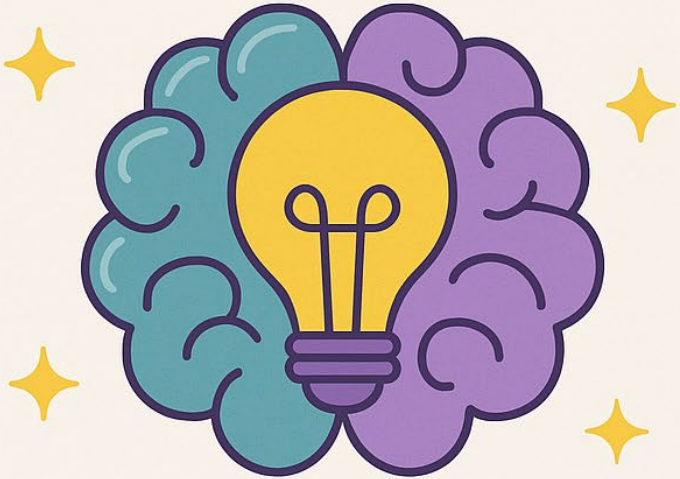
What is it?
AI that helps machines “see” & understand.

Quality Control

Safety Monitoring

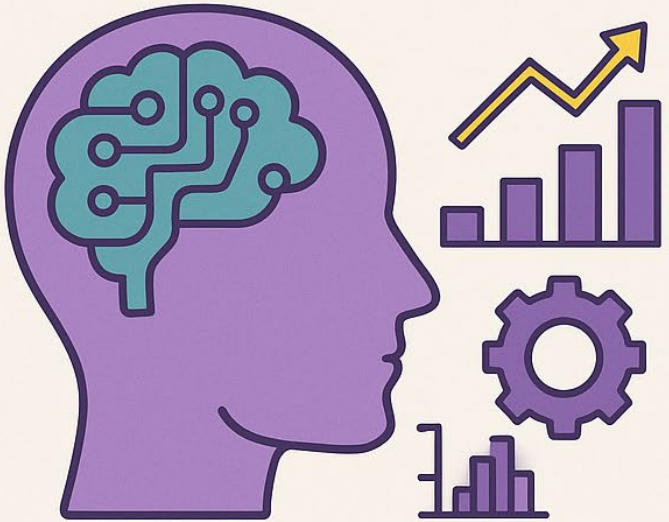
Progress Tracking

CREATIVE AI



- Generates original content
- Inspires new ideas
- Thinks imaginatively

ANALYTICAL AI



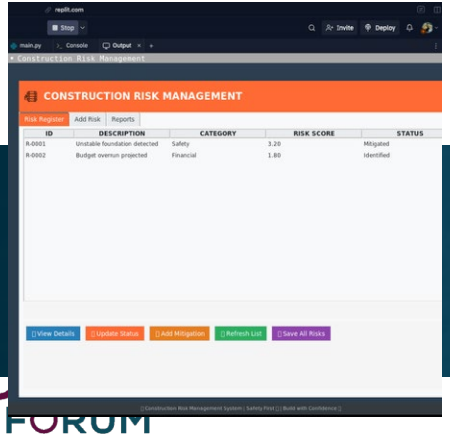
- Analyzes data and patterns
- Optimizes decisions
- Thinks logically

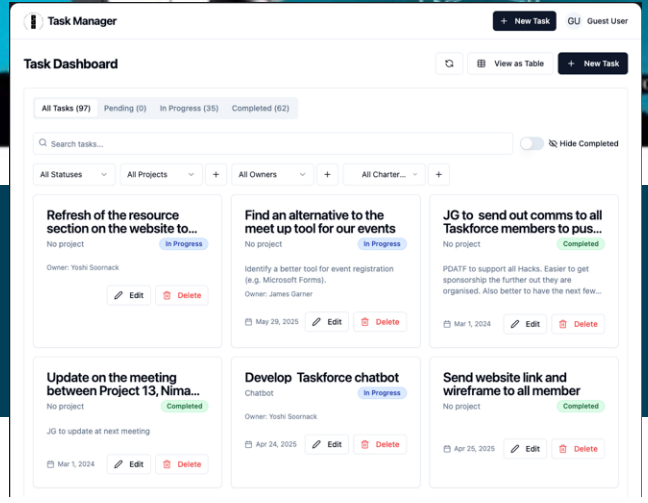
Vibe Coding

THE COLLINS WORD OF THE YEAR 2025 IS...

vibe coding

'Vibe coding',an emerging software development that turns natural language into computer code using AI, has been named Collins' Word of the Year 2025. The term was popularised by Andrej Karpathy, former Director of AI at Tesla and founding engineer at OpenAI, to describe how AI enables creative output while he could "forget that the code even exists".





Future Engineering Leaders: Agent Operators

From managing people to orchestrating intelligence
intelligence

Context Engineering

Design precise instructions for AI agents

Agent Orchestration

Coordinate multiple AI systems simultaneously

Human-AI Leadership

Conduct the symphony of intelligent automation

This slide is from a 1979 IBM presentation

A COMPUTER

CAN NEVER BE HELD ACCOUNTABLE

THEREFORE A COMPUTER MUST NEVER

MAKE A MANAGEMENT DECISION

NEW JOBS EMERGING FROM AI IN CONSTRUCTION & INFRASTRUCTURE

New Jobs by 2030

Chief AI Officer
Lead AI strategy and implementation across construction operations

Construction AI Data Analyst
Analyze project data to optimize scheduling and resource allocation

BIM & Technology Coordinator
Manage AI-driven BIM tools and digital collaboration systems

Digital Twin Manager
Create virtual replicas of buildings for real-time monitoring

Robotics Technician
Operate and maintain construction robots and automation systems

AI Operations Specialist
Monitor AI systems for safety, predictive analytics, and optimization

Drone Operations Manager
Oversee AI-equipped drones for site surveying and inspections

Data Center Builder
Construct AI infrastructure facilities (439K workers needed)

CRITICAL SKILLS SHORTAGE
The construction sector faces a significant skills gap as these new roles emerge. Urgent upskilling and training programs are needed to prepare the workforce for AI-driven opportunities and meet growing infrastructure demands.

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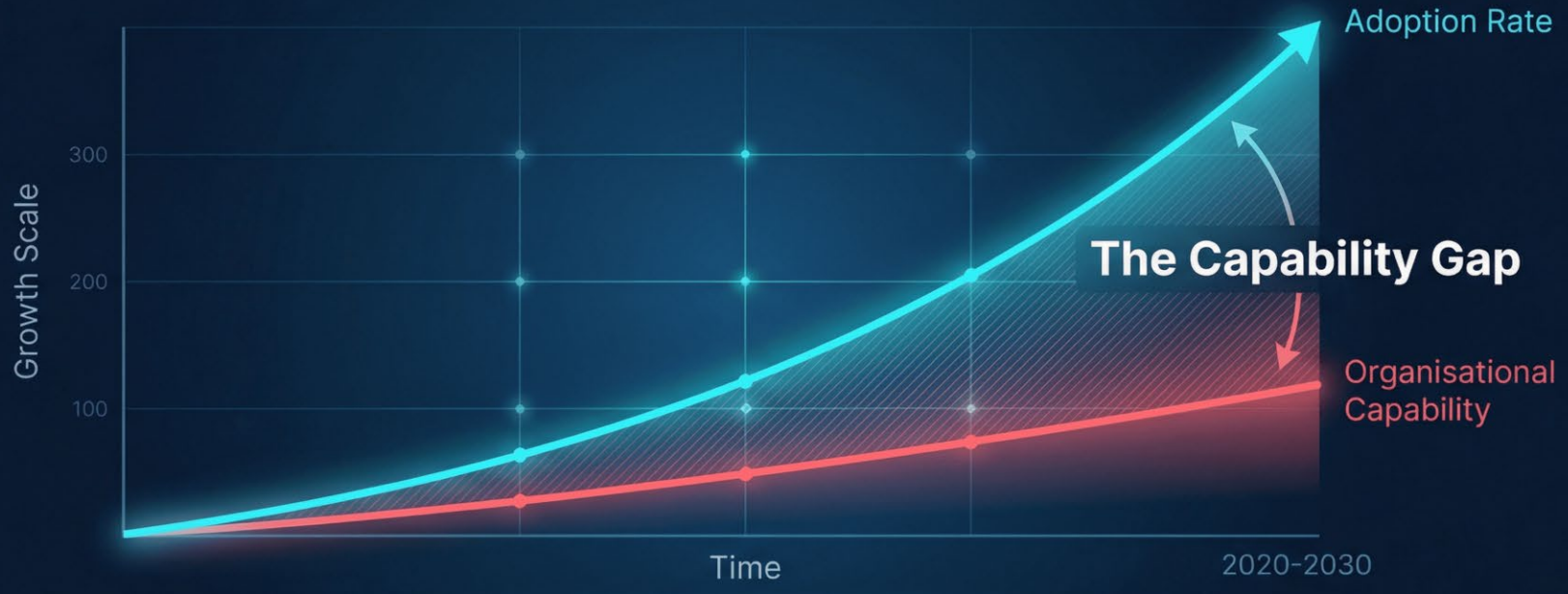
The AI Adoption-Capability Gap

A Widening Divide We Must Take Responsibility to Close



Adoption is accelerating, but capability is lagging.

We must bridge this divide.

AI is the New Electricity

From Light Bulbs to Unimagined Futures

The Past/Present

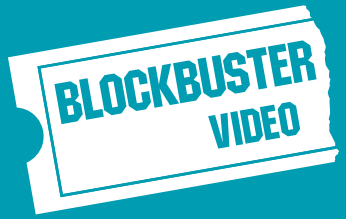
Early Electricity: Just for lighting.

The Future

Future Potential: Unimagined Transformation.

Just as early electricity users couldn’t foresee the internet,
we are only in the ‘light bulb phase’ of AI.

Companies that **didn't innovate**



Threatened Jobs and Jobs that **no longer exist**

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THE RADIOLOGIST PARADOX:

AI Augments, Not Replaces

THE RADIOLOGIST PARADOX

AI Augments, Not Replaces

2016 PREDICTION:
AI would replace radiologists within 5 years (Geoffrey Hinton)

ACTUAL OUTCOME:
Radiologist employment **GREW**

40%

TASK
(Image Analysis)

AI

AI AUTOMATION

HUMAN AMPLIFICATION

PURPOSE
(Disease Diagnosis)

HUMAN AMPLIFICATION

PARALLEL APPLICATION:
PROJECT DELIVERY PROFESSIONALS

60%

PROJECT MANAGER	Automated Task	Core Purpose
	Progress reports, schedule updates, data entry	Strategic decisions, risk management, stakeholder relations
SURVEYOR	**Automated Task**	**Core Purpose**
	Quantity take-offs, point cloud processing, report generation	Value engineering, cost consultancy, project accuracy
ARCHITECT	**Automated Task**	**Core Purpose**
	Design iterations, clash detection, drafting	Creative problem-solving, client vision, functional design

+6%
PROJECTED JOB GROWTH
(Project Managers by 2034)

£7.4 BILLION
MARKET SIZE
(AI Project Management by 2029)

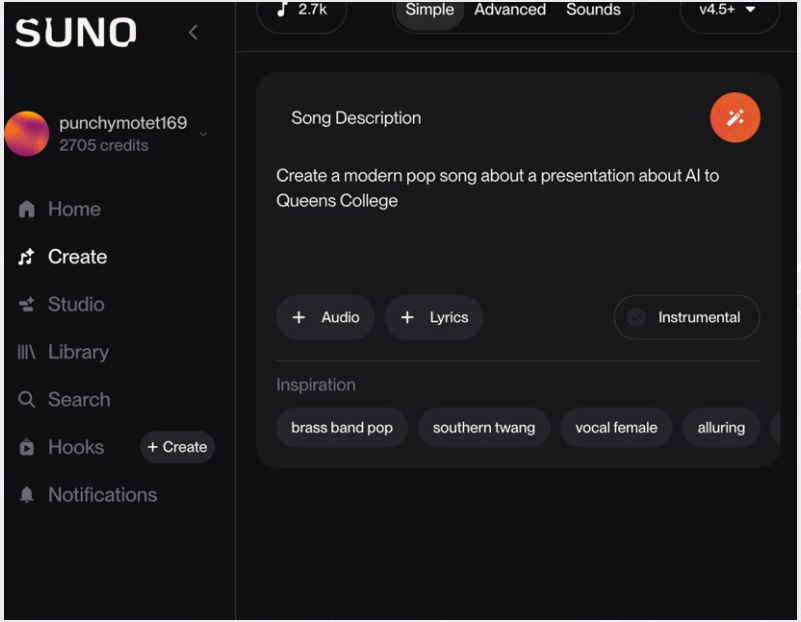
ONLY 6%
AUTOMATABLE
(Construction tasks - Goldman Sachs)

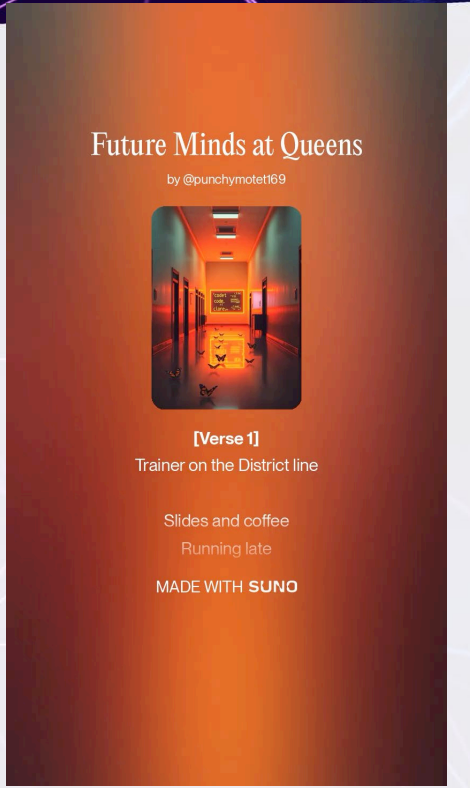
From BIM to AI: History Repeating Itself

If you remember the skepticism around BIM in the 2000s, you're seeing history repeat itself with AI.
The difference? You don't have decades to adapt—you have years.

Case Studies

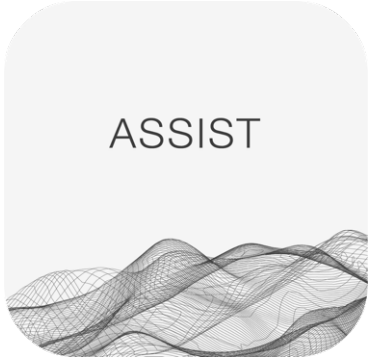
10 years is a long time in technology

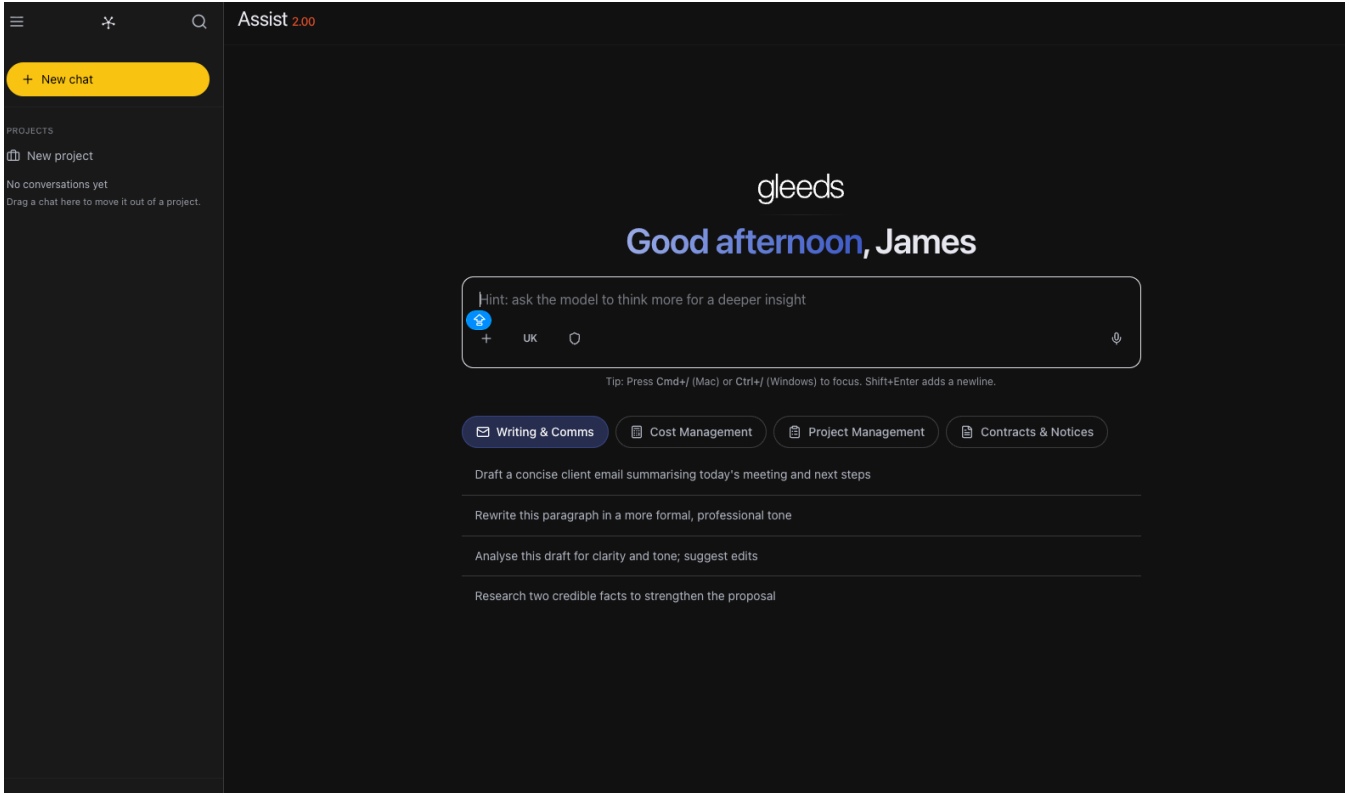





SEEDANCE 2.0

Assist AI





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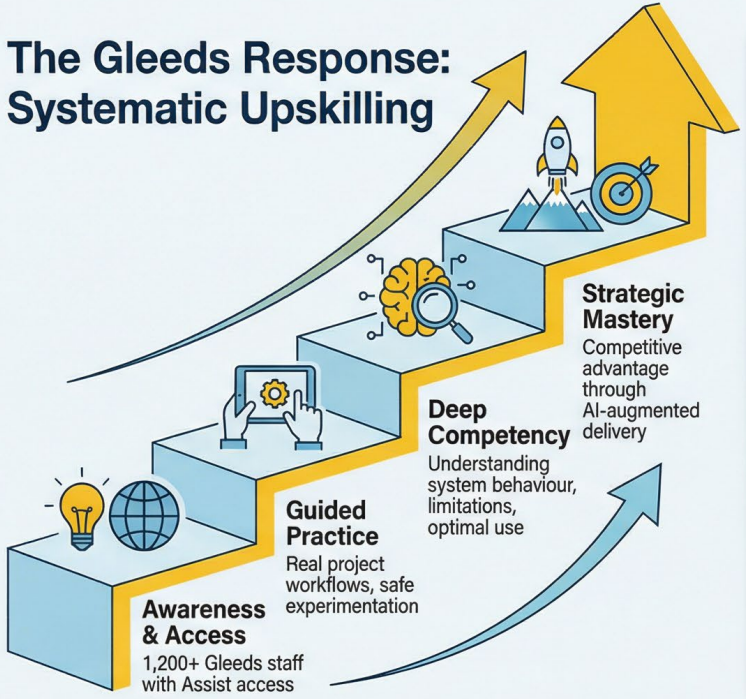
Bridging The AI Skills Gap: The Gleeds Approach

For project management professionals at APM.

The Gleeds Response: Systematic Upskilling



gleeds

Why We're Investing Now

- AI capabilities evolve faster than traditional training cycles
- Early adopters build compounding advantage
- Organizational flexibility beats late adoption
- Project delivery demands operational AI mastery, not surface awareness

The Challenge:
Most organizations underestimate the depth of AI competency required.

The Gleeds Solution:
Systematic upskilling at scale, embedding AI literacy across project delivery teams.

8 TARGET BEHAVIOURS: AI-MATURE PRACTICE

The difference between superficial tool usage and genuine capability integration

AUDITABILITY

Can users check AI work against professional standards (RICS, NRM, APM)?

SAFETY

Are users redacting sensitive data and avoiding bias?

VERIFICATION

Do users know when and where human judgement is required?

ADAPTABILITY

Can users detect when prompt chains are too complex and manage context effectively?

COLLABORATION

Are users sharing techniques, branching conversations, and working in groups?

REUSABILITY

Can someone else run the prompt in 10 minutes with minimal context?

DECISION-SUPPORT

Do outputs include options, trade-offs, criteria, and recommended next steps?

REAL-WORLD APPLICATION

Will this be used on a live project within 2-4 weeks?

Assist AI Case Study: Education Sector

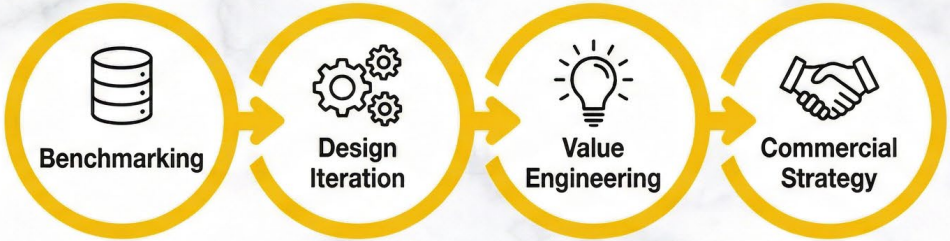
Rapid Scenario Testing for Complex School Scheme

PROJECT CONTEXT

- New Primary School
- UK Regions
- Two-stage contract strategy

140+ HOURS SAVED

In just a few days



THE CHALLENGE

- Regional cost benchmarks needed
- Design impact analysis required
- Programme implications unclear
- Multiple scenarios to evaluate

THE IMPACT

Time Compression
140 hours of manual analysis eliminated

Better Decisions
Quantified impacts vs generic statements

Client Value
Grounded advice in days not weeks

Assist AI Case Study: Infrastructure Sector

De-risking High-Stakes Tender Under Tight Deadline

PROJECT CONTEXT

- Regional Framework Bid
- UK City Region
- 2-week submission window

30+ HOURS SAVED

Strategy to submission in 14 days

THE CHALLENGE

- Complex tender documentation
- Partnership decisions needed
- Win probability assessment
- Tight 2-week deadline

THE IMPACT

Sharper Strategy	Better Leadership Use	Risk Mitigation
From reading to deciding rapidly	Refine vs build from scratch	Structured approach to bid risk

Assist AI Case Study: Project Management

Compounding Efficiency Gains Across Real PM Workflows

LEFT COLUMN

Project Plans Overview

7.5 HOURS SAVED

Developed detailed plans for PEP appendix from project documentation

Construction Advice Report

24 HOURS SAVED

Comprehensive reporting with data analysis and accuracy validation

Conference Planning

24 HOURS SAVED

Consolidating event outputs and analysing conference data

Risk Communication Infographic

7 HOURS SAVED

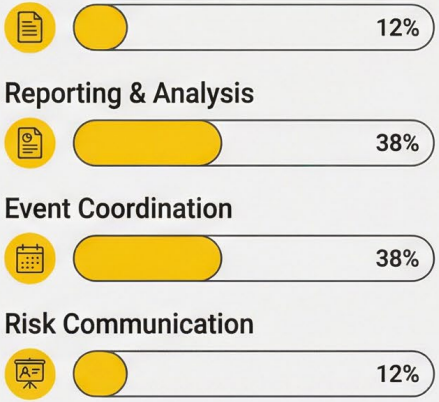
Visual risk communication materials and stakeholder reporting

CENTER COLUMN

62+ HOURS SAVED.

Across 4 real PM workflows

WORKFLOW TYPES



BOTTOM SECTION

Consistent 7-24hr savings per PM task	Repeatable across planning, reporting & coordination	Real Gleeds PMs, real projects, real impact

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gleeds.com

schedulestudio.ai

AI SOLUTIONS LANDSCAPE IN CONSTRUCTION PROJECT MANAGEMENT

12 Verified Categories of AI Software Transforming Project Delivery

PLANNING & DESIGN

Scheduling & Project Planning

ALICE Technologies

Generative scheduling, what-if scenario analysis, $100B+ projects managed

Preconstruction & Estimating

Togal.AI

Automated takeoffs, ChatGPT integration for estimating, days of work in seconds

BIM & Design Coordination

Revizto

Clash detection, 3D model analysis, design optimization

Financial Management

SubBase

AI invoice reconciliation, 21 seconds per invoice, $3.5M+ reconciled

EXECUTION & FIELD

Safety Monitoring

viAct / Intenseye

Computer vision, real-time hazard detection, PPE compliance monitoring

Quality Control & Inspection

Buildots

Helmet-mounted cameras, real-time comparison to plans, defect detection

Field Management & Workforce

SmartBarrel

AI facial recognition, PPE detection, 8X payroll reduction, time fraud prevention

RFI & Document Management

Datagrid AI

AI agents for RFI automation, document routing, deadline tracking

MANAGEMENT & OPERATIONS

Supply Chain & Materials

Kaya AI / Krane

Material tracking, demand forecasting, supplier optimization

Contract Analysis & Risk

Document Crunch

AI contract review, risk identification, legal interpretation for teams

Equipment & Predictive Maintenance

IoT/Specialized Platforms

Equipment monitoring, failure prediction, maintenance scheduling

Communication & Collaboration

Integrated into PM platforms

AI chatbots, translation services, team coordination

Governance

Governance and Regulation

- Baseline Knowledge
- Practice Management – Governance Frameworks
- Using AI – Procurement and explainability
- Development of AI

Material Impact on Service Delivery

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The RICS AI Standard at a Glance

Published in **September 2025** and effective from **9 March 2026**, the RICS professional standard "Responsible use of artificial intelligence in surveying practice" establishes **mandatory requirements** for RICS members and regulated firms globally. The standard takes a balanced approach—supportive of AI's transformative potential whilst guarding against complacency about its risks.

01

Baseline Knowledge

Understanding AI systems, their limitations, failure modes, and inherent risks

02

Practice Management

Governance frameworks for data, systems, and risk management

03

Using AI

Procurement, reliance on outputs, client communication, and **explainability**

04

Development of AI

Requirements for organisations building AI systems from inception

Key Concept: The standard applies when AI outputs have **a material impact on service delivery**—meaning outputs capable of influencing how professional work is rendered meaningful.

The Robots are Coming


BMW
DEPLOYMENT UPDATE

Humanoid Robots in Construction

Humanoid Capabilities

Humanoid robots are uniquely suited for construction environments as they can navigate the same spaces and use the same tools designed for humans. Their **advanced mobility**, **dexterous manipulation**, and **AI-powered adaptation** make them versatile across multiple construction tasks.

Leading Humanoid Robots

Several companies are developing humanoid robots with construction applications. These robots represent the cutting edge of what's possible in physical AI for the built environment.

Atlas

Boston Dynamics

Demonstrated agility on mock construction sites - climbing scaffolds and manipulating objects in a construction-like environment.

Source: Boston Dynamics (2023)

Optimus

Tesla

Designed for "dangerous, repetitive, boring tasks" and is slated for initial production by 2026, with applications for construction sites.

Source: Tesla AI Day

Transformer-like Humanoid

Jinki Ittai

Japanese startup's robot can assemble buildings, repair power lines, and replace road signs, operated by a human via VR controls.

Source: Jinki Ittai (2024)

AEON

Hexagon

Designed for industrial use with capabilities like creating digital twins through reality capture and performing asset inspections.

Source: Hexagon AB (2024)

Upskilling for Change

The AI Opportunity: Industry Transformation & The Skills Gap

56%

Increase in AI investment planned by construction firms for 2026

Source: RICS Artificial Intelligence Report 2025

170M

New jobs created globally by 2030, with AI skills topping demand

Source: WEF Future of Jobs Report 2025

The Massive Adoption Gap

Despite surging investment, **45% of construction organisations currently have no AI implementation**, and 75% lack strategic capability. The industry is cash-rich for tech but talent-poor.

Your Competitive Advantage

This "preparedness deficit" creates a golden window for graduates. Firms are desperate for professionals who can bridge the gap between traditional surveying/management and new AI tools.

Upskill - AI & Digital Training for the Built Environment

AI-driven learning

Equipping teams to harness AI & automation

Transforming decision making

Leveraging AI for predictive insights

From Theory to Application

AI in reporting, cost control & risk management

Behaviour and Culture Change

Custom Learning Pathways

AI training for leaders, project & cost professionals

Future proofing with AI

Driving smarter, AI-powered project delivery

Exercise 1- Use AI as your Thought Partner

C.R.I.T. Method

Context	Role	Interview	Task
Define the big picture	Define the outcomes, not just the tasks	Structured to reveal mindset and capability	Real-world challenge to simulate the role

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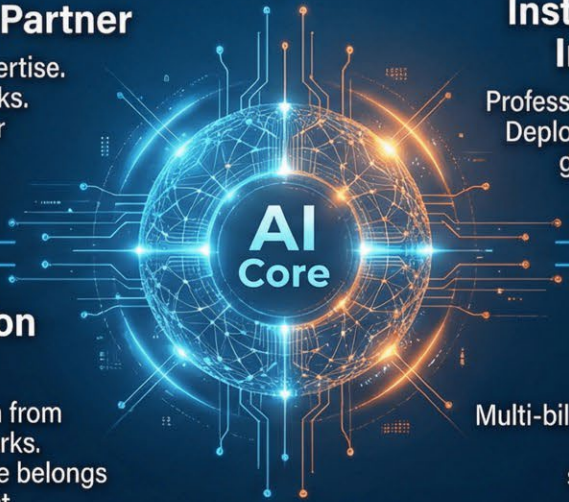
AI at Work: Four Key Messages

Transforming Construction Through Data and Intelligence

This is a culture change, not just a technology rollout.
The future of Construction is intelligent, data-driven, and human-centred.

AI as Thought Partner

Augments human expertise.
Automates routine tasks.
Frees professionals for strategic thinking.



Institution Aligned Implementation

Professional standards matter.
Deploy AI with transparency, governance, and ethical responsibility.

Experimentation at Pace

Start with pilots. Learn from results. Scale what works.
Competitive advantage belongs to those who move fast.

Measurable Value

Multi-billion pound opportunity.
Proven results: savings, faster delivery, time reductions.

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Human-Centric Data (HCD) survey

Thank You