University of Maryland
Project Management Symposium



Project Management in the Age of Artificial Intelligence

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This session will be recorded.

Project hagement Symposium Management In The Age of **Artificial**

Intelligence

Tim Jaques

President

International Project Management Association, United States



A.J. CLARK SCHOOL OF ENGINEERING
Civil & Environmental Engineering Department



Tim Jaques



Right Here At The Stamp!





Our Roadmap

- Where Are We Now?
- Where Are We Going?
- How Will We Get There?
- What Decisions Do We Need To Make?
- Takeaways







Where Are We Now?

1.0 2.0 3.0 4.0 5.0

Mechanization Electrification Automation Digitalization Customization 1780s 1870s 1970s 2000s 2020s

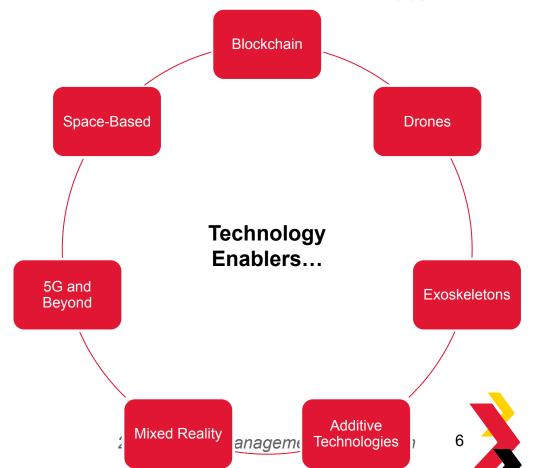




Industry 5.0

Human Consciousness and Machine Learning

- Humans and robots side-by-side
- Intelligent devices
- Hyper-customization
- Responsive supply chains
- Experience-activated products
- Early extra-planetary production



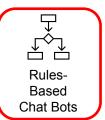




The Al Evolution

Recognition



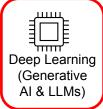




Comprehension







Low Complexity / Low Innovation

Optical

Character

Recognition

High Complexity / High Innovation

Generation







Diagnosis, automated care journeys, hyper-personalization of medicine, payor optimization.

Healthcare

Personalized learning journeys and materials, automated grading, professional development.

Industry
Front Runners

Pharma

Drug development and formulations, regulatory support, approvals and testing optimization

Create ideas, scripts, music, video, and translations.

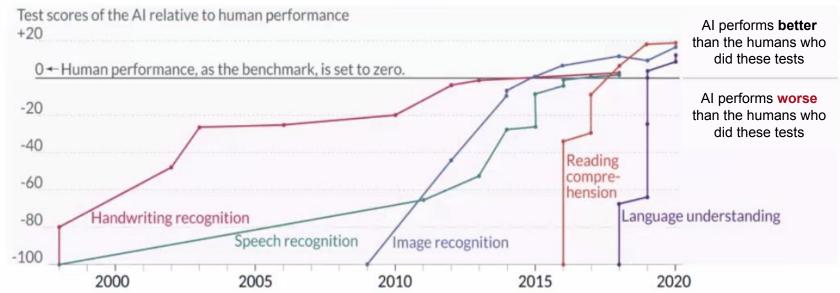
Media and Entertainment

Finance and Banking

Fraud detection and transaction analysis, investment analysis.











Current AI Strengths And Challenges

Al	In general, AI is better than humans at operating in stable environments, with static well-defined rules and consistent inputs.	Al is increasingly good at meeting our materials needs, optimizing	Al is good at handling big work like data crunching, large user bases, and global-scale systems
Humans	Humans are better at handling surprises, filling in the gaps, operating in environments with poorly defined rules.	Humans are better at meeting our social needs	Humans are better at one-off, multi-disciplinary, and/or high-stakes work

Adapted from Kevin Roose, Futureproof - 9 Rules for Surviving the Age of Al





Disruption is Underway: Examples

Insurance companies
leverage AI to sell
policies, calculate
quotes and highly
accurate actuarial data

Optimization



Logistics companies
have AI route optimizers
making deliveries more
efficient and reducing the
need for staff

Automation



Predictive software is enabling circular economic models, and lengthening the lifespan of large, complex assets like airplanes and bridges

Predictive







The Duality of Modern Projects

We Are Building the Most Advanced Solutions Ever

- Construction
- Robotic factories
- Advanced logistics
- Personalized medicine

Using 100-Year-Old Toolsets and Skillsets

- Gantt charts and activity sequenced schedules
- Risk registers
- PDF contracts
- Meetings and minutes

PM's risk becoming the meeting makers and note takers of the next wave of technologies.





A Different Path Forward

Automation **Decision Support** Creativity Optimization and Efficiency **Quality Control Customer Support**

We must be conversant in the emerging tech stacks.

We must understand blockchain solutions that will drive optimized contracting and agreement setting.





Scope Management Challenges

- What are the limits of the system? Chatbots may be more clear, machine-learned processing systems may be less clear.
- How do we implement data governance in an Al system to ensure a high-confidence system?





Stakeholder Management Challenges

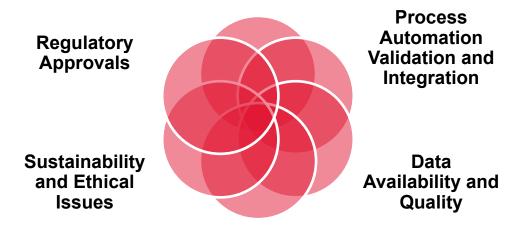
- How do we create a clear powerful vision of the changes that a new Al-driven environment will enable?
- How do we build solutions around job replacement fears, inadequate skills, and unlearning of today's roles?
- How do we build familiarity and comfort with these new systems for maximum upterker ect Management Symposium





Risk Management Challenges

Data Privacy and Security



Investment and Return







New Functions in a LLM World

- **LLM Trainer.** This role would be assigned early in the project, and the individual would be responsible for working with the AI platform to build the context-sensitive use cases. This role will prove to be critical for the translation of neural algorithms into actual user inputs and outputs.
- Prompt Engineer. This would be a customer-facing role that would help your users to get the right types of responses from the system, especially early on. These resources should be assigned at the outset and ramped up before testing begins, so they can understand the strengths and weaknesses of the system.





Where to begin?

- Gather Appropriate Stakeholders
- Build Literacy around Al
- Take Inventory of Current Uses of Al
- Align Al with Strategy
- Determine Your Al North Star



Join Us!



Right Here At The Stamp!





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Evaluate Session

