greyfly.ai
Delivering project intelligence

ANNUAL REPORT 2022

Adoption of AI in Project Management

Introduction

This research was conducted via an online survey with companies from various sectors and aims to update 2021 research with the latest picture of AI in project management. It recognizes changes in the causes of project failure, the level of project management maturity and focuses on the progression in the adoption of AI in project management. The report helps organisations consider their AI in PM journey.

We thank the project professionals who contributed their knowledge to complete this report. All information is anonymous and protected by greyfly.ai.

About greyfly.ai

greyfly.ai has experience in successfully delivering full life-cycle, benefits led, multi-million pound transformation projects. We are approved Government Cloud suppliers and preferred suppliers to the BBC for programme management. Our focus is applying AI in Project Management to improve project success and reduce the cost of delivery. We have built an Intelligent Project Prediction platform that uses AI to increase project success and save customers £billions.

Authors

Lloyd Skinner
Chief Executive Officer, greyfly.ai
Lloyd is a project professional with 25 plus years of experience working in multiple sectors and on multiple projects in both support and delivery roles. For over 3 years, he has been investigating the use of AI in project management and developing greyfly.ai.

Marcia Williams
Chief Product Officer, greyfly.ai
Marcia is a Certified Information Systems Auditor (CISA) with over 20 years of experience. Marcia's career began at the Audit Commission where she dealt with public sector clients and then moved on to the Big 4, where she spent 15 years in both the UK and overseas.

Summary of Findings

- Across all sectors, on average, reported project failure has risen to 41%, 6% higher than 2021 and double the failure rate of 2019 (20%).
- **Limited resources is the main cause of project failure.**
- 32% of companies reported **a low level of project capability at level 2 maturity**.
- **Higher mature companies reported a much lower failure rate** at only 20%.
- **49% of PMOs are established only as a delivery support function** for project teams.

- 68% of companies believe **AI will change the project manager role** in the next 3 years.
- 58% of companies are **working toward an AI in PM adoption plan.**
- The main driver to implementing AI into PM is to **reduce project costs and overruns.**
- For the third year in a row, the most appealing benefit of AI in PM is **gaining insight and foresight for decision making**.
- **26% still rely on excel spreadsheets and manually handle project data**.
- The majority understand implementing an AI predictive analytic system is a long journey which starts by **improving project maturity and capability.**
- The top 3 challenges of implementing AI in PM are the **uncertainty of the added value, implementation complexity and implementation expertise required**.

PROJECT FAILURE

- General Findings
- Failure by Sector
- Failure & Portfolio Size
- Failure & Budget
- Failure & Project Method

Project Failure General Findings

% of projects delayed, over budget or not delivering planned benefits

Across all sectors, on average, reported project failure has risen to 41%, 6% higher than 2021 and double the failure rate of 2019 (20%). Projects were unable to deliver on time, on budget, or obtain planned benefits. The rising trend of project failure is partly related to the impact of the pandemic and the consequent economic recession. Said Business School of Oxford University identified that among a sample of 3022 projects, only 0.2% of projects were delivered on time, within budget and benefits.

PMI 2022 report states that "**40% of large-scale projects were affected by the pandemic and rapid changes had to be made to prevent loss.**"

Project Failure by Sector

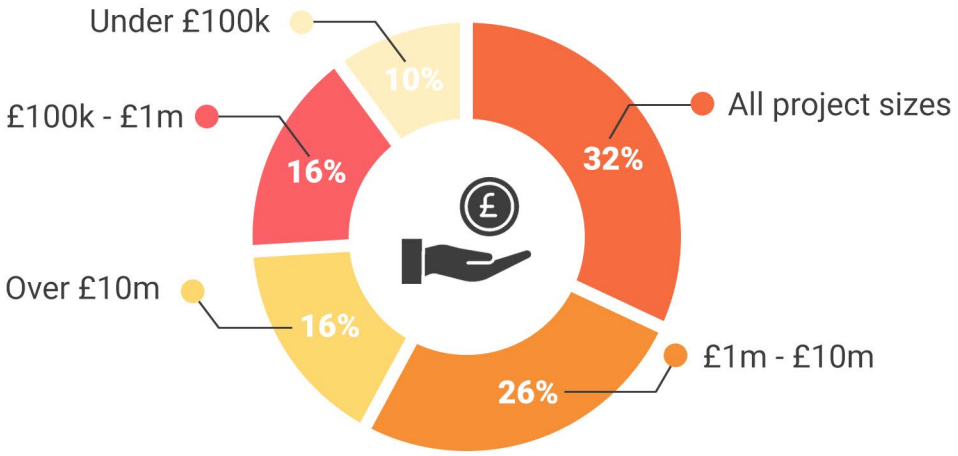
Our survey showed the Government & Public sector has risen to have the highest project failure rate (60%), 15% higher than last year. Government & public organisations have been prone to project delays or over budget, e.g. HS2, Crossrail, NHS IT programme etc. In fact, in 2020, there were only 3 projects among the 123 government major project portfolio were considered as "highly likely" to be delivered on time and within budget.

% of projects delayed, over budget or not delivering planned benefits by sector

Project Failure & Portfolio Size

Most companies taking part in our survey run a large portfolio of projects delivered in a short-medium period. 55% of respondents run over 50 projects pa, and the duration of these is mostly 1 to 3 years. **The trend showed a higher failure rate amongst larger project portfolios.** Failure is at 38% if run 10 – 50 projects, rising to 67% with a portfolio of 100 – 250 projects. This result is consistent for the last 3 years of our survey. Forbes (2021) noted a Gartner report stating big projects are more likely to fail than small ones.

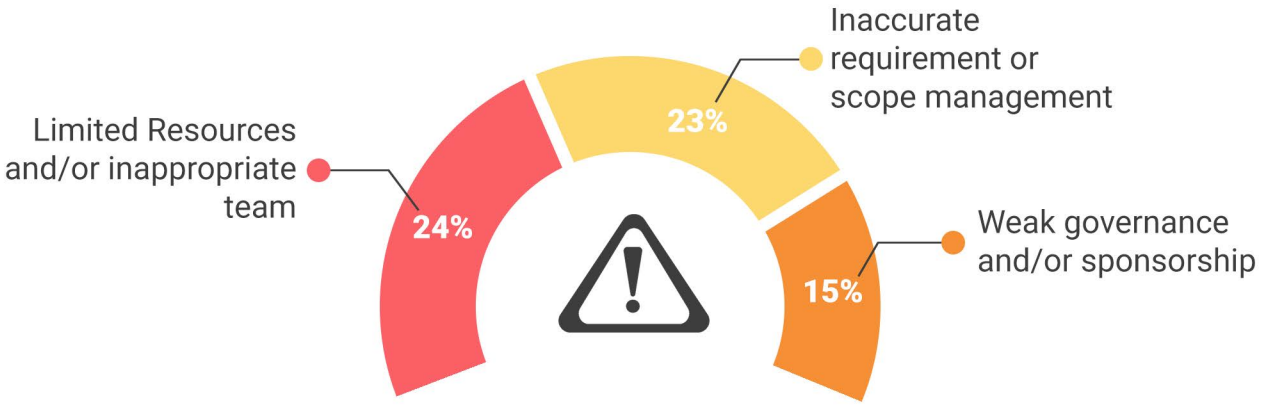
Project Failure & Budget



Most (32%) respondents confirmed projects of any budget are at risk of failure. However, 26% of companies confirmed big projects (£1m – £10m) are most prone to failure [6% less than last year]. Whereas mega (more than £100m) and medium projects (£100k - £1m) are reported by 16% of companies as likely to fail.

Projects budgeted <£100k are least prone to failure. A report from Said Business School points out that megaprojects consistently failed to deliver on time, budget, or the promised benefits. They are often commissioned for reasons that are pre-determined to systemic failures such as unrealistic promises to please stakeholders, building a legacy or desire to be the innovative leader.

Causes of Project Failure



There has been a significant shift from last year's result with limited resources (24%) now being the main cause of project failure. Economic recession and talent shortage have tightened company resources, causing project delays. According to Office for National Statistics (2022), 34% of large and medium-sized UK businesses experienced labour shortages.

Inaccurate requirements followed closely with 23% of companies reporting it to be a cause for projects to fail. This is particularly pertinent to megaprojects where vague scope definition, failure to execute change management or downsizing requirements for approval are likely to lead to uncontrollable scope creep later in the process.

Like last year, Unsupportive sponsors (15%) make up the top three causes of failure. Executive management had to worry about delivering multiple strategic portfolios supporting corporate objectives whilst keeping companies running during the pandemic and mitigating any impact of the recession.

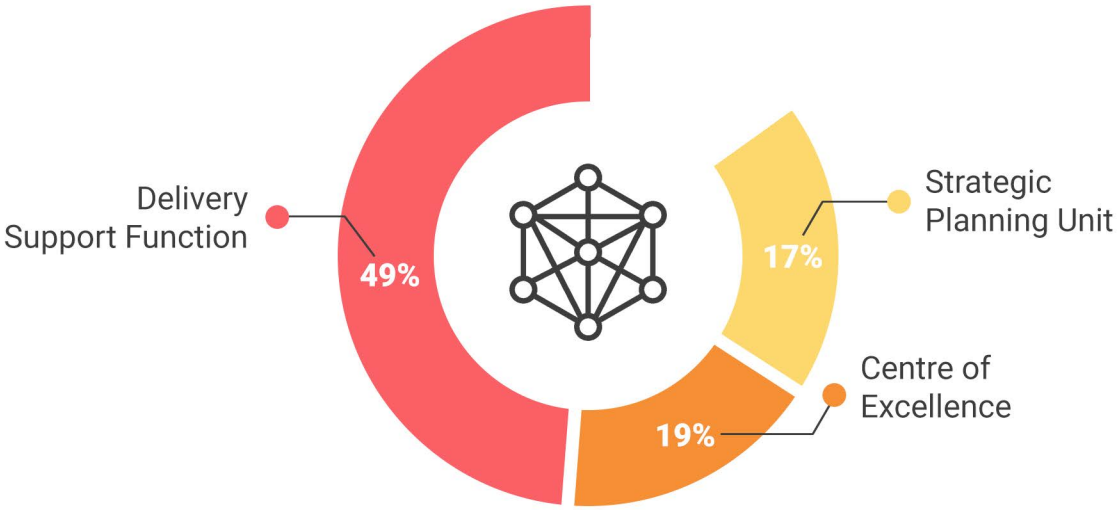
Project Failure & Method

Half of the participants responded their companies are applying hybrid project management method (combination of Agile and Waterfall), followed by only 19% of companies using Waterfall and 17% with the Agile methodology. Companies utilizing various project methods have the lowest failure rate at 34%, while Agile companies have reported the highest failure rate (45%).

PROJECT MANAGEMENT OFFICE (PMO)

- Function of a PMO
- PMO Age & Scale
- Project Management Maturity
- Project Portfolio Management (PPM) Tools

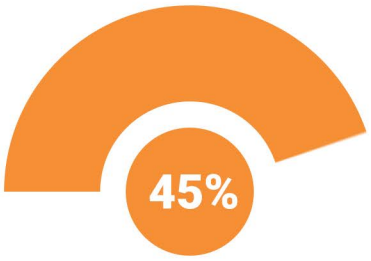
Function of a PMO



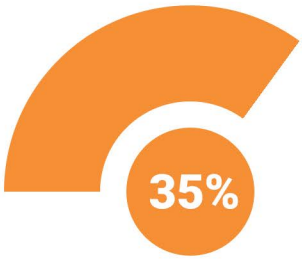
49% of PMOs are established as a delivery support function for project teams. This type of PMO suits a less complex and smaller project portfolio where it is less important to align with corporate objectives or be a centre of excellence. However since last year the PMO seems to have become less strategic. Both Centre of Excellence (19%) and Strategic Planning Unit (17%) received much fewer votes than the previous year's 24% and 32%.

Our survey showed most companies have big PMO functions, established for 5 years and with over 50 people and a support portfolio with projects budgeted over £1 million, yet they are acting as a rescuing/aiding team which reacts to the project team's needs rather than directing. Wellingtone 2020 report reveals majority of PMOs are performing low-value tasks such as project status reporting, maintaining project lists and documenting etc. **PMOs need to evolve beyond being a support function to one that is fundamental to strategic resolve.**

PMO Age & Scale



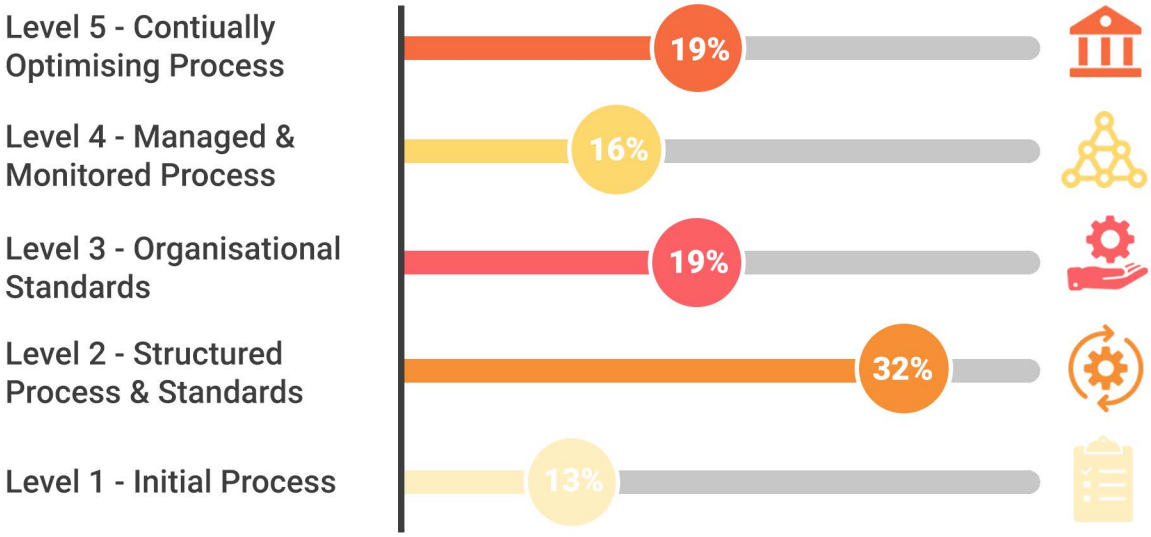
PMO established more than 5 years



PMO have more than 50 people

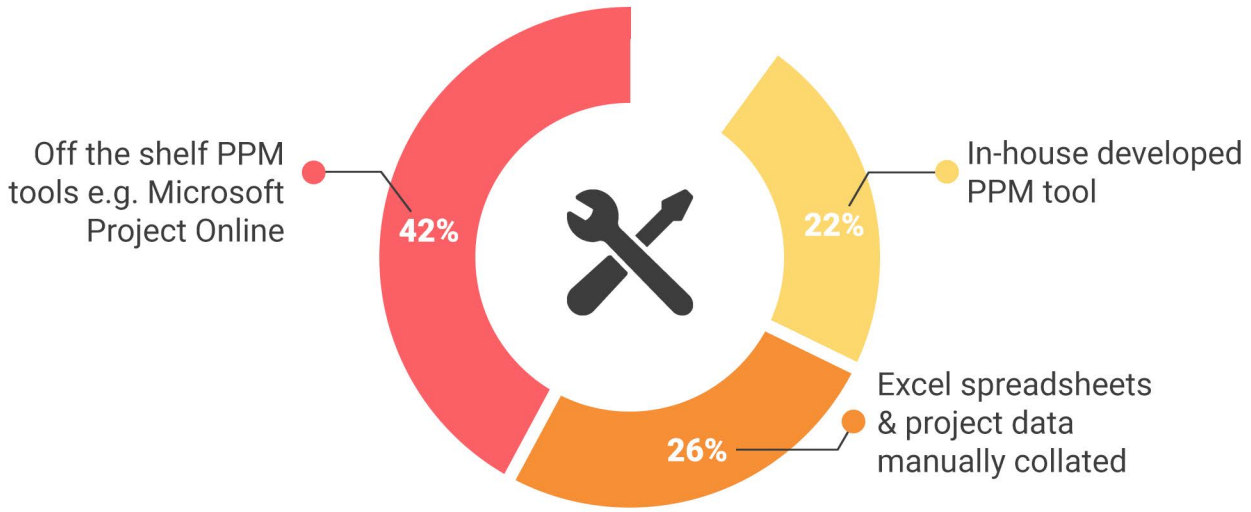
Our survey showed that most companies have a big Project Management Office (PMO) with over 50 people, established for 5 years. According to Wrike (2022), 95% of companies with revenue over £100bn have a PMO. A PMO plays a crucial role in facilitating projects to be delivered on time and within budget by keeping documentation for best practices, guidance, and metrics for project execution. Large corporates require a more developed PMO compatible with the scaling complexity of requirements and stakeholders.

Project Management Maturity



32% of companies reported a low level of project capability at level 2 maturity. Level 2 means companies have some project delivery structured processes and standards, but it is not necessarily monitored or applied to the whole organization. This slight increase (4%) compared to last year's result signals organization project capability has not improved. In fact, Wellingtone also confirms that 52% of respondents are somewhat or very dissatisfied with the current level of PM maturity. Meanwhile, less than 20% of companies reported level 5 PM maturity, a slight increase from last year. **Higher mature companies reported a much lower failure rate** at only 20% on average compared to 40% - 50% failure rate from companies at levels 1 and 2.

Project Portfolio Management Tools



Most companies (42%) seem to apply "off the shelf" PPM tools to support project delivery, while 26% still rely on excel spreadsheets and manually handle project data. 22% of companies develop their in-house PPM tools. As project scope increases, project managers need more than an Excel spreadsheet to keep up with the growing workload and data. These results align with the Wellingtone 2020 report that 25% of companies do not have the right technology to support project team collaboration or communication.

AI & PROJECT MANAGEMENT

- Use Cases
- Benefits
- Implementation Drivers
- Plans to Implement
- Adoption Challenges
- Implementation Expectations
- Impacts on the PM Role

Use Cases

61% Project risk modelling & mitigation

55% Real time predictive analytics

42% Project data analytics

32% Automating administrative tasks

29% Project execution discovery & modelling

29% Project mitigation & recovery plans

27% Project performance

19% Automated report generation

7% Project manager selection

Project risk modelling, mitigation, and management (61%) is consistently voted as the most required AI in PM Use Case. Risk modelling at the early stage is often neglected by project managers partly due to data quality. Early identification will minimize impacts and enable a realistic project schedule and resource estimation. Even potentially discouraging the acceptance of financially unviable projects. The other most appealing Use Cases were real-time predictive analytics (55%) and project data analytics (42%).

The ability to understand the likely project outcomes is expected to help to keep track and provide foresight to head off any future crisis. Automating PM admin tasks (32%) has been realized for years. In fact, according to an IBM report, 49% of companies turn to automation software or tools to give valuable time back to employees so they can focus on higher-value work.

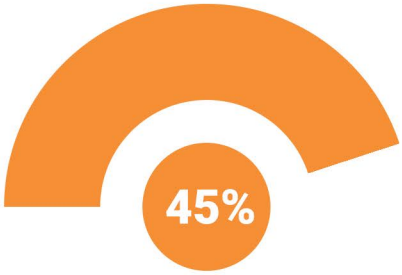
Project execution, discovery/modelling, and project mitigation & recovery plans at 29%, received slightly less interest. The least favourable Use Case was project performance (27%), automated report generation (19%) and PM selection (7%) which is consistent with previous findings.

Benefits

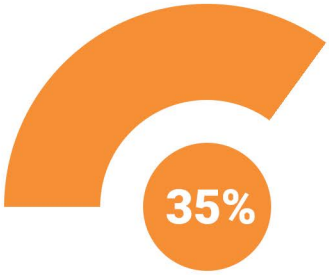
Gain insight & foresight for decision making

Predict outcomes & generate recommendations

For the third year in a row, the most appealing benefit of AI in PM is gaining insight and foresight for decision making (80%). Project professionals are interested in obtaining reliable evidence to back up decisions. In fact, 92% of business leaders say AI has improved their decision-making confidence level (Forbes, 2021). Leaders are also highly interested in knowing the likely outcomes and recommendations (65%). Unlike standard project tools, with a prepared dataset, an AI-based system can be trained and predict the project performance based on historical project data. In fact, machine learning has been applied to predict project delay and risk prediction in the construction sector to mitigate project time overruns (Egwim et al., 2021).



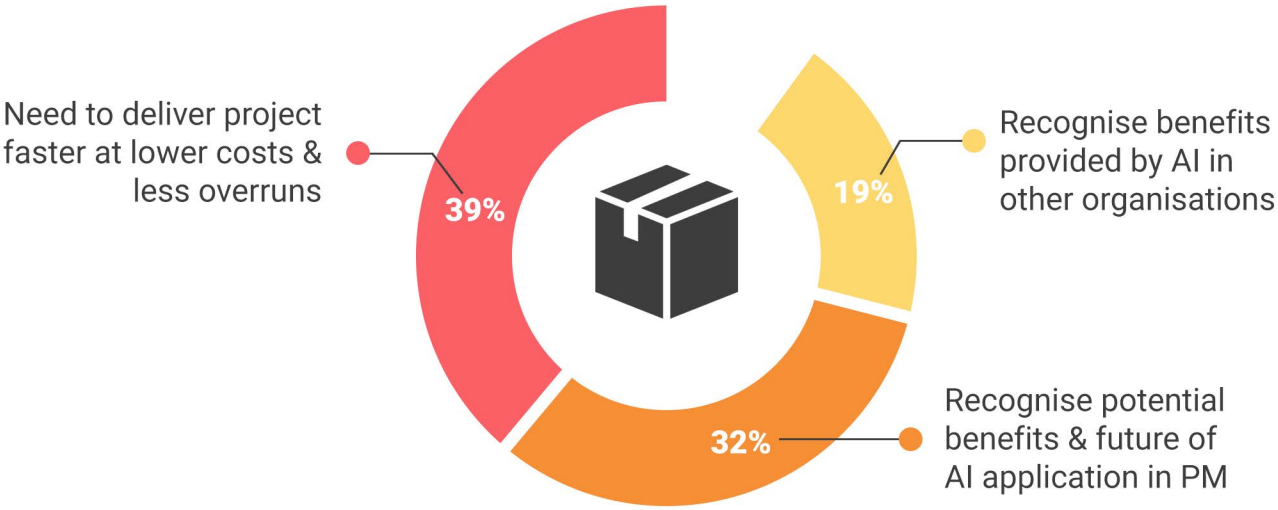
Collate & analyse large volumes of data



Automate repetitive, tedious tasks

The ability to collect and analyse a large volume of data (45%) and automate tedious tasks (35%) such as creating reporting, scheduling, and allocating resources etc. are also highly beneficial to big portfolios of projects. Forbes estimated AI can save business leaders roughly 360 hours a year via automation. Reducing the cost of project failure (26%), eliminating human errors/bias (23%) and alerting risks (23%) received a lower level of votes.

Implementation Drivers



The main driver to implementing AI into PM is to reduce project costs and overruns (39%), compared to last year's 21%. Emphasized during the economic recession and high inflation, project delays are costing more. IBM Global AI research reported 42% of companies consider cost reduction in the top ten factors driving the implementation of AI.

32% of companies also recognized the potential long-term benefits of AI in PM motivates them to adopt AI. In comparison, 19% are convinced knowing the improvement in project performance brought by AI in other companies. The pressure from competitors/the board or budget availability doesn't tend to contribute to the driver to apply AI in PM.

Plans to Implement

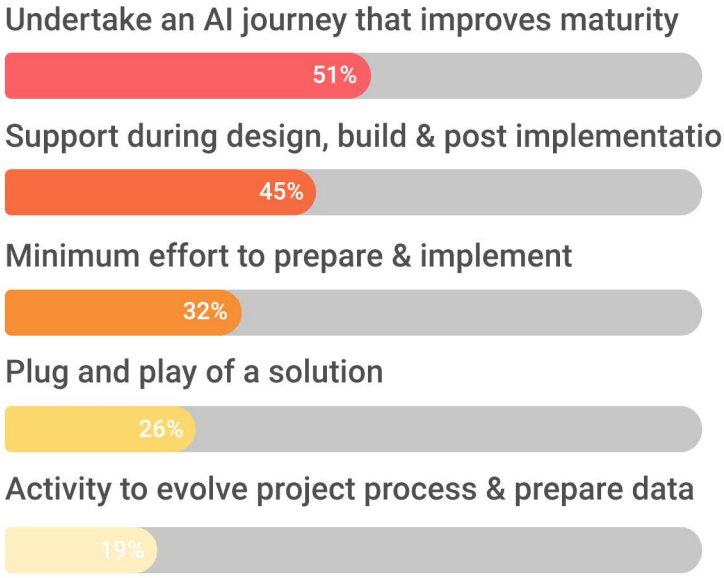
Likely to implement AI into Project Management in the next 3 years

58% of companies either expressed positively toward implementing AI in PM or already working on the adaptation plan, which is consistent with the result last year (56%). On the other hand, 32% of companies are still sitting on the fence about AI in PM implementation and only 10% completely neglect the idea. Companies are surely excited to explore AI's benefits to project management. However, some are taking precautions as late adopters. In fact, Forbes warned these late adopters are putting themselves at a disadvantage. AI is not a one-off installed solution and is only as good as the data input over time. Late adopters will always stay behind in the early stage of data preparation while their competitors will be already yielding benefits of cost reduction and improving staff efficiency. This gap is becoming bigger when 90% of AI leaders plan to significantly increase investment in AI compared with only 45% of AI laggards (EY, 2021).

Adoption Challenges

64% of respondents were unsure of the value that AI in PM would bring. Further challenges were implementation complexity(48%) and the lack of expertise required (48%). The earlier hype for AI has given way to anxiety about what AI can contribute without disrupting the business process. Forbes (2021) confirms the lack of trust in AI is the biggest stumbling block in adopting AI. Only 47% of leaders trust AI decisions some of the time. Lack of evidence and clear benefits lead business case make businesses concerned. IBM report (2022) also claimed that 34% of their participants have a problem with limited AI expertise while the other 24% struggle with the complex integration process. Compatibility with the existing systems has become less important, dropping from 2nd to 4th. Although the complex implementation process may mask this as both reflect a company's doubt in infrastructure readiness. In addition, need recognition (26%), limited budget (26%) and lack of trusted data (23%) also prohibited companies from implementing AI into project management. Low maturity in project capability, especially in monitoring performance, storing, and utilizing project data consequently hinders data readiness and new system integration. Forbes (2022) reminds us of the dependence of AI on data to learn and function and that companies need to pay attention to a data-first approach to support the adoption of AI-powered tools.

Implementation Expectations



The majority (51%) understand implementing an AI predictive analytic system is a long journey which starts by improving project maturity and capability. It is a continuous process requiring ongoing support before, during and post-implementation (45%). For most companies, this is a completely new adventure which may require external expertise. Gartner also suggests that ensuring knowledge transferring from these external experts and building the internal capabilities are essential throughout the implementation.

Managing expectation is equally important, by setting realistic and achievable objectives in the early stage. Understandably, some companies expect the minimum effort (32%) required and the quickest solution (26%) with the highest ROI. Although every company has a different infrastructure, database, and objectives; this may not be achievable as AI needs to be tailored before yielding benefits. Forbes 2021 listed "Assuming AI is A Catch-All Solution" as one of the top 10 common mistakes of AI adopters. Companies need to improve the project process and prepare their dataset (19%) first and foremost, yet this is the last expectation from the participated companies.

Impacts on the PM Role

Role of project managers changing as the result of automation in the next 3 years

7 in 10 companies believe AI will change or at least influence the role of PMs in the next 3 years. Meanwhile, 16% are not certain what will happen and only 13% don't believe AI will have a significant impact. Given the overwhelming application of AI in business, the question should be, perhaps, "how much AI will change the role of project manager?". According to research, soon, no matter how significant the transformation is, the role of the PM won't be replaced in cognitive decisions. Businesses should therefore look to up skill PMs and prepare them to deploy AI effectively. Gartner recommends "Focus on Augmenting people, not replacing them".

42 Watch House Place,Portishead, Bristol. BS20 7AU

advice@greyfly.ai

(+44) 1275 460315

https://greyfly.ai/

https://twitter.com/Greyflythinking

https://www.linkedin.com/company/greyfly

greyfly.ai
Delivering project intelligence

Crown Commercial Service *Supplier*