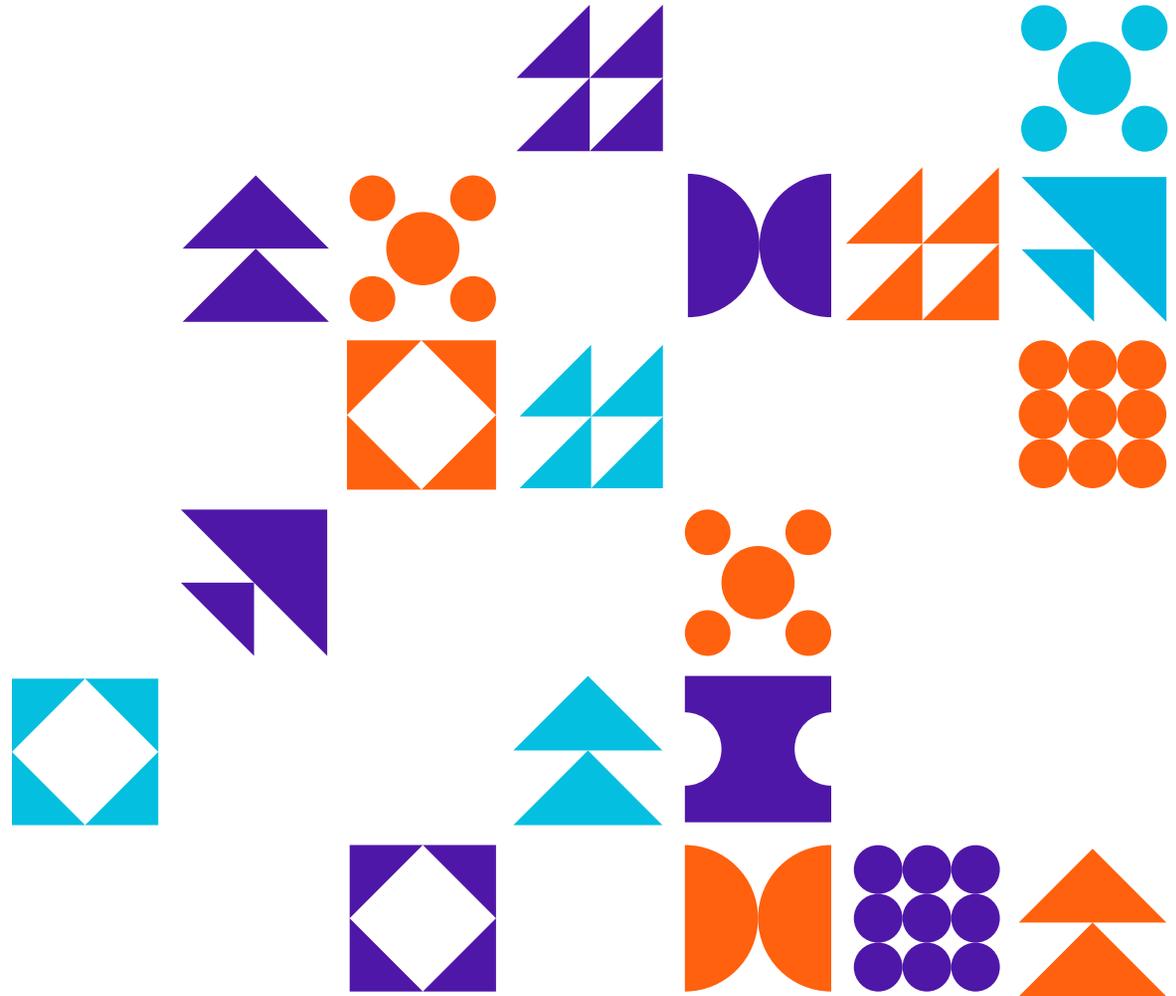**Project Management Institute.**

CENTER STAGE PODCAST CLUB

AI: ADVANCES & ETHICS

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Our Moderator and Discussion Provocateurs

Tammy Ashraf

Dr. Wanda Curlee

Mohamed Hassan

The May Podcast Club webinar had 981 participants from 74 countries during the live session. The webinar was highly interactive with lots of questions and insights.

DISRUPTION OF PROJECT MANAGEMENT AS WE KNOW IT

Poll Question: To which project management tasks or activities is your organization applying AI and machine learning?

Audience poll: Of the 321 poll respondents, the majority (51%) indicated their organizations were not using AI/machine learning while 26% indicated their organizations were applying AI/machine learning to data collection/reporting activities. All other responses were less than 10% (cost management, performance monitoring; planning; risk management; scheduling; and stakeholder engagement).

AI has got to be brought into project management. Instead of sitting on someone's computer taking space, AI can bring forward important lessons learned to help project managers address risks and deliver better results. Machine learning can help with developing status reports. Project leaders must know how to harness AI and those who can do that will succeed.

Wanda Curlee

I think in regard to cost and risk, AI will replace actual people. Decisions will be made from the machine looking at trends and having all the information stored and then provide projections.
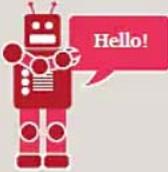
Participant Insight

Beyond data analysis, the real value of AI is in the algorithms that support decision-making. Project leaders need to know the uses of AI and other technologies, but do not need to be coders or developers themselves. AI will be an assistant to the project leader.

Mohamed Hassan

(All remarks attributed to speakers are summaries, not direct quotations.)

"Besides technical project management processes – which are what the previous three phases primarily focus on – an autonomous project management system will additionally need to comprehensively consider and master the project environment and related stakeholders. These AI systems would therefore have to be able to apply sentiment analysis algorithms to crawl through customer communications and understand stakeholder satisfaction and commitment at any given point in time."

	Integration & automation	Chatbot assistants	Machine learning-based project management	Autonomous project management
Key elements	Streamlining and automating tasks through integration and process automation	Integration and automation with additional human-computer interaction, mainly based on speech or text recognition	Enabling predictive analytics and giving advice to the project manager based on what worked in past projects	Combining the previous phases, autonomous project management leads to little-to-no human interaction in project management
Outlook	Sophisticated project management tools will enhance the quality of project management processes and reduce the effort and labour costs. Project managers can focus more on complex project activities creating value for the project	Chatbot assistants will take over basic project management tasks, relieve project teams of repetitive tasks and provide more interactive automation capabilities. The classic project manager leading a PMO will be increasingly replaced by project assistants	Predictive project analytics will give project managers increased visibility into the project's future and enhance the quality of decisionmaking. Machine learning-powered project management will give intelligent advice on project scheduling and project risks	Implementation of autonomous project management for smaller, standardised projects involving relatively little human/stakeholder interaction. Purely autonomous project managers seem unlikely within the next 10 to 20 years, since certain skills such as emotional intelligence, creativity and leadership will remain the domain of humans

Audience comment: With AI and machine learning, recurring project tasks, risks, lessons learned, etc. will become quicker to complete. Because of the constant learning and feeding the machine, I think this will make life easier for PMs.

Audience question: I work in the aerospace industry, which is known for structure and resistance to change. As there is a lot of opportunity to add AI in order to improve predictions and efficiencies, do you have any advice on how to successfully broach this topic with management in order to start implementing this new approach?

There is a big distinction between AI/Machine Learning and automation. AI is always learning, not waiting for its program to be updated as with automated robots. AI can adapt to new information in real-time whereas pure automation without AI cannot.

Mohamed Hassan

Chatbots don't just repeat routines, they get to know you. The chatbot learns as it engages with you so it can adapt to help augment your capabilities. For example, if you use a chatbot that knows that risk management is not your strong suit, the chatbot can bring forward information from risks on other projects that might be applicable to your work.

Wanda Curlee

In industries like aerospace where there is little margin for error, the application of AI can impact risk, and that could have great benefits.

Tammy Ashraf

(All remarks attributed to speakers are summaries, not direct quotations.)

Question for the Audience - How are you currently involved in the development of AI applications for project management?

Response 1: I am the only one in the IT department looking into adapting AI for project management.

Response 2: We are only thinking about the future of AI in our organization and how it may be useful.

Response 3: I work in the public sector, with an emphasis on electronic records management and data access and privacy. With the pandemic, especially, the value of moving project management into the virtual sphere has increased the need for existing legislation to be reinterpreted. I work within the ethics and data responsibility side of things.

Response 4: A project I managed was to develop bots to automatically post monthly payments.

Response 5: Currently write about implementation of AI during transition of contracts or during start up activities in proposals.
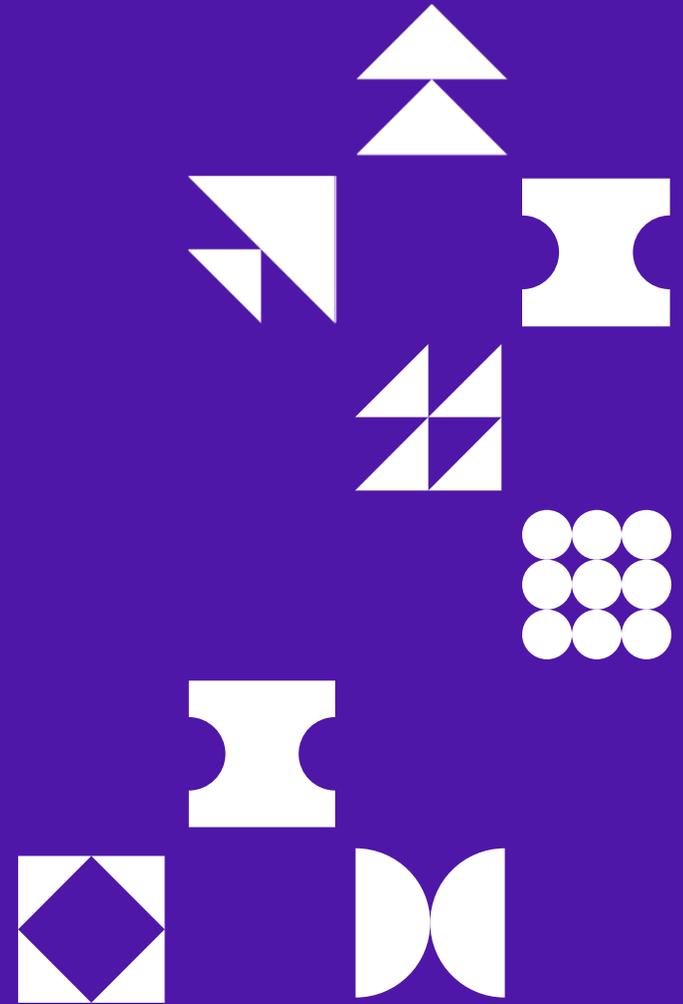
Participant insight

Question for the Audience – How do you think AI/Machine Learning will affect the way you lead and manage projects?

Response 1: I hope it will reduce the burden of mundane task and elevate my ability to perform critical thinking through additional data/scenario suggestions.

Response 2: Right now, it has little impact, but I see it significantly impacting the way we lead and manage projects within 5 years especially in the areas of risk and project investment..

Response 3: Make obtaining data and making analyses quicker, more objective by removing human element.

Participant insight

THE INTERSECTION OF AI AND ETHICS

PMI CODE OF ETHICS & PROFESSIONAL CONDUCT

In addition to the *PMI Code of Ethics and Professional Conduct*, PMI offers several resources to help project leaders and team consider the ethical implications of their work, including:

- *Core Values Card* (see right-side panel of this slide)
- *Ethical Decision-Making Framework*
- Articles on ethical and moral leadership in project management

To access these and other resources, visit: https://www.pmi.org/codeofethics.

Responsibility is our duty to take ownership for the decisions we make or fail to make, the actions we take or fail to take, and the consequences that result.

Respect is our duty to show a high regard for ourselves, others, and the resources entrusted to us. Resources entrusted to us may include people, money, reputation, the safety of others, and natural or environmental resources. An environment of respect engenders trust, confidence, and performance excellence by fostering cooperation—an environment where diverse perspectives and views are encouraged and valued

Fairness is our duty to make decisions and act impartially and objectively. Our conduct must be free from competing self-interest, prejudice, and favoritism.

Honesty is our duty to understand the truth and act in a truthful manner both in our communications and in our conduct.

PMI.org/Ethics | EthicsInsight@pmi.org

Poll Question: What is your organization's level of maturity with incorporating AI ethics into its business model?

Audience poll: Of the 338 responses to the poll question, 48% of respondents indicated their organization has not considered AI ethics while 30% were generally aware of AI ethics. Fewer than 10% of respondents indicated their organizations had formal or informal ethical guidelines and resources.

AI is coded so it can reflect the biases and ethical lapses of those who program it and of those who use it improperly. Some things to consider – whose values and ethics do the coders use? How do they test for this? Don't take it for granted that AI is built within an ethical framework – understand the ethics built into the machine.

Wanda Curlee

The law is clear on what is right and what is wrong. With ethics, there is a lot of grey space. PMI has provided a Code of Ethics and Professional Conduct built on four values: Responsibility, Respect, Honest and Fairness. There is also an ethics decision-making framework to help practitioners put the Code into practice.

Mohamed Hassan

Sometimes bad things happen accidentally due to unintended or unknown consequences based on the programming and the data used. That why's we really need to probe what's in the "black box."

Tammy Ashraf

(All remarks attributed to speakers are summaries, not direct quotations.)

Wanda Curlee

We as project leaders need to audit the AI that we are using. Is what came out what you expected? Is it rational? Does it appear to be honest? This is where the AI-human interface ensures the AI is being used appropriately. We need to create a balance between the rational and the emotional.

Could ethics change over time, e.g., something might be acceptable in one culture today but could change later? If AI were to look at artifacts from previous projects for learning, how should it make decisions that could have been ethically sound in the past but maybe not so today or the other way around?

Participant insight

Mohamed Hassan

AI should be constantly pulling data, learning from it and interpreting it through a current lens. So the machine learning aspect should support adaptation and where it does not, reprogramming may be required.

Tammy Ashraf

The human elements of empathy, leadership, and intuition have to play a role.

(All remarks attributed to speakers are summaries, not direct quotations.)

Question for the Audience - In what way(s) do you feel your organization's ethical policies or guidelines need to be enhanced related to AI applications for project management?

Response 1: We have no consideration for AI at this time and will need to address it in all of our policies.

Response 2: Panel of diverse people to audit and review the tools being used.

Response 3: Once more AI tools are used, there will be a need to set standards for usage, similar to how we set standards for systems that were cloud-based.

Response 4: Defining and guarding AI ethics is a gateway to reflect on human ethics. It forces us to see from the outside when trying to tell AI what is ethnical or not. Respect, accountable, honest, and fair applies to all cultures. There should be universal basic standards for AI ethics as well.

Participant insight

Question for the Audience – In what way(s) do you feel your organization's data privacy and security policies or guidelines need to be enhanced related to AI applications for project management?

Response 1: We are a global company so we have fairly strict policies on data privacy and a large security group auditing—but we could likely use more diversity in that group.

Response 2: It should just be a continuation of what is currently in practice. There should be a separate network location where data that is not intended for AI applications to be kept (i.e., personnel data, government classified data).

Participant insight

DYNAMIC DIGITAL CAPABILITIES

The Project Manager of the Future

Developing Digital-Age Project Management Skills to Thrive in Disruptive Times

1	2	3	4	5	6
Data Science Skills	Innovative Mindset	Security and Privacy Knowledge	Legal and Regulatory Compliance Knowledge	Ability to Make Data-Driven Decisions	Collaborative Leadership Skills
Data Management, Analytics and Big Data					

Pulse of the Profession Report: The Project Manager of the Future – Developing Digital Age Management Skills to Thrive in Disruptive Times

Poll Question: How are you currently building your digital skills and capabilities?

<u>Audience poll</u>: Of the 273 respondents to this poll question, 31% indicated they were pursuing technical courses within and outside of their organizations. About another third (29%) shared they were taking PMI courses with technical PDUs. Just over a quarter of respondents (26%) indicated they were doing their own research and reading on the subject.

Whatever AI can do, we don't need to duplicate that effort. We can use the outputs to make the final decision, particularly since there are things like current developments, culture and similar factors that AI may not be able to discern. The key skillset is to understand how to use the technology, not how to develop it.

Mohamed Hassan

It is important to stay in-tune with what is going on and how to use the technology. For students, universities are starting to build how to use disruptive technologies into their curricula. For working professionals, make the argument to your leaders to invest in digital skills that will enhance your project delivery capabilities.

Wanda Curlee

There are multiple resources, toolkits and checklists that people can access.

Tammy Ashraf

(All remarks attributed to speakers are summaries, not direct quotations.)

Question for the Audience – Which digital skills do you feel you need to develop within the next year?

Response 1: AI and Agile methodology and tools.

Response 2: Big data manipulation and machine learning. Data collection and display.

Response 3: More technical knowledge on AI and Machine Learning.

Response 4: Further my understanding and familiarity with the options available for facilitating digital transformation.

Participant insight

I review and read as much as I can on disruptive technologies, find continuing education classes at local universities or other companies that offer classes.

Participant insight

Participant insight

These skills have always been around. The difference is lots of data and because we have the technology, we can parse and study it to get the information at the speed demanded of today's world. Without the technology, we will be left behind.

Moderator Insights

Tammy Ashraf

- Poll results indicated that most participants whose organizations currently use AI technology apply it to augment data management/reporting processes in project management. This indicates the early adoption stage of AI.

- Project managers will need to enhance their technical skills to have enough knowledge of how AI can augment project-oriented tasks and increase the success rate of projects. They do not necessarily become developers (ex. data scientists).

- There are several ethical principles which organizations have adapted and continue to evolve for their AI applications. While ethics can be fluid across cultures, some key AI ethics principles include the following:

Fair	Equitable	Transparent	Easily Explainable
Accountable	Governable	Secure and Safe	
Human-Centric and Beneficial to Society			

- Security and privacy of data are becoming top priorities for organizations especially in light of recent incidents that have caused significant negative and costly impacts.

- Examples of an ethics checklist and best practices to guide data-driven projects:

  - ❏ https://deon.drivendata.org/#data-science-ethics-checklist
  - ❏ https://medium.com/salesforce-ux/how-to-build-ethics-into-ai-part-i-bf35494cce9

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