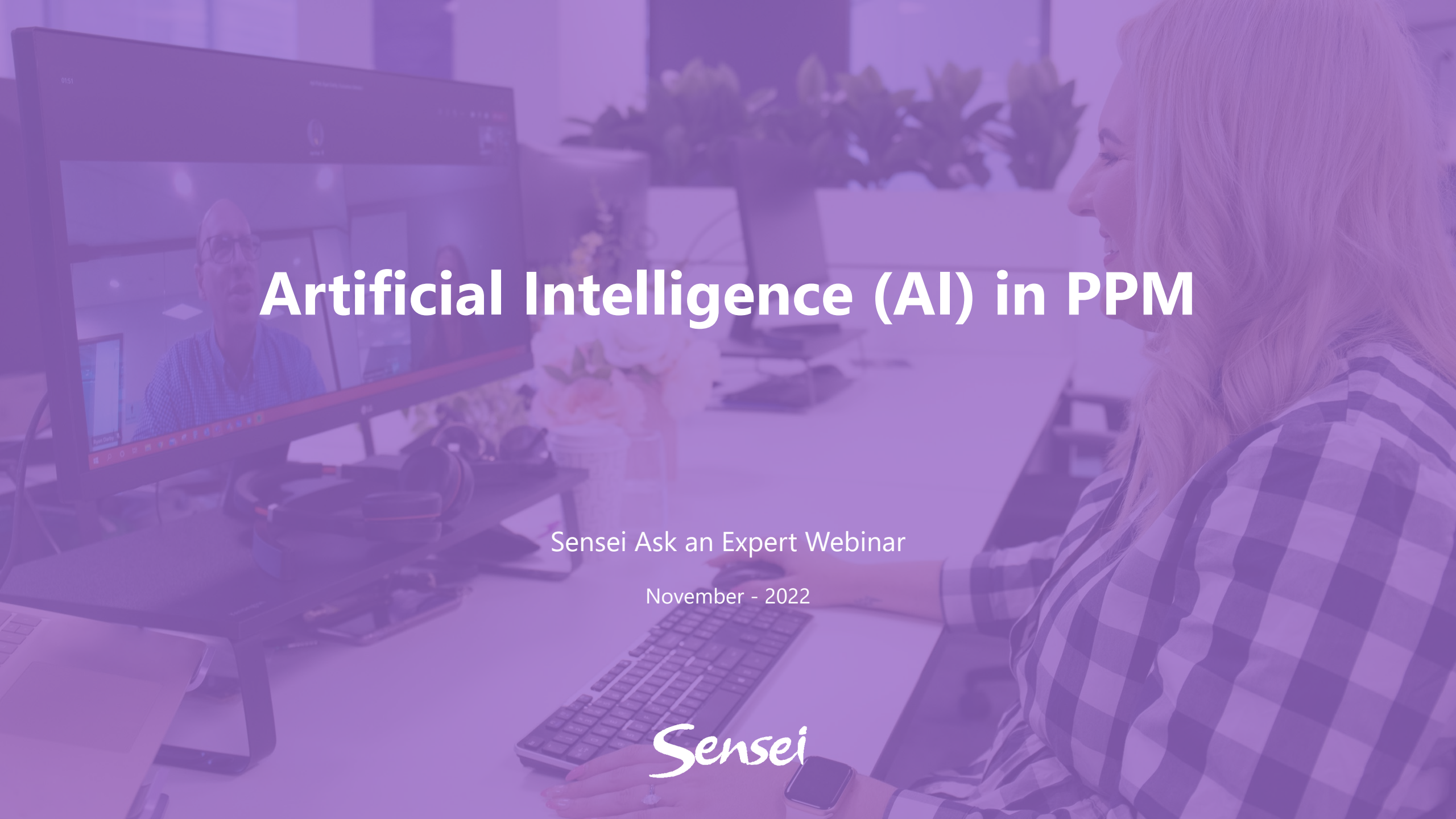

Artificial Intelligence (AI) in PPM

Sensei Ask an Expert Webinar

November - 2022

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Panel

Ryan Darby

Success Lead

Sensei APAC

With over 18 years in PPM and Work Management Ryan has developed into a well-rounded professional who can always be approached and asked for advice. Ryan is an industry-standard expert on all levels of PMI, PMO and Scaled Agile.

Marc Soester

Executive Director

Sensei APAC

Marc has over 20 years experience in being a PPM & Work Management Subject Matter Expert, he has been part of over 250 PPM implementations and is an Industry Standard Expert on PMI, P3O, Scaled Agile.

Agenda/ Key Takeaways

Anything that can be automated will be automated, and anything that's left will become 100 times more valuable

1. How AI will change the project management landscape
2. How you need to prepare
3. Challenges to implementing
4. Examples of how AI could work in project management

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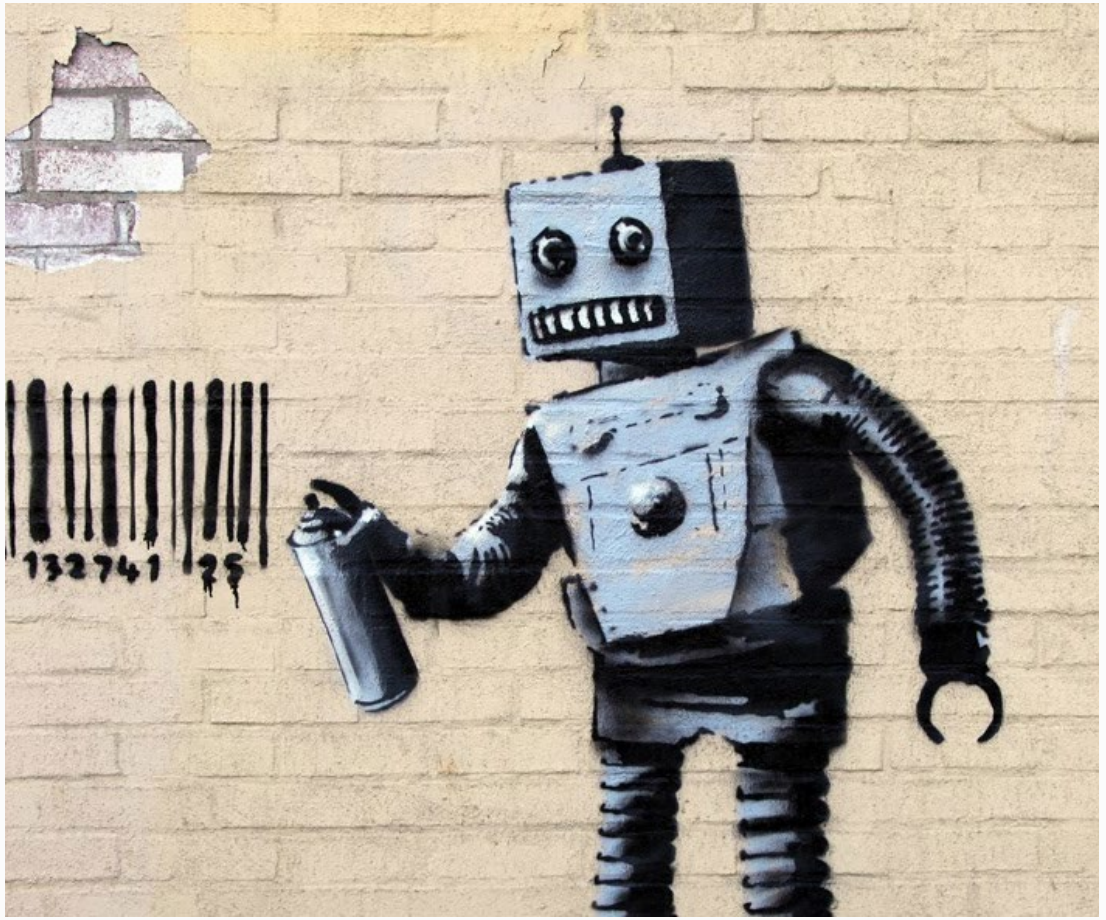
What is AI, especially in PM?

Umbrella term to describe multiple technologies that are able to perform tasks normally requiring human intelligence.

Artificial intelligence is **the simulation of human intelligence processes by machines, especially computer systems**. Specific applications of AI include **expert systems**, **natural language processing**, speech recognition and machine vision.



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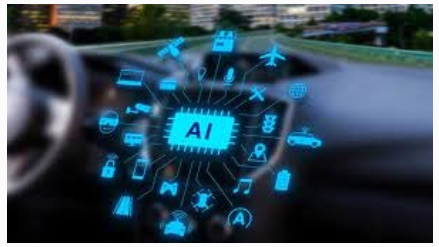
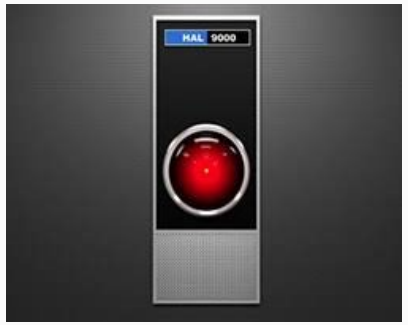
What is AI?

Your phone
Your Fitbit
Your car





Weak

Strong

AI, but let's keep it real for now

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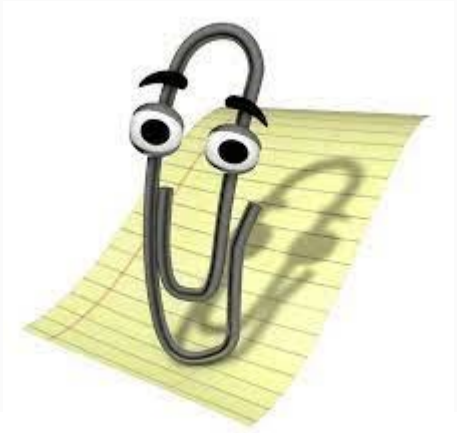
What is AI?

Tactical

Drafting emails
Writing status reports
Meeting transcription
Play my emails



Strategic

Watch the moving parts
Schedule predictions
Lessons learned
Suggest schedule options
Alert to potential risks and opportunities
Observe team member behaviour
Cost patterns

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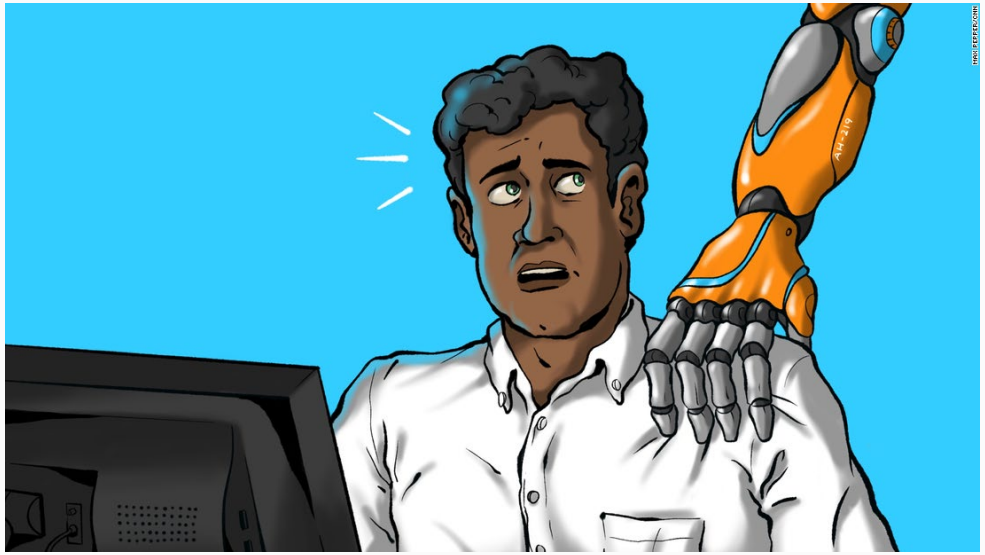
Do I need to worry about this?



$20 trillion by 2030 created in the economy by AI.

If AI in your strategy 17x more likely to succeed. Future of AI by Deloitte.

Australian Government

Deloitte.

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Gartner Predicts: Strategy Needs Humans, Maybe Projects Don't

… by **2030**

- Enterprises that commit dedicated organizational resources to ensuring that strategy is successfully executed are **80%** more likely to be industry leaders.
- Some **80%** of the "work" that represents the bulk of today's project management discipline, practices and activities will be eliminated by partnerships between humans, smart machines and AI.
- The multitude of PMOs existing in organizations will have to amalgamate into one function concerned with change, strategy, product evolution and organizational governance.

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If it's going to replace work, why do we need AI in projects?

Projects are temporary

- Knowledge goes as staff move on.
- We need to build up data. This gives us a foundation to KM and AI.
- AI helps make sense of all that data.

Projects are unique

- The volume of data grows but human ability to analyse it isn't.
- Within the uniqueness we find commonality, and form a base of data with it.
- But insights don't come automatically. Data is great but knowledge is value.
- AI moves us up the maturity ladder to gain insights from data.

Projects are human

- AI frees us from the data and processing to be human.
- Focus on relationships not spreadsheets!

Freedom to be human is the real value of AI

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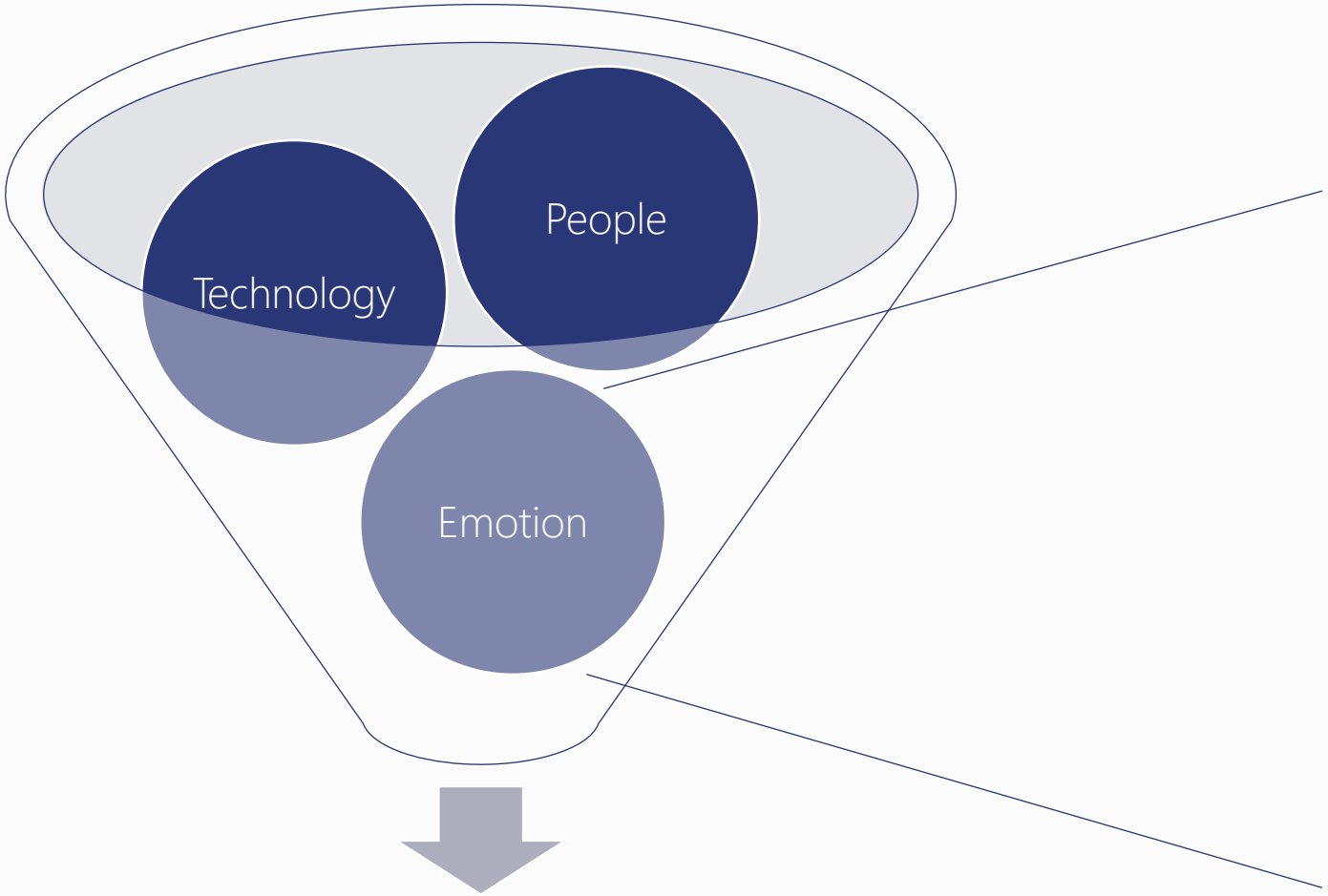
Projects are human, and we need to analyse the human component



The modern tools to deliver a project

Achievement = Happiness

Fear = Planning

Sadness = Learning

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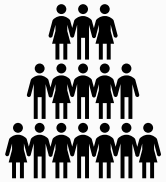
Projects are human – we need to analyse the human element

The project fails.

Management is surprised

The messages are not making their way up

The team is not surprised



What was missing?

Stakeholder management.

Here is an example scenario that AI already delivers:

Sentiment

Engagement

Influence

Interest

Relationships

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What AI is good at

- Processing volume
- Not biased but make sure your data isn't either
- Handling complexity
- Dark data
- Says it like it is
- Re-optimising your portfolio by creating scenarios

Eliminate human bias, but also free you up to focus on naturally biased human interactions

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What will the impact be on project management?

Decisions a PM makes	Redefinition	Move to data driven	Strategy and product focus	Hybrid strength
• Transactional (plan, manage, control deliver), AI can provide support. • Guiding and leading. AI can help with some integrated decisions for scenario planning. But it is controlled by nuance, complexity and context. • Influencing and negotiating decisions. Frees up time for this.	• Another methodology like agile? • Another tool? • Or a redefinition of project management?	• Instead of intuition and experience based	• Not administration	• People, partnering and negotiation, and the machine on process. • We will get better at business analysis as we need to create better data • Business skills, as the AI does the process administration. **This empowers the citizen PM**

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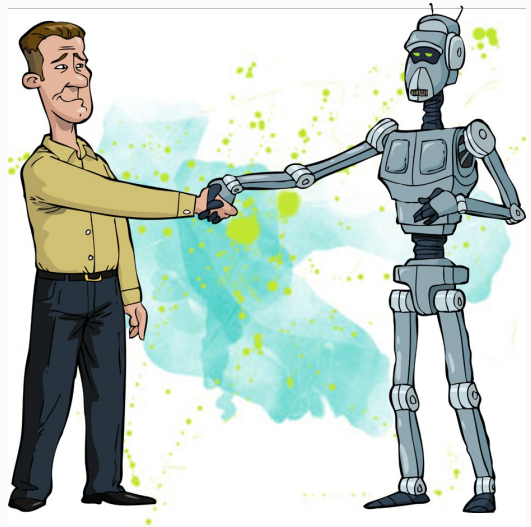
What does AI need?

Data

- Do trust your reports?
- An organisation model
- All the data – an estate
- Is there data in Excel that tell a hidden part of the story?
- Do you have access to the dark data or only what you think of as the project management data?
- Is yours complete?
- Do you have baselines?
- Do you record actuals?

Processing power

- This is now here, but it is up to use to use it
- Think about the service you use and how integrated it is



Data estate and relationships	Data standards and quality	Volume	Data bias, emotion and GIGO	Where is the incentive to populate data?	Ethics

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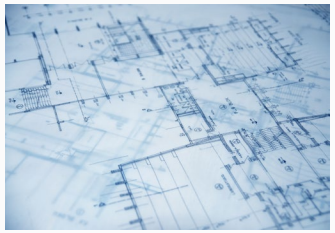
AI broadens our understanding of data

Project KPI	Deliverables KPI	Schedule KPI
On Wat...	On Track	On Track
On Wat...	On Wat...	On Track
On Track	On Track	On Track



Analyse

Bring together PPM and work based project data

Predict

Predict based on all project data not just PM data

Prescribe

Find the right people and tell them what they need to know in advance

Data is in an estate, it is not all in one database. You need to consider not just the PPM tool but construction data for example as this is a deeper and richer source that can be learned from.

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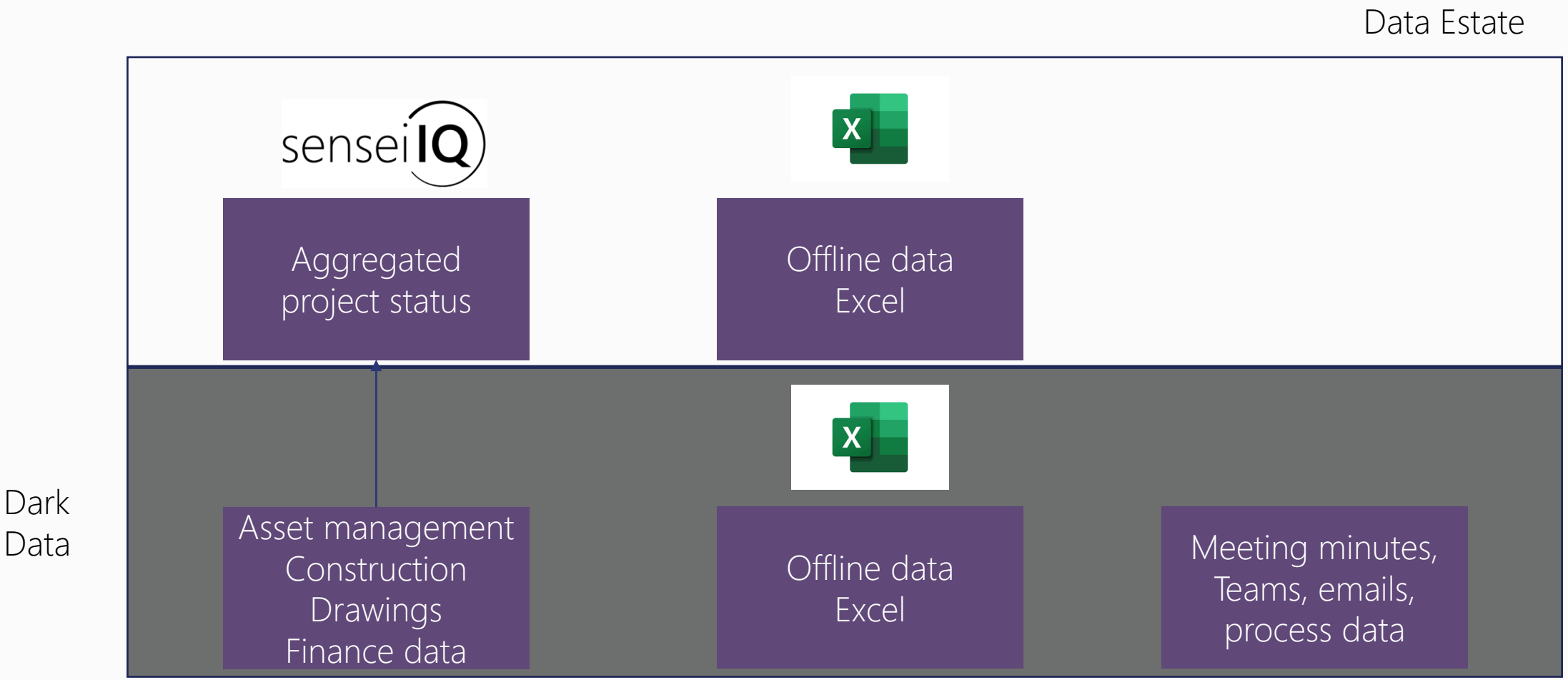
Where is your data?



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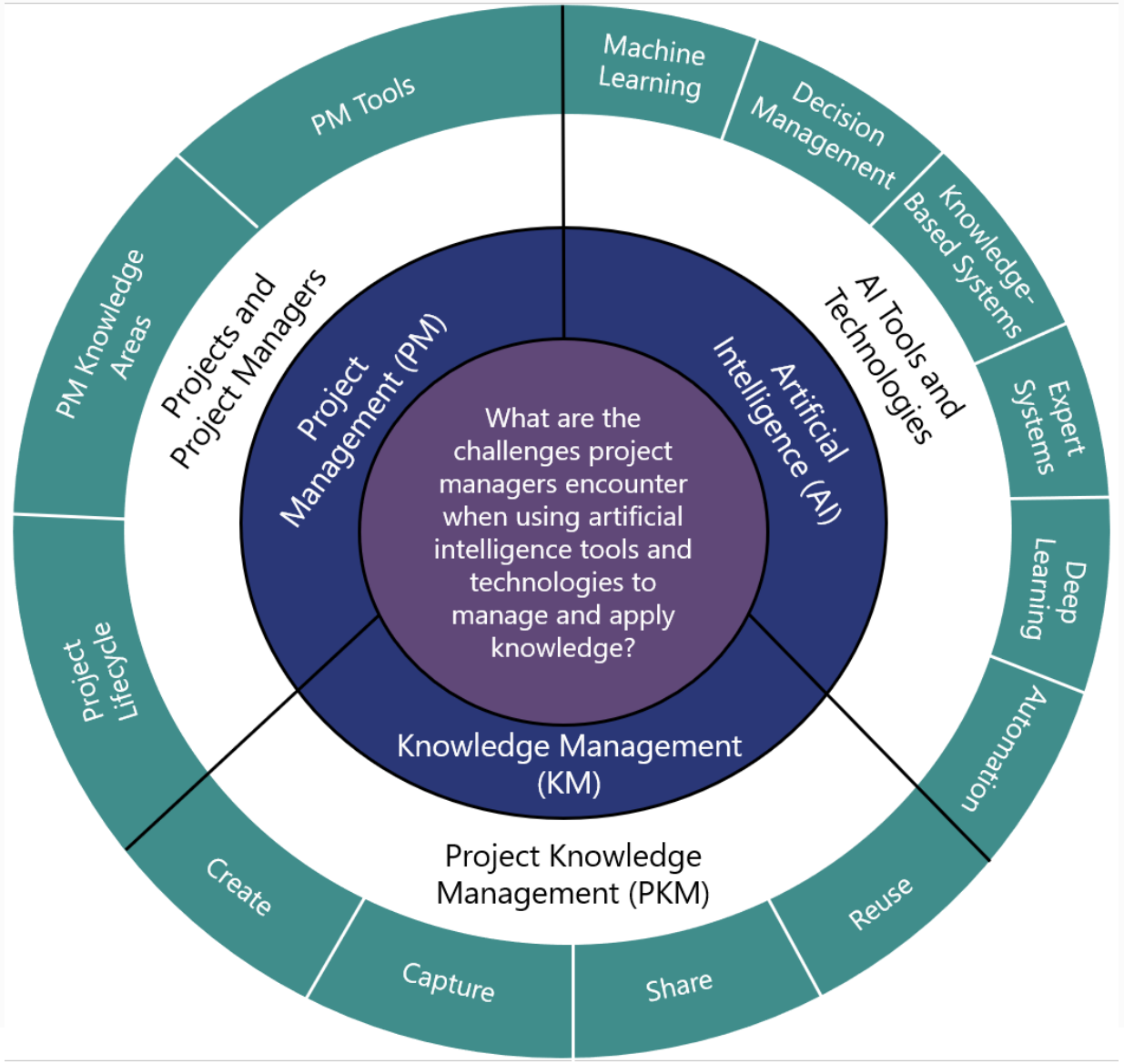
Do I only need data and processing power?

We need data, and a strategy to relate and manage it.

Processing power, which the Power Platform has now given us



Data is lost when a project ends Informal collection is in place

Consistent data driven approach so that the data, knowledge and insights make sense

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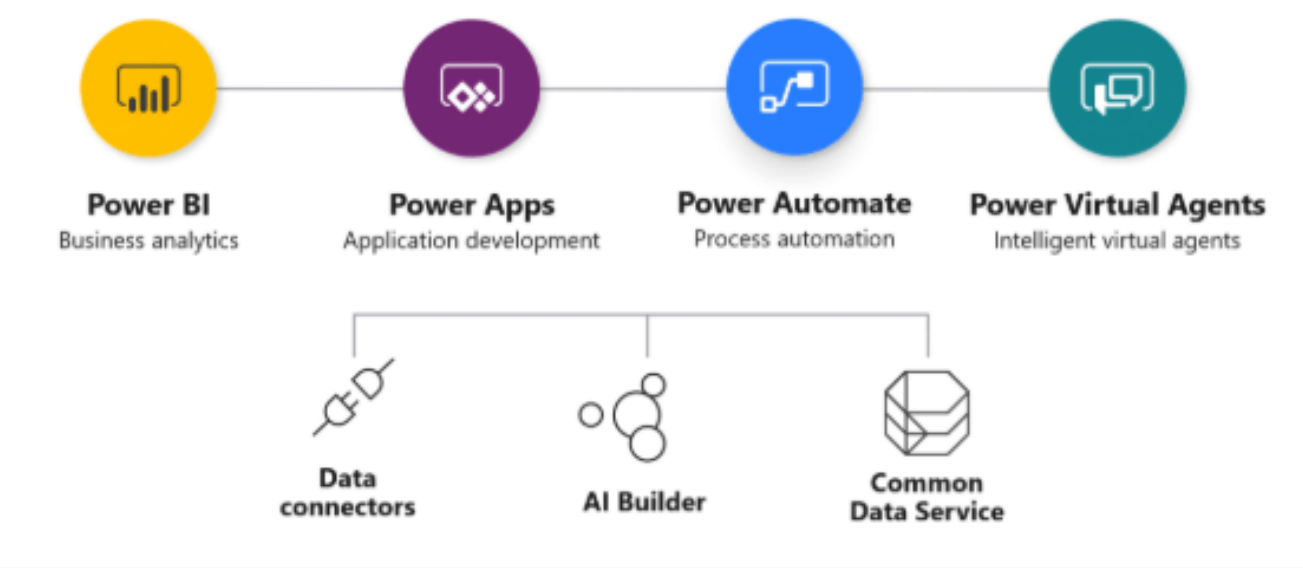
Processing power: what is AI in a Microsoft context?

Start with existing models that plug into your Power Apps



Build your own to large scale

Microsoft Azure

Applied AI Services

Cognitive Services

Machine Learning

AI Infrastructure

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Barriers

70% don't know enough

60% can't create use cases

60% worried data privacy

Deloitte

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Challenges to AI in PPM

Purpose	Fear and embarrassment	Change management	Preparation
• Not having a scenario and reason, just wanting AI for the sake of it or for the wrong problem.	• Data is poor, and a focus on it will expose us. • Unknown dynamics. We may mistrust the technology if it exposes issues that we don't consider issues.	• Resistance to change or not realising it's a tool not a competitor. • Early adopter issues, losing faith as you fail too fast. • How to get new PM's to use AI before they understand project management	• Lack of education. • Critical thinking skills are lacking to analyse what the AI comes up with. • People skills and digital literacy is not being invested in, so we don't have what we need to move into the vacuum created by AI.

AI needs data and processing power.

Processing power is now here.

Is your data?

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Challenges to AI in PPM

Data and tools

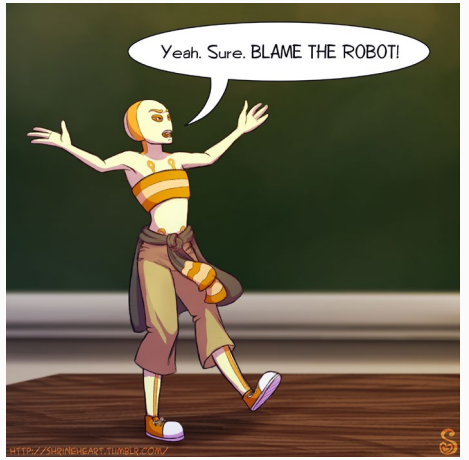
- Do you even data?
- Lacking complete data
- Structure and relationships between data. **AI considers your mistakes as gospel**
- Integration of the PPM tool to AI tools
- Hoarding

Innovative ability

- Top down hierarchy in large organisations stifles innovation
- Industry inertia in innovation
- Watch out if you are developing AI within your own project. Push for innovation outside of the project that is aligned with your objectives

Human weakness

- Don't code emotion into your data
- Don't imprint emotion and bias onto the AI
- Emotion is a sensor and we can monitor the sentiment



Don't blame the AI.

You fed it.

At least it is making you think as it will amplify your own bias.

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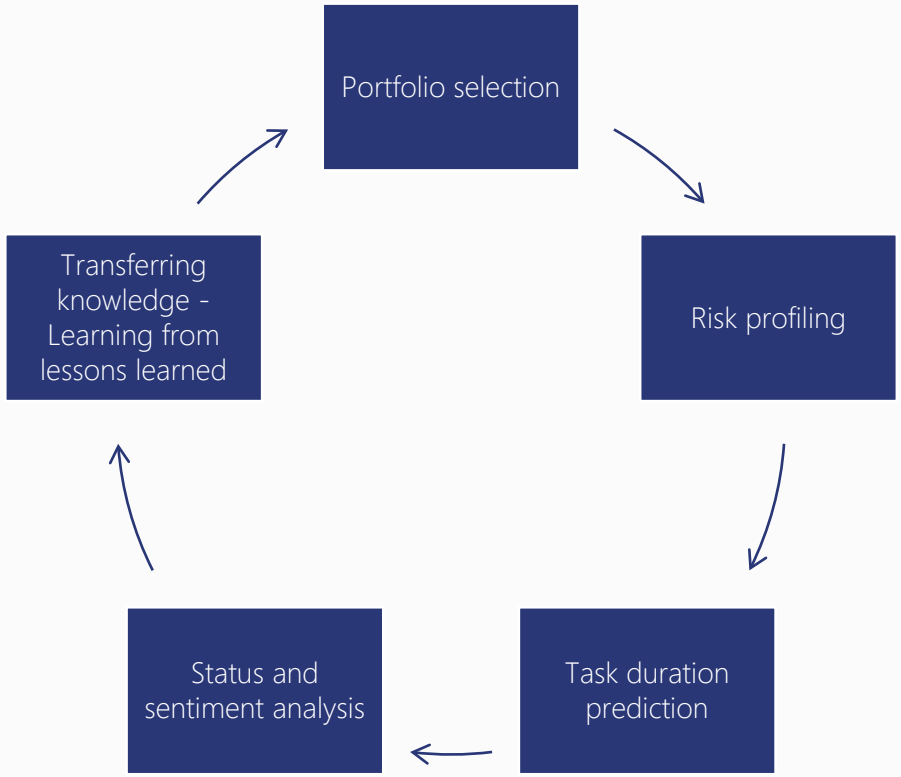
Scenarios



Large volume of data is needed

Can't keep changing data as you change

How to physically integrate with a PPM

Workflow	• Needs the right model • Needs data
Dashboards	• Part of your process • Needs data
Notifications	• Integrate with Teams
Your phone	• Siri briefs you on your day

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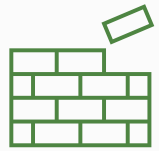
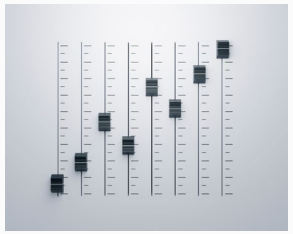
Scenarios – digital twins and portfolio analysis

Portfolio

Current projects
Pipeline
Resources
Costs
Benefits

Digital copy





Find the most successful portfolio by adjusting levers on the digital twin

Implement changes in the real world

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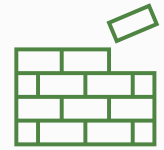
Scenario – Portfolio Selection

Create a proposal/business case.

"I wonder if there is anything earlier projects learned about whether this could work?"



Analyse past completed projects and predict success

Requires 50+ projects per type completed. 1000+ for realism.
Departments etc. can't change over time.
The PMO only has aggregated statistical data.
Need to analyse the Dark Data that describes what the project is.
This requires a data model, which a PMO probably won't have.

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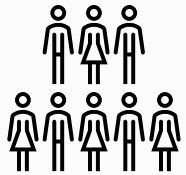
Scenario – Risk

Organisations collaborate to share risk patterns



Creates risks, and tags them with attributes.

Risks are part of a project context, with attributes and outcomes.

Analyse past completed projects and generate common risks based on classification.

Warn the PMO about the pattern.

Live data.

Don't separate the PPM and the AI.

Detect as you go.

This is governance. We can do this right now. Are you governing your process?

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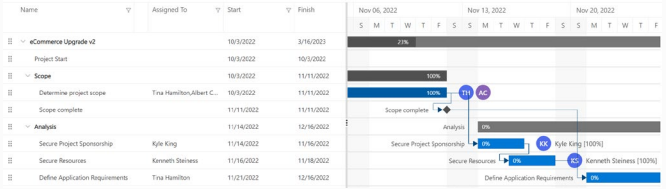
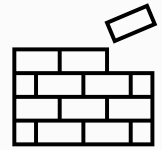
Scenario – Prediction

Create many tasks per project. But the tasks are associated with common elements





Prediction. Numerical or binary.

Needs a lot of data.

Needs a well understood data model.

Predicts the Duration of a task based on who it's for, who is doing it and the project type.

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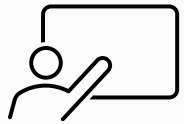
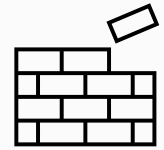
Scenario – “how’s it going?”

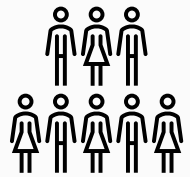
Most common question managers ask, “How’s it going? What’s the status?”

“It’s all good, trust us!”





“We are in so much trouble. Management doesn’t understand. This stuff is complex. Who signed up for this anyway? The PM is not defending us”.



Sentiment. Make the human feeling behind the official status more visible, especially with distributed teams

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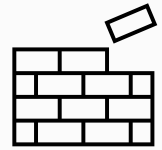
Scenario – “how’s it going?”

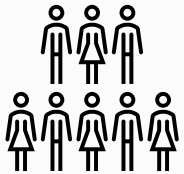
Ethics and privacy

Teams transcripts as available data comes out in November 2022.



Status report is green, but what are they saying in meetings?

“We are in so much trouble. Management doesn’t understand. This stuff is complex. Who signed up for this anyway? The PM is not defending us”.



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Scenario - Sentiment

AI created this artwork and won an art competition with it, based on a textual description.

It has caused a commotion in the art world.

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Improving *the way you* work