



AI in the project profession:
Examples of current use and roadmaps to adoption

Petrofac: the importance of a framework and forward-planning

Introduction

Disruptive technology and accelerating change is now the norm within business. Advancements that feel relatively recent are already becoming embedded in business-as-usual activity. AI is one such advancement; it is already being used and having real-world impacts across the project profession. To help project, programme and portfolio (P3M)

professionals understand the implications of this change, APM has produced a series of case studies showing how organisations are adopting and using AI in their operations.

This case study focuses on energy services company, Petrofac.

About Petrofac

Petrofac is a leading energy services company that helps its clients meet the world’s evolving energy needs. It uses its engineering know-how and consultancy expertise to design, build, and operate world-class energy facilities that are engineered for safety, optimal efficiency, and low-emissions.

How Petrofac has prepared for AI

A future underpinned by project data analytics is no longer optional; it’s already here. Virtually all organisations use some level of data analytics. Some take a more advanced approach, using Application Programming Interfaces (APIs) or machine learning (ML) capability to analyse their data. The goal for many however is to ascend to AI-powered intelligent performance.

Petrofac has long used project data analytics to inform decision-making and drive required action. In line with its culture of seeking continuous

improvement, the organisation has been laying the groundwork that will enable it to take the next step in developing its organisational maturity – the measure of the quality of its operations.

This groundwork is, by requirement, comprehensive. New technology is often surrounded by hype and perceived competitive advantages associated with early adoption. AI is no exception. There is a risk however for businesses that rush to implement complex and/or expensive systems too quickly; namely that performance will not improve in line with expectations.

At Petrofac, the process of enhancing organisational maturity is being underpinned by robust analysis of current systems, targeted application of technology and engagement with technology suppliers to determine future application. This approach is helping Petrofac identify exactly how, where and why AI can be introduced to its projects.

Predicting Project Outcomes: Maturity Roadmap

| Step | Maturity | Outcome |
|------|--------------------------------|--|
| 5 | Intelligent performance | <ul style="list-style-type: none"> How AI/ML is used to better predict future events and likelihoods How insights and actions are improved How performance and predictability is maximised |
| 4 | Automated performance | <ul style="list-style-type: none"> How performance expectations are set with people How business intelligence insights are triggered into meaningful actions How it’s assured that the right person is taking the right action at the right time |
| 3 | Business intelligence | <ul style="list-style-type: none"> How any information is obtained, at any time, within three clicks How stakeholders are communicated to How projects are benchmarked, governed and assured How analytical dashboarding and reporting is deployed |
| 2 | Integration | <ul style="list-style-type: none"> How an integrated delivery model is enabled How all single source of data truths are understood How human error in reporting is prevented |
| 1 | Core systems | <ul style="list-style-type: none"> How the foundations for consistent and predictable delivery systems are built |

Outcomes and next steps

This maturity model has done more than just make Petrofac ready for AI.

Coaching and training among its project teams has helped standardise approaches to data gathering. Previously, when project managers were onboarded onto a project, different people had different expectations of how frequently data updates were needed or what actions needed to be taken. The outcomes identified in the organisation's maturity roadmap has helped standardise those expectations, providing a more unified way of working.

There has also been positive cultural change, as people become more aware of the importance of taking action in response to what analytics show, and for action to be taken at the right level (e.g. managerial or director level). A simple fact is often overlooked when introducing technology to project delivery: without action being taken on data insights, there will be zero increase in performance...and without a demonstrable increase in performance, further innovation and funding will likely cease.

Petrofac has created an AI tool called Insights, which is a bridge between dashboards already being used and AI-powered tools and dashboards. Data sources are plugged into Insights, ready for AI to be enabled. When the organisation knows it is ready (i.e. when it sees high-quality performance at maturity level 4), its tech ecosystem is ready for the next step.

The desired future impact of an organisation reaching step 5 on its maturity roadmap is for predicted project outcomes to become more reliable. This will provide greater certainty for project stakeholders, improving confidence in future delivery and supporting business growth.

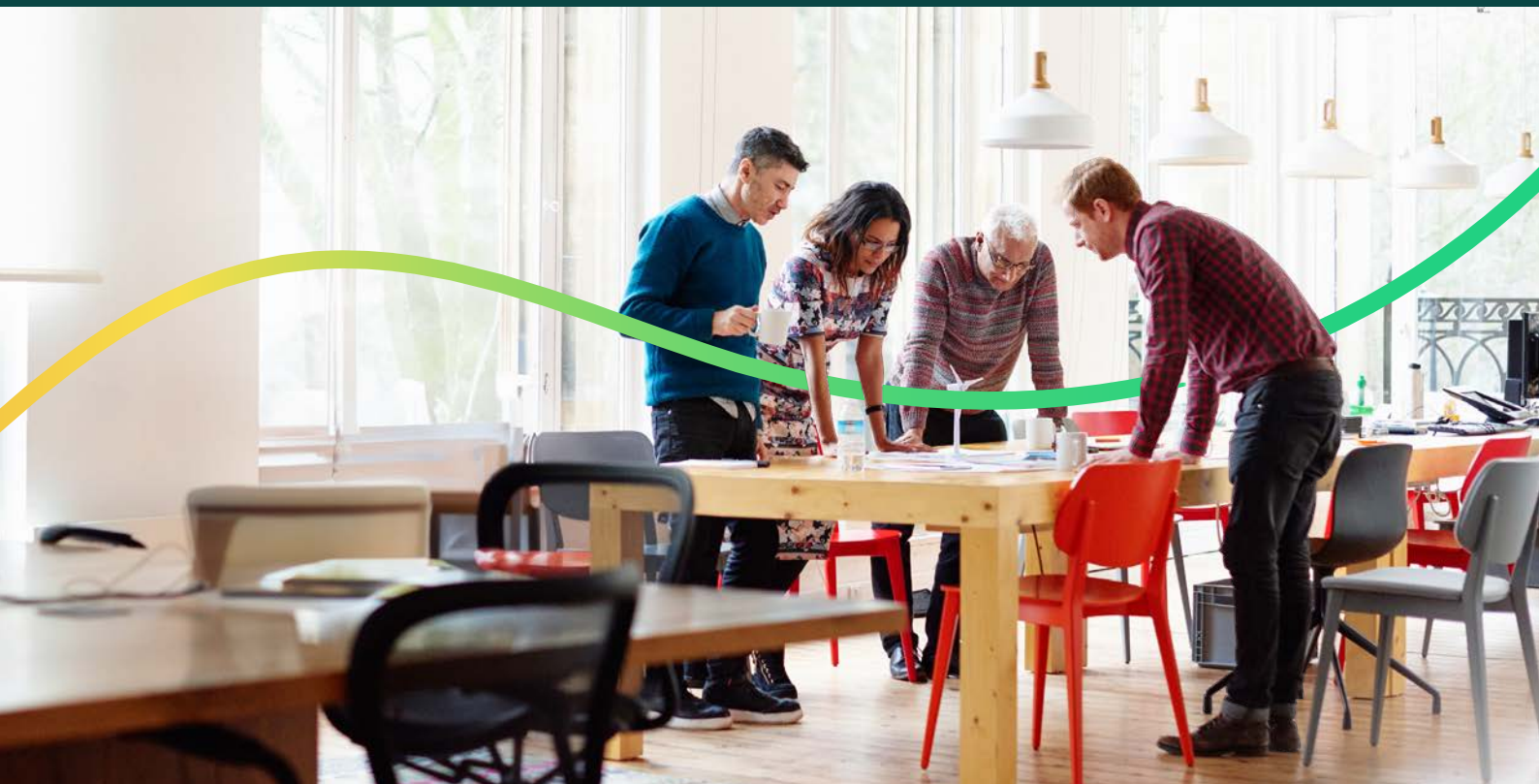
"If an organisation is very predictable, banks will fund future projects and clients will deliver more projects. Predictability is key. In order to be predictable, we have to be able to perform to each level of this model."

Alex Robertson
Petrofac



Concluding thoughts

1. Plot a high-level vision and roadmap for change. Every project delivery organisation should look at developing a data strategy, irrespective of how mature or immature its understanding of project data analytics is. Underpin the strategy with a maturity model so that you can measure progress.
2. Appoint a specific person. The vision will only become a reality if someone is responsible for it. This person should operate at strategic level and have board-level sponsorship. They will be responsible not only for developing the strategy but also addressing any issues that may arise around implementation, such as securing resources and working with IT teams.
3. Ensure your organisation can translate your data insights into actions that reflect the magnitude and timebound nature of the event. Without action by the right person at the right time, performance will not change.
4. Undertake due diligence when selecting AI tools. Organisations leaning towards third-party tools must consider any impacts or overlaps with existing corporate systems and their standard technology stack (e.g. Microsoft). APIs provide a facility for users to overcome some of these integration challenges, allowing the integration of disparate data sets. A strategy will be needed for how the stack tools will work together, however.



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