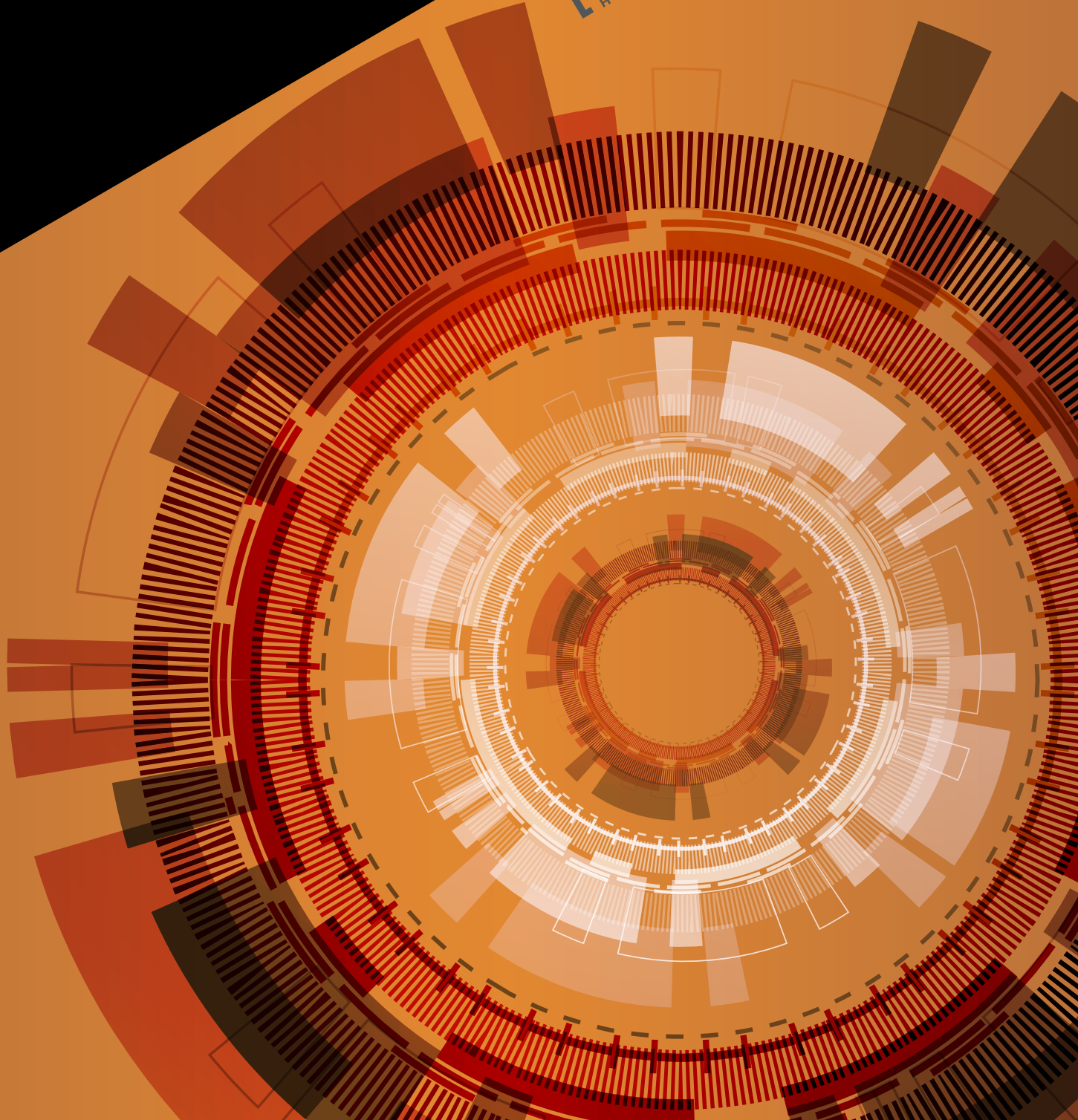


House of **PMO**: Inside PMO

The AI PMO:
Threat or
Opportunity?

HOUSE OF PMO
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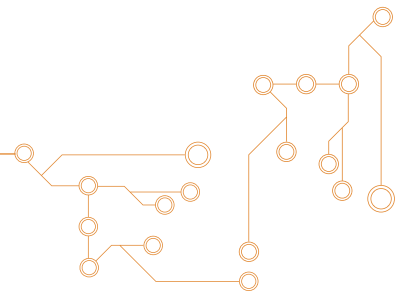
It is an extension of a role that the PMO already performs; we are already using data; providing some analysis and pushing that out in the form of project reports.

We're already translating data into information so where is the potential threat if we're just utilising advanced AI technologies to do more of that and get better at it?



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The Conclusions



- Understanding data literacy and data culture are the foundational steps to becoming a more data-driven organisation.
- You have to spend as much time on building a data culture as you do with the technologies you will be using and the PMO can support the building of data literacy, one of the building blocks for a data culture in the project management organisation.
- The five drivers for the PMO and the delivery function to become more data-driven is increased productivity and predictability with data; improved consistency and certainty in the information and insights created and repeatability in the steps and processes taken.
- The first steps for getting started? Education, education, education.
- The PMO provides the role of data translator - working in the area between the technology and data specialist and the senior executives. We translate the data produced into actionable information and insights that executives can make decisions on.
- To get started with AI technologies the PMO leader has to be curious with curious people working within the PMO too.
- Behavioural science and behavioural observations are just as important as data science and project observations. The PMO must be knowledgeable and skilled in both.
- Selecting the tools you'll use is the easy part - upskilling both technically and behaviourally will be harder.
- The PMO performs the role of data hunter - data gatherer and data farmer - we're the custodian of data.
- Robotic Process Automation is a easier place to start than data science and analysis.
- There are both opportunities and threats to consider with AI technologies yet our PMO Managers see them as a real opportunity for PMOs.

House of PMO: Inside PMO

November 2019 \ London

Uncovering what PMOs are already utilising and understand how these new technologies are being embraced by the organisation.



We keep hearing about the rapid pace of change in businesses today; how digital disruption will change our workplaces; that advanced technologies will transform the way we carry out work tasks. In project management, these technologies will not only feature in project solutions - they will also be used in project management and the management of projects to drive better predictions; decision-making and reduce the time spent on repetitive tasks. The technologies at the centre of this change has become collectively known as 'artificial intelligence' (AI) or 'AI technologies' and in our project world that means technologies such as predictive analytics, machine learning and robotic process automation (RPA). They're all used in conjunction with data.

Over the last 12 months, House of PMO has been exploring this subject to understand what AI technologies will mean for the PMO and find answers to questions such as:

- What problems are we trying to solve with AI?
- What are AI technologies should we be interested in?
- How do we get started with AI?
- What pitfalls do we need to be aware of?
- How does this change the PMO role?
- Are these AI technologies a threat or an opportunity for the PMO?

In this report we look at all of these questions and more. As the PMO, our role is to support the successful delivery of programmes and projects within our organisations alongside a decision-enabling role. It is also our job to be aware of and build knowledge about the things that impact their success. Like the Agile explosion a few years back, the PMO needs to be in a place to provide guidance on the benefits of these advances, how they can be utilised and the steps the organisation should consider taking to embed them. This report provides insights into what the PMO needs to know about and consider in relation to AI technologies and data.

This report provides insights from the fifth PMO Manager's Lunch held on the 22nd November 2019.

The PMO Manager's Lunch is a House of PMO event. With House of PMO there are great conversations amongst different types of PMO people and this event gives us an opportunity to bring together leaders of PMOs - PMO Managers and Directors to discuss PMO topics which are relevant today.

It is an opportunity for PMO Managers to talk to other PMO Managers in different organisations and industries. We also wanted the opportunity to understand what is happening in PMOs today - PMOs in the real world.

We are also conscious that there is not a lot of PMO benchmarking available, either formally or informally and this is an informal benchmarking opportunity which brings insights that others from within the PMO community can share and use.

What's **Driving** the Change?

Before we get into the details of the report, it is worth taking a step back and understanding where the drivers for this change are coming from. As technology continues to develop, is AI just another 'paperless office' pipe dream or the proposed benefits achievable?

What's Driving AI Technologies in Business, Project Management and the PMO?

In **PwC's 2019 Annual Global CEO Survey** it was stated that the gap between the information a CEO needs and what they get has not closed in the last 10 years. They're looking for useable, actionable intelligence yet 59% say their data is not comprehensive. Furthermore, 85% of CEOs agree that AI will significantly change the way they do business in the next five years. They have a strong desire to keep pace with technological change and recognise that to do that, they need a workforce ready to adopt it - and that means addressing the skills gap.

Also, in 2019, **Accenture's AI: Built to Scale** report stated that, "84% of C-suite executives believe they must leverage artificial intelligence (AI) to achieve their growth objectives, yet 76% report they struggle with how to scale." Accenture focus on the belief that AI is not about 'artificial superhumans', more using technology to give human's 'superpowers', equipping them with new skills and capabilities to achieve more and learn faster.

At **McKinsey & Company**, also in 2019, they estimate that AI will add \$13 trillion to the global economy over the next decade, yet only '8% of firms engage in core practices that support widespread adoption'

Business

In **Gartner's 2019 report How AI Will Reinvent Program and Portfolio Management**, there was the headline grabbing statistic, "By 2030, 80% of project management will be eliminated as AI takes functions such as data collection, tracking and reporting"

PMI's 2019 Pulse of the Profession states that 81% of organisations are impacted by AI technologies today and 37% are making it a high priority to adopt AI technologies. There is also the statistic that states today 23% of projects being managed are already using AI technologies and that will rise to 37% over the next three years. The research is also showing that there is a correlation between progressive firms that are adopting AI are also outperforming when it comes to utilising project management to make change happen.

There are numerous sources dedicated to project management news that are picking up on the changes that AI technologies will bring to project management.

Benefits include:

- Reducing human error - such as bias and prejudices.
- Increasing accurate predictions.
- Automating simple, repetitive tasks and saving time.
- Creating better insights from data to allow better informed decision-making.
- Creates projects with improved outcomes - saving time and become more effective.
- Real-time data about performance - quick to identify and correct problems.

Project Management

Currently there are limited insights into how the PMO will change as AI technologies become more prevalence in businesses and within the delivery organisation. Evidence would suggest that the PMO would take a seat at the table to explore AI uses within portfolio, programmes and projects. There is also the possibility that the PMO will own these technologies in the project organisation, much like it does with current PPM tools. There are already some AI technologies being utilised by the PMO itself, especially with automation of repetitive tasks.

There is an expectation that each organisation will develop an AI strategy; that it will be driven from the top down and that the initial focus will be within the R&D department. However, for some organisations, AI technologies are being introduced bottom up, stemming from some curious people within the PMO. Keep reading to find out how.

PMO

PMO Managers

We know a theme for a report is going to be new and advanced for the PMO profession when it comes to finding PMO Managers to join us for the lunchtime session. It was tricky this time because not many PMOs have started putting AI technologies in place. At this lunch session we have a mix of PMO practitioners and specialists in the AI field.

Martin Paver - Projecting Success
 Craig Mackay - Sharktower
 Stephen Coates - Independent
 Russell Willis - Mace
 John McIntyre - Hot PMO Consultancy
 Rachelle Cooper - Mace
 Tim Loughton - Stonefield Automation
 Fay Hawkins - Foundation SP
 Graham Markham - P2 Consulting
 Hosts: Lindsay Scott & Eileen Roden



London \ November 2019

Our Drivers

We've seen what research organisations and professional bodies have to say about where the drive for AI technologies is coming from, now we take a look at what our PMO Managers thought and we were interested in that moment when an organisation thinks that this is really worth spending time and effort on.

• Remove Ambiguity

The need to move towards methods and tools that will reduce the ambiguity in project information and the decisions it drives. AI can reduce the human error and the bias that people have when interpreting data and providing insights - removing ambiguity is seen as a great leap forward.

• Reduce Time

If time spent on repetitive tasks can be reduced; time wasted due to errors can be avoided and less time spent on processing data - our time can be better spent on managing the exceptions and anomalies that AI can't solve yet. Time is made available for other, higher value work such as providing new services or working closer with people with coaching and mentoring.

• Obtainable

AI technologies are now at a place where it is affordable and it's also easier to build and operate the technology. There are a lot of products that require very minimal coding skills and therefore accessible to many different types of workers. If you can think logically, the products are not difficult to understand and use.

• Opportunity to Dabble

Due to the accessibility of tools, it has led to an opportunity to dabble; to play and experiment with what the tools can do without making heavy commitments on labour and spend. There is also the opportunity to learn, whilst ring-fencing the activity to minimise security concerns and impacts on other areas of the organisation.

• We Demand It

We are already seeing the benefit of AI driven technologies in our personal lives and we want that at our fingertips within our work life too. We have movies recommended; driving assistance; searching the web or paying a bill.

Having access to real-time data and the ability to process it may be available in parts of the business-as-usual operations (think customer service department for one) but not in the change-the-business part. Business leaders want that to change. It's the lack of clarity and insights that is driving business leaders to ask for solutions that we happily use outside of work every day.

"It's no longer acceptable to update spreadsheets and Powerpoint slides when I'm using Trello at home with my kid's projects"

Data Literacy & Data Culture

When we first choose this theme for the latest Inside PMO Report, part of me wasn't looking forward to a discussion around data and technologies and even less having to create a report like this from it. What we didn't realise is just how much of this topic is about people and that's great news for PMOs because that is an area we should already understand a lot about.

All AI technologies are based on data and using them will enable us to become a much more data-driven organisation. To do that there are two specific areas of organisational readiness that need focusing on. First is the individual level of people working within the business to ensure they are **data literate**, then there is the overall **data culture** of the organisation too.

Data Literacy

Data literacy is all about the ability to read, write, analyse and communicate about data and it affects everyone in the organisation. We can't make assumptions that everyone feels comfortable working with data - and that's everyone from the PMO, Project Managers to the senior executives.

With advanced technologies we will start to see data, information and insights never generated before. With AI we will be seeing a step change in the organisation AND project management, and with any change, we already know that it is the people aspects that impact the success of the change sticking.

"I don't think people are in the habit of being data-driven yet"

Data Skills include:

- **Data Fluency** - using the right language, terminology and conversational skills.
- **Analytical** - and critical-thinking skills including understanding statistical methodologies.
- **Data Visualisations** - to draw insights from data.
- **Learning** - continuous to ensure self and colleagues improve.
- **Mentoring** - experienced data roles working with the less experienced.

From the Data Literacy Project

Data Culture

Data culture means being data literate within a specific organisation and sets out the principles or rules of engagement with how the organisation might proceed to become more data-driven. There will be different approaches to building a data culture because of the context of the organisation and there will be different roles or personas who have different degrees of contact, understanding and usage of data. One PMO Manager said, "*Data literacy will be 'tiered' and we will need to ensure we teach the relevant level of literacy for the data they will be dealing with*".

The Roles

Many of us will have heard about the role of the data scientist, a specialised and data heavy role, "part mathematician, part computer scientist and part trend-spotter". Fundamentally the data scientist uses data to help predict the future, using predictive analytic techniques. The PMO are likely to engage with this resource to use their expertise but there could be a future where a data scientist resides within the PMO. The PMO is more likely to have a Data Analyst within the team - someone who is working with the technology to cleanse, structure and analyse the data, provide insights based on what has already happened and is happening now. The role extends to include interpretation, visualisation and the sharing of insights if they were also appropriately trained and experienced in project management. This role could also be an extension to an existing PMO Analyst position if they were willing.

The Data Translator

Unpicking what a *data culture* means to our PMO Managers ranged from being aware of bias in data through to avoiding data silos in an organisation. It can mean helping to support the building of data literacy levels; storing data in a structured way; ensuring data is used ethically and so on.

In Gartner's paper, A Data and Analytics Leader's Guide to Data Literacy, it talks about establishing a literacy programme which would include the role of a translator. The need to have an explainer who bridges the gap between the technology and data specialists and business leaders. It's also a theme that appears in many papers and is one that was also picked up during the lunch. The PMO could and should be the translator. What does that mean?

It is an extension of a role that the PMO already performs; we are already using data; providing some analysis and pushing that out in the form of project reports. We're already translating some of the heavier project management terms into readable reports for senior executives for example. We're already translating data into information so where is the potential threat if we're just utilising advanced AI technologies to do more of that and get better at it?

The Curious PMO

When our PMO Managers started on their journey to a more data driven PMO, there was one word that continued to pop up, be **Curious**. Being more curious about the possibilities that AI technologies could bring to the PMO has to be there. Without curiosity you are less likely to ever get started and if you do get started, there is an increased chance your appetite will wane. What our PMO Managers are saying is, it's highly unlikely that the PMO will be unable to secure future investment for these technologies if we ourselves don't show the appetite for it. And there's the strong possibility that if we ignore AI because our organisations don't seem that interested in it today, we'll be on the back-foot tomorrow when our organisations are ready.

A Curious PMO?

What characteristics does a curious PMO have?

"And how many hours a day did you do lessons?" said Alice, in a hurry to change the subject.

"Ten hours the first day," said the Mock Turtle "nine the next, and so on."

"What a curious plan!" exclaimed Alice.

"That's the reason they're called lessons," the Gryphon remarked: "because they lessen from day to day."



1. It has curious people working within it

Are you a curious PMO practitioner? Do you think more broadly about your role? Do you generate different ideas about the way you do some of your work? Do you discuss and debate that with others within your team - and wider organisation? Do you regularly look outside the organisation - your industry to see how others are tackling similar problems to you? Do you ask open questions? Do you use active listening? Do you encourage others to contribute ideas? Do you prolong discussions with 'yes, and...?'

2. It makes time to play

When we are curious we have to find an outlet where we can play around with our ideas, to experiment and to 'fail fast'. The PMO has the opportunity to invest some of its time in allowing its curious members to see where they can take an idea and dabble with the 'art of the possible'. It can be used as a reward or motivational incentive for those members that are interested in taking it further. Play does not have to be a frivolous thing; play can easily be interpreted as research and development with a purpose or hypothesis to test.

A 'data playground' may require some investment from the business and with any investment a case needs to be made. We can do this in a staged manner. We start by being curious, playing a little, learning more and the unknowns lessens each time. Then we think about how to add to our playground - add more data; more functionality; more resources and we ask for further investment each time we see potential outcomes and benefits for the business. R&D or a playground, either way, it starts with the curiosity to explore.



3. It Presents Really Great Questions the Business Can't Ignore

What answers do your business leaders really want? What questions should project stakeholders really be asking? What answer would really lead a project sponsor to shut down a project? What insights could the PMO provide that really makes an impact on the way the organisation manages risk? Really great questions are not necessarily ones you have the answers to today, and that's the whole point. We're thinking about 'moonshot' questions, ones that really demonstrate the current gap between what we're able to provide answers for today and what would be possible in the future with the right investment in data and AI.



4. It is Prepared to Be the Guinea Pig and Leader of the Menagerie

Any guinea pigs required and the curious PMO is right there. Any initiatives within the business that are focusing on data or AI and the PMO wants in. It will only be a matter of time before other traditional departments in the business such as HR or finance, are given the opportunity to see how AI can improve their work. The curious PMO keeps their ear to the ground - builds a great relationship with IT for example - anything to be the first in the queue. Not only that, they're happy to be the leader of the menagerie too, providing insights from their own journey and experiences and sharing that with others within the business also setting out on the journey and hopefully with the wider PMO community too. *Already heading up the menagerie? Get in touch with House of PMO, we need to hear your story!



5. It Already Has a Roadmap in Place

Your curiosity is such that you know where the PMO is heading in the future so you've already started to think about the roadmap to getting there. What building blocks will you need in place? Who's help are you going to need? What skills will your team need? What blockers will get in the way? What quick wins are possible? This is not a pipe dream, it's the start of a plan.



6. It is Already Thinking About What to Do With the Extra Time That is Freed Up

There will be more time made available for PMO staff members, and that means new services can be created or improvements made to existing ones. It can be an agile incremental plan of action - or a big bang change in evolution. With the use of AI technologies and a stepped change to PMO activities, maybe now is the time to really think big about the future of the PMO.



We look specifically at the automation side of AI technologies - robotic process automation - later in the report.

Getting Started

In addition to being a curious PMO, our PMO Managers shared their insights into getting started with AI technologies. Often, we get stopped from making a start because it feels like it is too big or too complicated. Part of the problem is the fear of the unknown, so we focus on tackling that first with education:

Education

It's the most obvious way to overcome the unknown. Set time aside to do the research on the web; take a short course; read a book; start talking to others in the business - just start improving your knowledge.

Questions

Start formulating different questions to help understand current problems you're trying to solve from a data perspective. Use your education to understand what could be possible.

The Data

Start with the data you currently have access to - that could be project management data, such as costs and risks or project data, related to the solution itself. It's just the playground at the moment so don't expect too much at this stage.

Processes

Start identifying certain PMO processes which could be ripe for automation. Start with the ones which are either (a) easiest in terms of number of tasks (b) most valuable in terms of time saved if automated. Start to produce the workflow diagram for the process.

Make It a Game

Give the PMO team a real low-level problem to solve and give a prize or reward for the best idea using the different AI technologies available to solve it. They don't need to know the ins and outs of the technology - just get them to explore the "art of the possible".

Conferences

The PMO Conference is curated and designed for you, the PMO practitioner. Focused on portfolio, programme and project offices, this one day conference is all about learning more about your chosen profession. From a full programme of PMO expert speakers, a dedicated PMO exhibition full of PMO products and services and time to network with new PMO contacts or reconnect with friends and ex-colleagues, the day is 100% PMO focused.

The Tech

Understand what technologies you already have access to - talk to IT and see if you can get started with products, like Microsoft, immediately. Lots of tools are free to download and use, use your education to find the right tool for the job.

Cleanse Data

Work to improve the quality of the data you already have; you'll find that it will probably need cleaning up a bit to get it into a more structured and useable form.

Team Insights

Start to understand more about how your PMO team ticks - who is more analytical, who's the most creative? Consider doing team profiling to see where their strengths are. Have fun with it and see how it can open their minds to trying out new things they were unaware they have the behavioural characteristics for.

Conversations

Start engaging with the PMO team to have conversations about people's thoughts about how the PMO might change in the future. You'll be looking for those interested in getting hands on from day one and keeping everyone else engaged and informed.

What Data, Whose Data?

Which data are we talking about?

When we talk about data we have to be clear if its - **project data OR project management data**. The first is data which is directly from the project itself and may include, for example, data from the testing cycles. The second is the data which is generated by the project management and team such as risk, costs, schedules and so on. We need to understand which set is the most crucial for gaining insights that have an impact for the business.

Who owns the data?

Our PMO Managers are very clear - the data belongs to the project. The PMO are the facilitators and translators of the data. The PMO can do several things with that data such as cleansing it; structuring it better; using it to pull insights and providing guidance on how the project can improve their data.

Where is the data stored?

Data stored in silos within the organisation is one of the barriers for an organisation becoming data-driven. The PMO can be the custodian of project related data with a responsibility for ensuring the data is clean; is structured and useable - and provides access and support for those wishing to use it. The data storage can be effective in Excel, PPM tools and larger enterprise 'data lake' storage solutions - a central repository for the whole organisation.

How do we find the data?

The PMO would be responsible for being the 'data hunter, data gatherer and data farmer'. Finding the existing data from PPM tools or documentation is one perspective, however we can use the technologies like RPA and machine learning to find new sources of project data from other tools the project team uses.

Hunting for the data inevitably leads to the gathering and finally to the farmer role - nurturing and maturing the data sources and data stores.

What can the PMO do with the data?

Fundamentally there are two things the PMO can do - we can be the funnel or the conduit for the data to pass from the project, be cleaned up, information extracted and sent out. The PMO can go a step further and provide some intelligence and insights from the data.

In other words we carry on providing a mostly reactive service or use the technology to change the service we offer. Technologies such as those from Microsoft - Azure, Power BI, Flow and Excel can be utilised to analyse the data and advanced AI such as machine learning utilising Python are just some of the tools in current use. You can expect to see more on the market plus free tools to use in your "data playground".

Is it just project data?

No, it can cover programmes and portfolios too. We're looking at different sets of data, with properly structured data, it is possible to roll up from project to programme, or the portfolio of projects and programmes across the change organisation. We're looking at the data from different perspectives, posing and answering difference questions.

Does 'custodian' just mean looking after the data?

Our PMO Managers also use the term custodian when talking about the ethical responsibilities. Examples where data is only providing part of the story - not taking into account the social-economic side to people at work; or data both being inputted and insights being devised with strong bias such as "confirmation bias" at play; utilising sentiment analysis without taking into account local customs and cultures.

"If you're going to put this data together and push it out you become the custodian, you become an ethical centre for that data."

With this custodian role we must be conscious of the behavioural science just as much as the data science. We will be guided by our organisation's culture and policies to a large extent about the use of data and the impact on behaviours. The PMO is there to enable decision-making, we have to ensure that is the right data being used at the right time to timely accurate decisions.

Finally, in this role the PMO also needs to keep carrying out healthchecks to make sure that the data is being used in the way it was intended; that people are conscious of their own bias; the right meta-data is in use and the context understood.

"We do as much behavioural science as we do data science and we do as much behavioural observation as we do project observation"



PMO: PPCCR

PPCCR - Productivity, Predictability, Consistency, Certainty and Repeatability.

That's the mantra that our PMO Managers had throughout the discussions and if the PMO can help drive these five in project delivery using advanced technologies and thinking, the future PMO will be an exciting place to be.

One PMO Manager talked specifically about the focus on two sets of customers:

First there are the people doing the work - delivering the projects. Then there is the person sponsoring the work - the project sponsor. In the simplest terms the PMO can:

- Reduce the burden on getting the data (productivity)
- Give information easily (productivity)
- Give more accurate information (consistency and certainty)
- Enable better decision-making (consistency and certainty)

In another example, if we can better understand the problems through data and insights (productivity and certainty), we can create processes (consistency) to help streamline parts of project delivery (repeatability).

“That’s a key driver for me... improved visibility, finding those mythical lead indicators that helps us engage with projects and targets problems to fix before people become aware there are problems, that’s the exciting part”

Objective: Subjective

It's good to have objective data flowing from the project, however, our PMO Managers know that the reality is there is also context around data which gives the subjective elements - those different perspectives based on opinions and bias. It is the subjective that drives ambiguity and ultimately makes people distrustful of the information and insights stemming from the data. Driving certainty and predictability requires hard facts, that's why one of the starting points for project data analytics has focused on cost data, with risk data a close second.

“The machine learning AI side of predictability is where you get informed decision-making and an informed view of when a project is going south”

The PMO also needs to be in a position to challenge the data it is seeing.

As one PMO Manager stated, they're interested in the data that informs about the likelihood of a successful delivery rather than the performance of those delivering the work. There is a case to be made about which data is included and which is not therefore ensuring the right metrics are chosen to drive the right behaviours. This links right back to the custodian role and ethical considerations.

We also must trust people and our own gut feelings about what we're seeing on the project versus what the data is showing. The data is not the 'be-all and end-all', the PMO has to use all its experience and judgement too.

A Word of Warning

“How many times has the PMO had conversations where we are trying to explain ourselves to Project Managers, ‘if only the right information had gone into the PPM tool, the PPM tool would have delivered exactly what you need and we would have known that the project was going to be late’. Before we go on this big exploration journey of AI, machine learning and RPA we can't have the same kind of conversations - we won't be changing anything. We will be falling into the same trap.”

Using advanced technologies doesn't solve everything, if we need to go back to basics to ensure that everyone knows what responsibility they have and what they need to do, then that's what needs to happen. “We can't go after the new stuff and then turn around and blame it on our lack of data literacy.”



Red, Amber, Green

Red, Amber, Green - or better known as RAG - has long been a way to highlight the status of projects in the simplest way. The RAG status was used as an example through the lunch to highlight how AI technologies can improve on the determination of a status of a project - and where AI can present problems.

If we are using AI technologies to remove ambiguity in the status of projects - in other words, will it be able to determine which project is really red and not amber as the previous non-AI reports would show? RAG status has often become the butt of jokes - think 'watermelon projects', red on the inside and green on the outside - where the status of a project has been open to interpretation based on people's different perspectives.

Could project status and the use of RAG be improved with AI?

It's back to the human input again because AI needs to be taught what red, amber and green means. There must be algorithms that are based on the objective - not the subjective gut feel. It starts with the ability to ask the right questions to give the organisation the answers they need to know.

It Starts With Questions

"The questions senior leaders are asking are the same type of questions from 10 years ago, they should be thinking like a BOT." In other words the questions can be a lot more ambitious! The question shouldn't be *what is the RAG status?* It should be every conceivable question they have about project delivery. Using AI we can prioritise them and do a gap analysis against all the data available, then we can start to evolve the data we have, increase the volume of data and really start to solve the problems we have". AI helps because it can string the answers to all the questions together.

The key learning point here is - what do senior executives and project stakeholders really want to know about the project - what questions do they want to ask.

"It's the start of some big step-changes in this industry"

And that is the concern around the table and brings us back to data literacy and the data culture in the organisation. Here's one familiar situation, "I think the worst issue is that [senior execs] understand red, amber, green and they know how that gives them an action to take from that meeting but they don't understand what red, amber, green represents. They don't understand how that's been made."

Is the organisation ready to move away from simple yet often manipulated RAG status of today? It is "an ingrained paradigm in project management" which suggests that the PMO will have a role to play in the education - and more importantly in the change management aspects of taking executives from the RAG status of today to the one tomorrow.

"RAG isn't really the way forward, guys. We want to predict and pre-empt [problems] so we're going to bring you a new dashboard. I am moving the RAG stuff towards the bottom of the deck and we will start with this new stuff" You would show them insights and demonstrate how that aligns to the RAG and how it is an improvement on what they have had available before.

The cultural change of taking a more data-driven approach to project management cannot be underestimated. There are many unintended consequences of making the inner workings of projects more transparent and the different interpretations of what the data is showing. It will impact people's behaviour; there will be politics at play in the organisation; there will be protectionism and "owners of change will want to control the story". It also starts to highlight individual performance - just like timesheets did when they were first introduced.

The learning point here is you must spend as much time on building a data culture as you do with the technologies you will be using.



Skills in the PMO

Does a PMO practitioner need to become a data scientist? Or can we take a data scientist and upskill their project management knowledge? Neither! The PMO practitioner, however, does have to gain a **superior level of data literacy** if it is to be able to:

- (a) Work with the data community to gain that superior level;
- (b) Understand how data analytics; predictive analytics and machine learning work;
- (c) Learn how to create questions and hypothesis for the data;
- (d) Understand what the data is telling them.

A Mix of Skills in the PMO

Our PMO Managers believe that it is a mix of skills required - namely the analytical and the more creative.

With the *analytical side*, it is not just the ability to use the tools or direct data specialists to do so - it is the specific work around statistics and metrics that also need attention. Are we sure that the statistical approach we're taking is the right one for the type of data we're analysing; are we able to recognise when the steps in the analysis is wrong; are we using the right combination of data and method of analysis to drive the metric results?

With the *creative side*, it is the skill required to draw insights from data that compel people to make decisions and take action. This side is about the focus on using the right visualisations and medium to convey the insights from data to the right audience. It's about the human side of the data, bringing it to life, telling audiences through techniques such as storytelling. Data analytics is not just about numbers, the numbers are telling us why we chose a certain direction and how we can choose other directions to give a better outcome.



“Your PMO Manager who loves navigating the business, being strategic, engaging people... has different ways to visualise data and different ways to tell stories about it. They also need to see the same data from others perspectives.”

The Analyst in ‘PMO Analyst’

We already have the title and role of ‘PMO Analyst’ yet when we look at this role, the analyst aspect of it doesn't include anything in-line with the data-driven focus. There is a lot of updating of tools and systems today which means that the automation side of AI could be added as an activity and new skill. There is also a lot of tracking of data, which again could benefit from automation and would allow the beginnings of a ‘data playground’ in which the PMO could start experimentation. There is also maintenance of systems and tools which suggests that there is scope for being the custodian of the project ‘data lake’. Yet there is still a distinct lack of any real data analytics activity in the PMO Analyst role and that will need to change.

“I think the tools are analytical and data-driven and the PMO will be the specialists at using the tools and delivering the output, I can't see them writing the code and doing the data modelling side of it.”

New Role in the PMO?

Is there a need for a new technical and data-driven role in the PMO? There could be a case for an apprenticeship* role for a Project Data Officer: someone specifically hired to focus on the data-driven tools. Or a more experienced data analyst that sits within the PMO. One PMO Manager also talked about the utilisation of current data analysts available in the organisation - the ability to call off services from this resource as and when required.

* Apprenticeships are for anyone at any age and include people already working in an organisation in an unrelated role.



Robotic Process Automation

Robotic Process Automation (RPA) or automation is a part of AI technologies which specifically focus on automating tasks. That can be any process which the PMO currently carries out and is labour-intensive.

A good indication of which processes are great for automation include any which include a good deal of moving data from one place to another - so a lot of copy and pasting, formatting of documents, sending reports to people and so on. It also should be a process which is repetitive; carried out a lot and should be fairly labour intensive in order to drive real benefit when it becomes automated.

In many ways, automating is easier to do than the PMO becoming more data-driven and our PMO Managers think it is a good place to start when exploring AI technologies.

The best way to describe RPA is it's like macros in Excel. Macros help you to automate tasks you do repeatedly in Excel by recording them. RPA is exactly like that, but you are not limited to Excel. You can use RPA across literally hundreds of different software programmes and the web.



Another way to think about RPA is to imagine that the BOT (the software application that runs the automated tasks) is just like having a new member of the team. It makes it easier to think about what the BOT can work on, when it does it, what happens in the holidays if you imagine that it's just another member of the team.



Is Robotic Process Automation a Threat to the PMO?

For many experienced practitioners they see it as a way to reduce a lot of the PMO role that many of us don't like performing which gives the much needed time to concentrate on other services that can make a really difference to the business. It could be seen as a threat to the entry-level PMO roles which currently carry out a lot of this work - yet that gives us an opportunity to shape the work they do and upskill a lot quicker than if they were still carrying out the more mundane, repetitive tasks.

Getting Started with RPA in the PMO

Start working with the team to generate ideas about which processes could be automated.

Start to create a workflow diagram of the process including tools / programs used.

Start to improve knowledge with the online training and meetups available around RPA.

Start playing around and experimenting with the RPA tool - try UiPath free version to get going.

Get one of the more technically minded members of the team trained up in RPA development.

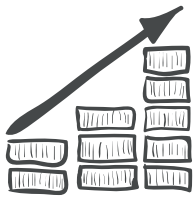
Consider using a RPA consultant or consultancy to help you get started on the right foot.

Start talking to the IT department about what you're looking to achieve and what help you need.

Connect with the RPA community and other PMO peers also starting out on the journey.

Get started with one simple process first, learn from it and build from there.

PMO Nuggets

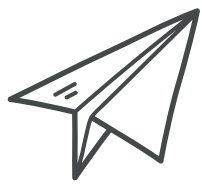
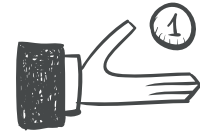


Benefits 01

Work to really understand what the benefits are of adopting a data-driven PMO and AI technologies for the business. Create a compelling hook such as questions that can't be readily answered today but senior execs really can't ignore the power of having those answers. Help the business to understand what the PMO is capable of providing.

Create a compelling vision and an outline roadmap- use these alongside the benefits statement and initial findings from the 'data playground'. Create the case for investment- yes, it's going to be an overhead and yes, there will be hard won discussions about who picks up the tab- be ready to counter the arguments.

Investment 02



Leadership 03

Now is the time to set up and show real leadership of the PMO. Be strategic in your aims to bring automation and data analysis to the project delivery organisation; be an exemplar to your PMO team in driving the change; be a partner to other parts of the business to draw together the resources you need.

Gather together the curious people- from Project Managers to senior stakeholders, from delivery teams to the PMO. Start building datasets and include interested people in the process. Use RACI to share the insights from the journey- warts and all! Don't oversell and be mindful of detractors but use the cheerleaders and promoters well.

People 04

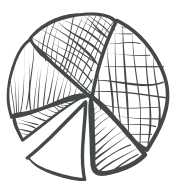


Mindshift 05

It's a change in stance for the PMO, once an entity that was using data to control- from using methodologies and frameworks to plan, measure and ultimately control the project- now the shift to using data to manage uncertainty. It will be a tough journey for the PMO to shake the 'control function' label.

The AI driven PMO will be a hybrid approach- there will be the hard fact driven data such as cost, time, resources and scope which with the use of machine learning will minimise ambiguity and bias. Yet there is the people side of projects which still need a people focused PMO- stakeholder engagement and communications specifically- a balanced skillset required.

Hybrid 06



Data 07

We already have enough data to get started- you just need to be the *data hunter* to find it. First steps just get some data insights, it doesn't need to be amazing, just work through the process. Learn the lessons along the way and find root causes of problems- it is a data gathering or quality problem. Don't expect data to be perfect, you're going to have to spend time cleaning it.

It will be a top-down and bottom-up approach. A vision is ideally needed from the top, yet people won't necessarily buy into it if they can't see what the outputs are and what the outcomes are for the business. It needs action and the PMO is ideally placed to do that- anyone in a role today which features data has to be conscious that they can be making better use of it and the PMO is definitely there

Org 08



Threat or Opportunity?

When we first chose the theme for this year's Inside PMO report we were part of various discussions that were leaning to the PMO disappearing in the future because a lot of the work the PMO does could be automated. Furthermore, some of the core work, such as reporting and analysis could be done better with AI technologies.

What has become clear is that AI is never going to be able to entirely replace a PMO and the main reason for that is project management is all about people and where people are involved it's never black and white.

Our PMO Managers predominantly see AI technologies as a real opportunity for PMOs - using them to really uncover patterns and problems that can help senior execs and sponsors make better informed decisions.

Some aspects of the PMO will be made better because of technology and part of the service offerings may disappear completely or at least reduce in work effort time. The initial concerns will give way to positive outcomes if the PMO starts to explore and set in motion a phase of discovery and learning.

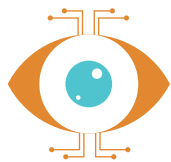
Not all PMOs will be quick out of the blocks - there are always early adopters and followers and it is the sharing of journeys and insights from others that will further alleviate concerns amongst the profession.

AI technologies clearly show both opportunities and threats to the PMO, project management and the wider organisation yet we can't ignore the fact that they will be used, and they will make a difference to our work and our workplaces.

OPPORTUNITY

THREAT

	OPPORTUNITY	THREAT
Automation	Remove the repetitive tasks and we have more time for higher value work.	PMO staff who carry out this work today will see their role disappear eventually.
Data-Driven	Data-driven decisions made with predictability and certainty keeps PMOs in place.	Lack of data literacy; analytical and behavioural skills, PMO becomes irrelevant.
Data	Upskilling and new roles to hunt, gather and analyse data, evolve the PMO.	Data is not democratised, remains siloed and unavailable to the PMO.
Decisions	Unambiguous and unbiased data leads to decisions that drive real positive action.	The behavioural changes needed to accept the new normal are slow to appear.



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Beyond Data Literacy - <https://tinyurl.com/insidepmo-09>


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Cyril - The PMO Bot - <https://tinyurl.com/insidepmo-11>


PMO MANAGER'S LUNCH

Welcome to the PMO Manager's Lunch, we're looking to uncover what PMOs are already utilising and understand how these new technologies are being embraced by the organisation.


Starters || Introductions

- 
- How is your organisation utilising AI, RPA, Machine Learning or Predictive Analytics?
 - How about the PMO? The delivery organisation?
 - What or who are the company drivers?
 - What problems are we trying to solve? Or are we just playing/experimenting?
 - What was the catalyst?


Main Course || Getting Started in the PMO

- 
- What were the first steps? What was our big idea?
 - What helped you drive it forward?
 - What was the biggest obstacle?
 - Did you start with the data you had then play around with it - or did you start with a strategy first and then start?

Main Course || Roles, Skills and Relationships

- 
- How have the roles in the PMO changed? The people and the services?
 - What new skills have had to be acquired?
 - How are the new skills acquired?
 - How has that changed the relationships - with PMs / Finance / Others....

Dessert || Moving Forward

- 
- Did you have to justify to the business - how did you get investment?
 - How much is it worth to the organisation?
 - Are they prepared to give further investment based on the worth already delivered?



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