



LOGIKAL
Project Intelligence



2019

PROJECT CONTROLS SURVEY REPORT

LOGIKALPROJECTS.COM



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It's been fantastic to get an even greater contribution to LogiKal's Project Controls Survey this year, with just under 700 participants getting involved from around the globe. The feedback reinforces the challenges and improvements we regularly see within our own clients, large and small. We are seeing an increasing willingness and continuing opportunity to learn from others; whether a neighbouring project, industry or geography.



In undertaking the survey, we asked questions which would not only help us to measure performance and improvements across our profession, but to also identify clear takeaways for our readership to improve project controls teams' performance and projects as a whole. The survey results show that project controls performance is improving with increasing integration of both project management processes and the systems which underpin them. The results also show that for those organisations that are mature enough, cutting edge BIM techniques are adding real value too. However, with that comes an important realisation that their adoption involves much more than just a set of new tools and systems, but also a change in organisational culture, improvements in the skills of the people and the processes that underpin them.

Our challenge continues to be to ensure these improvements increase our own efficiency. We predict driving efficiencies will become increasingly important as governments continue to invest in infrastructure, driving up the demand for capability and capacity, globally. Improving capability through

training and development will remain critical, whether through internal or external enhancement programmes. In our recent experience, delivery organisations are beginning to take this one step further through outsourcing the controls or PMO functions to ensure the sufficient level of capability is assured throughout delivery, delivering better outcomes and cost benefits too.

Thanks again to those who contributed to strengthening this year's survey and I hope the takeaways prove useful in helping your organisation strengthen their project controls and improve project performance, through development and delivery.

Bryn Lockett

Bryn Lockett
CEO

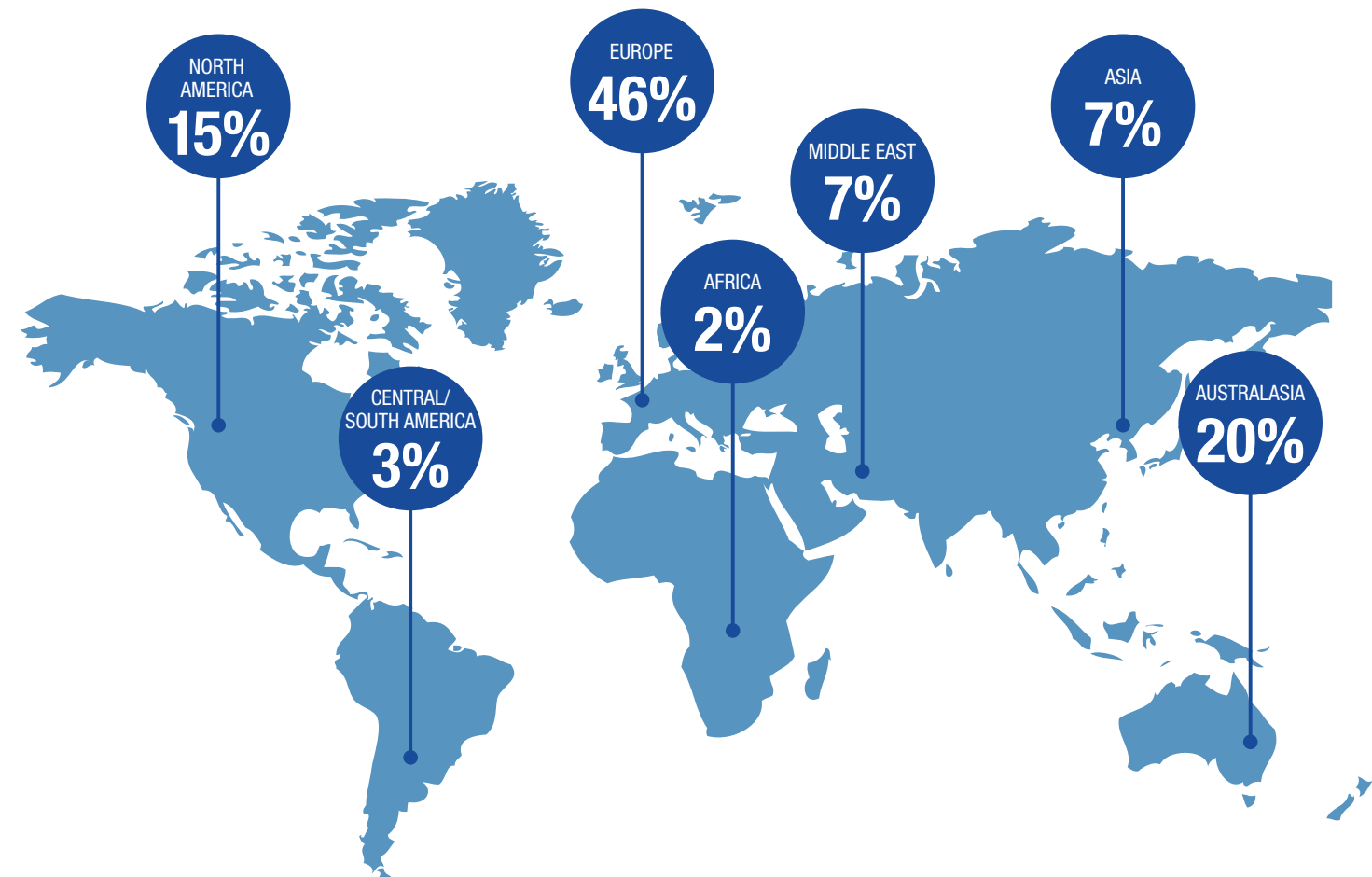
SURVEY AT A GLANCE

686 
PARTICIPANTS

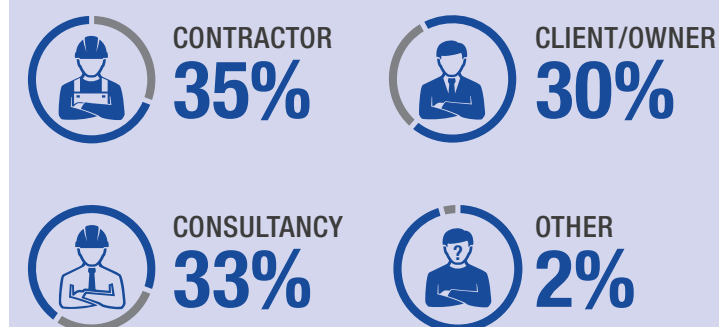
12+ 
INDUSTRIES

7 
REGIONS

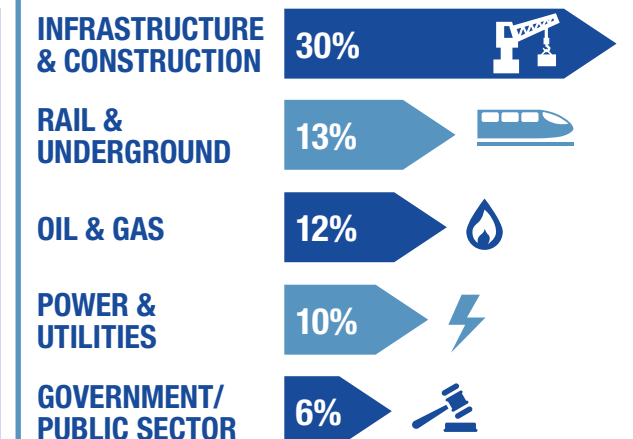
Location



Organisation Type

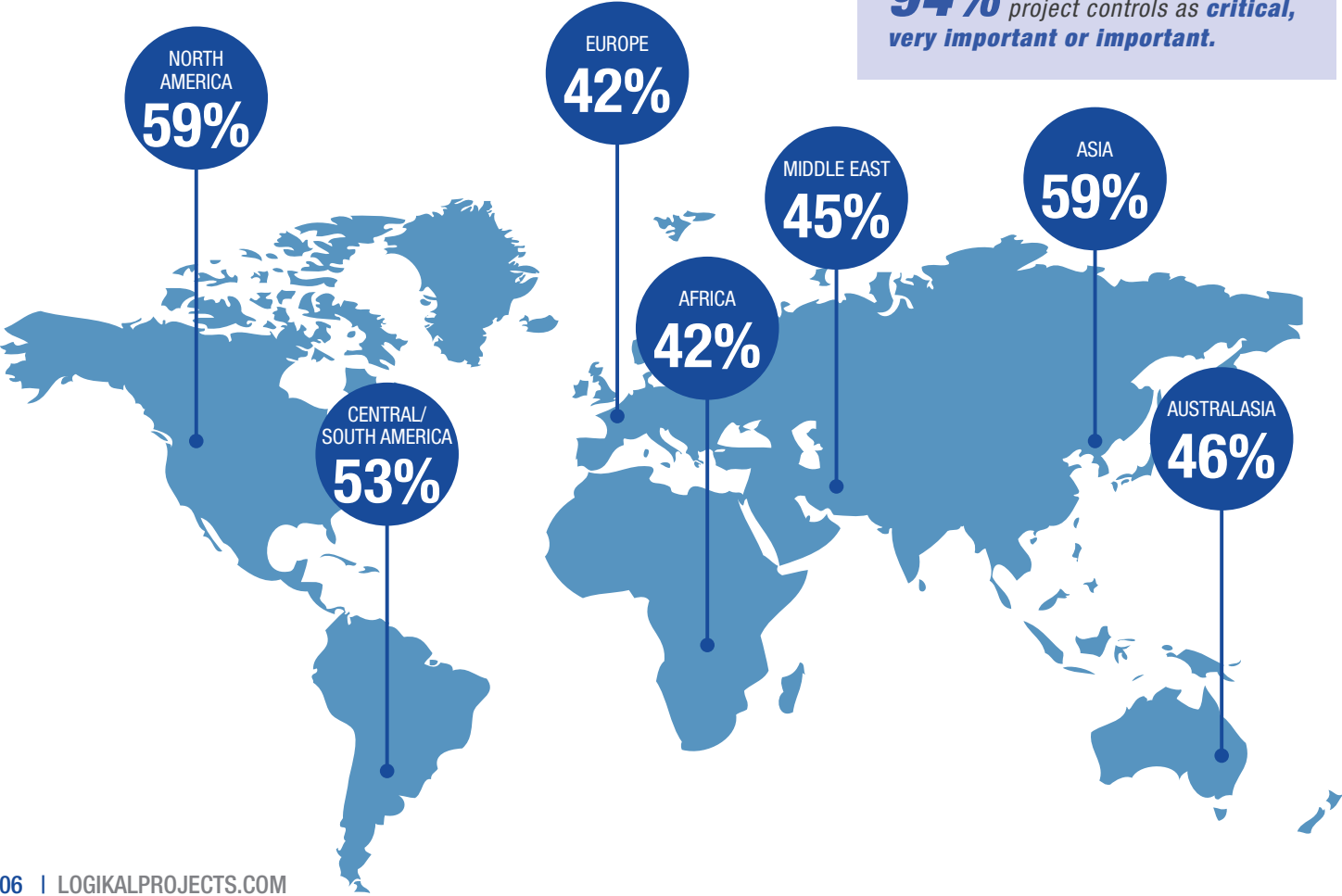


Top 5 Participant Industry Sectors



KEY STATISTICS

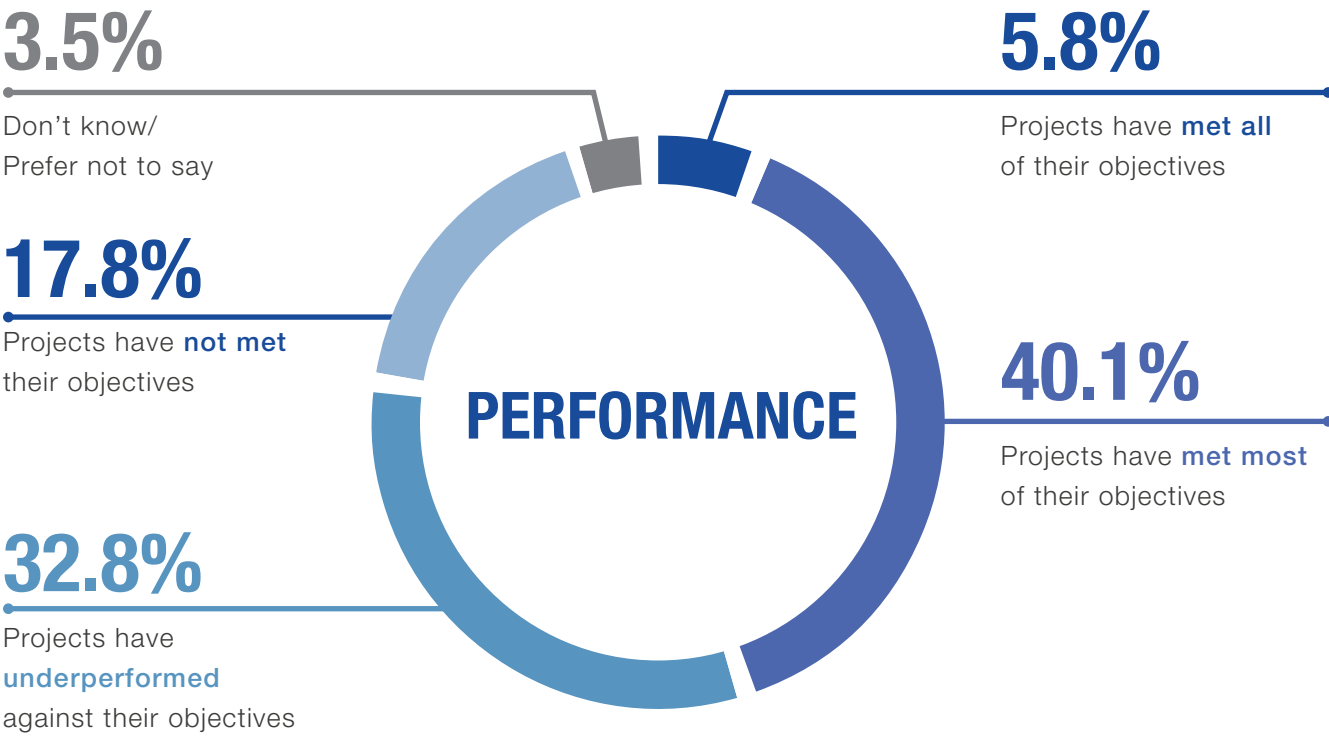
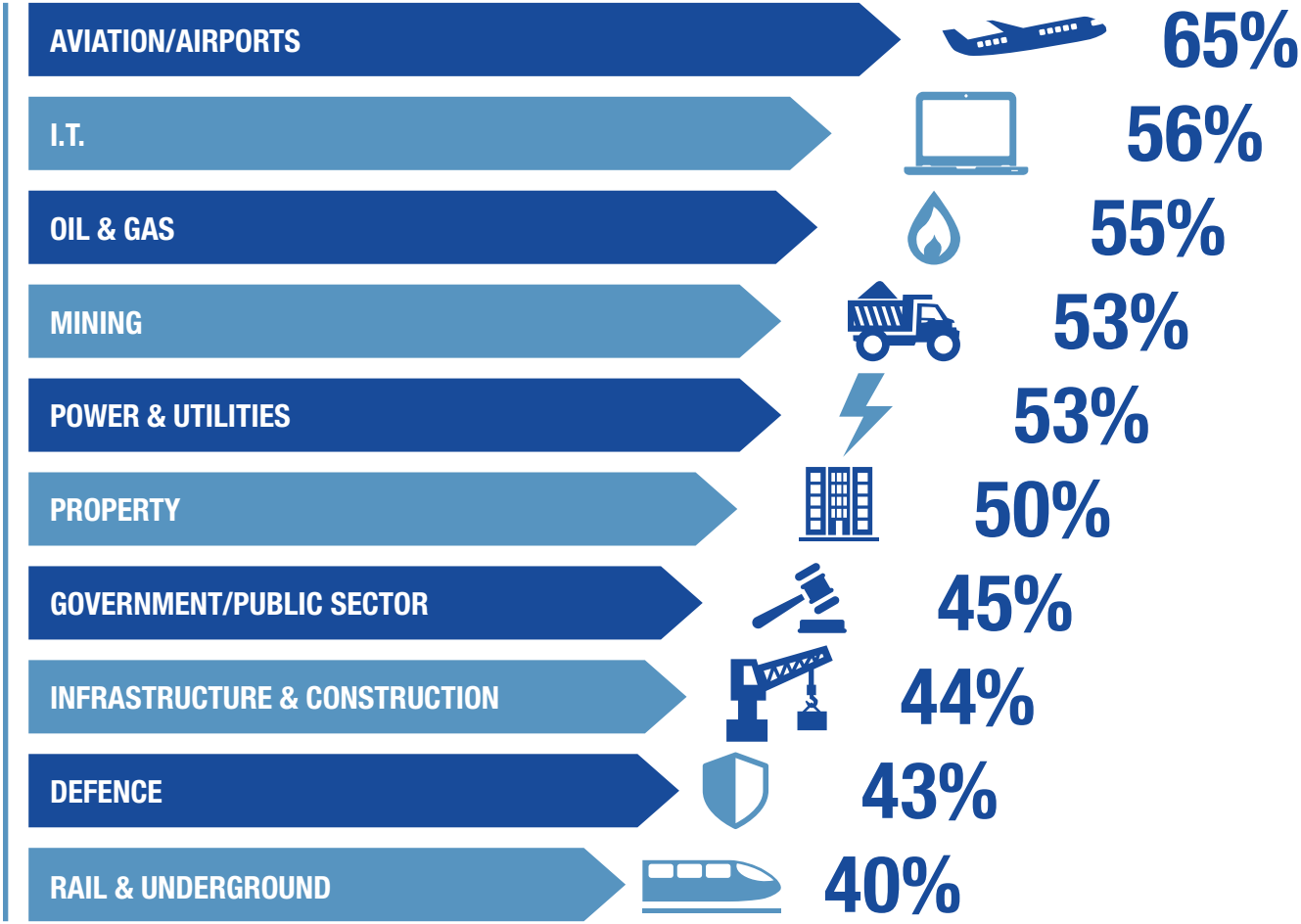
Percentage of projects achieving all or most time, cost and quality objectives



KEY FINDING

94% of successful projects saw project controls as **critical, very important or important.**

Top industries finding success in projects





PERCEPTION & BENEFITS

Projects that have been set up for success will have highly effective project controls functions that consider the three core elements:

- People
- Processes
- Systems

When these elements are properly established and working together in harmony, project controls functions can accurately predict, understand and influence the time and cost aspects of projects. Of our respondents who had all three of these in place; highly effective teams, fully integrated processes and fully integrated systems, there was a **91% success rate** in projects achieving all or most time, cost & quality objectives. Just **5.8% of our respondents** reported that their projects met all of their objectives with **97%** of these respondents' organisations placing **high importance** on project controls.

Our respondents working for contractor organisations had

KEY FINDING

91% success rate in projects achieving all or most time, cost & quality objectives when respondents had highly effective teams, fully integrated processes and fully integrated systems.

the greatest level of success when their project controls function was embedded in the PMO. The results were less clear for client/owner organisations where results were spread more evenly across the board. Although within an established PMO is preferred, our experience has shown that where project controls sits within the organisation isn't overly important as long as the project controls team is properly integrated. This means the discipline and performance indicators are established and seen as fundamental to programme delivery.

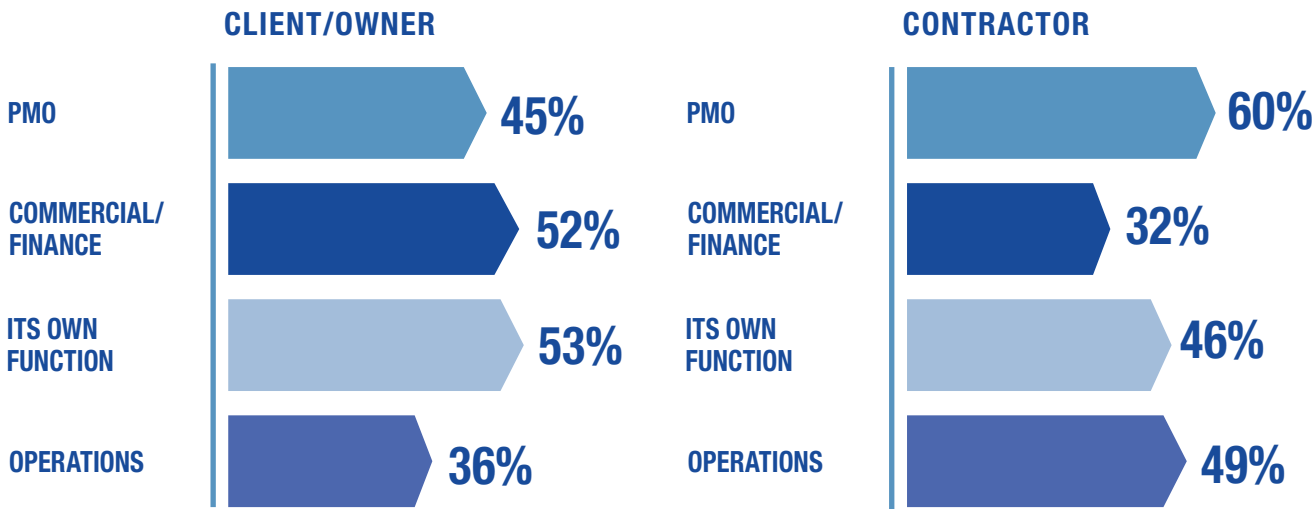
Clearly there is benefit in having a centrally located project controls team which can:

- Explain how insights were derived
- Ensure that project issues can be easily communicated
- Ensure corrective actions can be taken, particularly during the delivery phase of a project where most contractor organisations are likely to be involved.

For project controls functions located in isolation, the reports that are created may be less likely to be acted on, despite the quality of information they might be producing.

Calculating a bottom-line cost benefit based on project value is not always a simple process, but several respondents reported benefits through application of effective project controls of what they believed to be between **3-12% of project value**. This range is further supported by a 2018 Deloitte study which

Project success rates based on where project controls sits in an organisation:



reported ROI benefits of **5-10% of project value***.

This strong correlation between companies placing importance on project controls and projects meeting all or most time, cost and quality objectives is unsurprising. Clearly the perception of project controls is steadily increasing and is leading projects to more success.

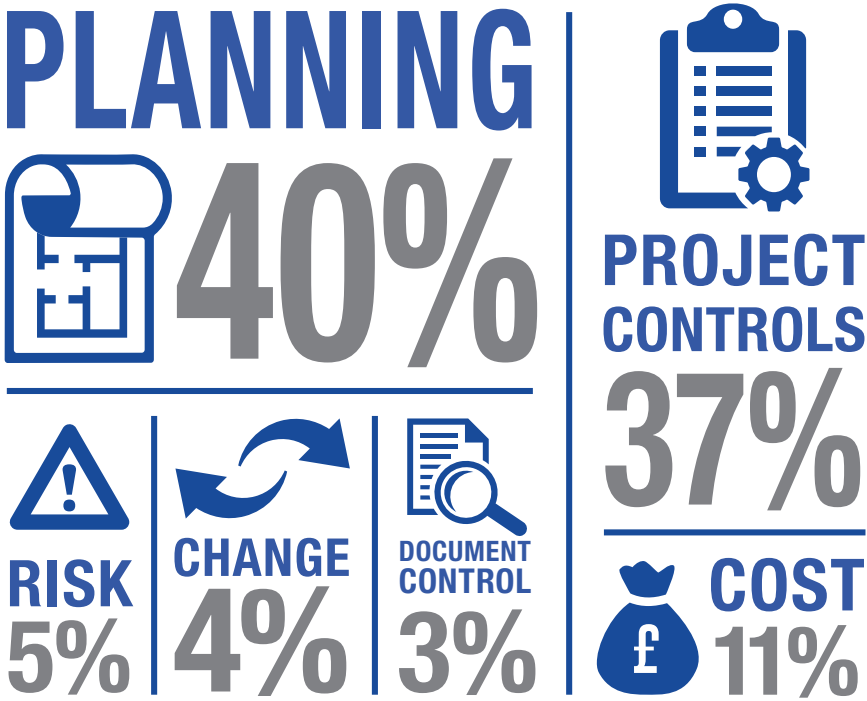
KEY FINDING

3.5x more likely for success when a high importance is placed on project controls.

“Organisations that persist in separating Controls from their PMO are taking a big risk that they inadvertently damage the communication lines and the trust that needs to exist between Controls and the wider team”

Richard Palczynski
Senior Programme Director
at Arcadis

Most critical role performed in a Project Management Office:



What are the responsibilities of our respondents' project controls functions?

Time/planning: **93%**
Cost: **89%**
Risk: **72%**

Change: **74%**
Performance: **73%**
Quality: **33%**

* source: <https://www2.deloitte.com/content/dam/Deloitte/uk/Documents/strategy/deloitte-uk-frontier-project-controls.pdf>

WOMEN IN THE WORKPLACE

“*Having worked within a client organisation that is very actively promoting both diversity and inclusion I can see the benefits. Not only does it make for better decision making but also a happier workforce.*”

Sarah Wenn
Programme Controls Manager at Heathrow Airport Limited

KEY FINDING

9% of respondents stated that women of the same levels of experience as men were paid less in the same role.

“*There is a wealth of evidence which demonstrates that general management teams that are gender balanced and diverse are more effective. The evidence produced by this LogiKal study shows, for the first time, that diversity and balance deliver better projects too.*”

Manon Bradley
Development Director, Major Projects Association

KEY FINDING

84% of companies that did not actively promote gender diversity said there is a need to increase skills in their teams.

Overall it would seem attitudes towards women in the workplace within the project management sphere are positive, with 87% of respondents organisations promoting gender diversity in the workplace. However, there is still a way to go in achieving a gender diverse working environment through encouraging women into the profession.

Respondents who claimed they had more equal gender diversity in the workplace saw far higher success rates, with respondents whose organisations had 40-50% female workforce showing that 52% of their projects had achieved all or most of their project outcomes as opposed to organisations with 10-20% female contingencies of whom 41% said their projects had met objectives.



PEOPLE & CAPABILITY

There is a clear need for upskilling within the industry with just **17% of respondents** believing their teams have the necessary skills required to perform their functions successfully. Although over half of respondents felt that their team's skills had seen recognisable improvements over the last 2 years, there is still a way to go. The results are unsurprising in light of the current skills crisis, whereby the industry is losing workers faster than it is recruiting them.* With the number of megaprojects being undertaken globally at an all-time high, the industry is in agreement that there are key skills challenges that need to be addressed.

An overwhelming majority of respondents told us that

‘Planning’ and ‘Data Analytics & Visualisation’ were the **two main focus areas for improvement** in their project controls teams. This is an interesting finding, identifying a clear need for improvement in some of the more fundamental areas of project controls (planning), as well as in areas that are more innovative and cutting-edge (data analytics).

“*Across all sectors there is increasing competition for resources. This is already manifesting itself in skills shortages, driving increased costs and affordability pressures.*”

HM Treasury's National Infrastructure Plan for Skills

KEY FINDING

17% believe their project controls teams have the skills required to perform their functions successfully.

Client/owner organisations were identified as having the lowest percentage of skilled teams. In our recent experience, we have seen more public sector organisations investing in project

KEY FINDING

61% saw recognisable improvements in their team's skills in the last 2 years.

controls specific apprenticeships and graduate schemes. We are also increasingly seeing client organisations going to market for outsourced or augmented project controls solutions. They are recognising the benefits of both learning from experts with multi-region and multi-sector experience and relying on them to address the challenge of providing rapid project controls capability.

KEY FINDING

2.5x more successful if there is less than 5% staff turnover.

All team members have the skills necessary, by organisational ability:



CLIENT / OWNER

11%



CONTRACTOR

18%



CONSULTANCY

23%

*https://www.ciob.org/sites/default/files/CIOB%20research%20-%20The%20Impact%20of%20the%20Ageing%20Population%20on%20the%20Construction%20Industry_0.pdf

BIM & 4D PLANNING



KEY FINDING

Using 4D planning on a regular basis achieves **3x more success** on projects.

In a relatively short period of time we have witnessed a vast number of technological advancements. It can come as no surprise that keeping up with emerging technology is vital for businesses who wish to succeed in the digital age. Digital Engineering, especially the use of Building Information Modelling (BIM), was highlighted in last year’s survey as something expected to make a ‘significant contribution to project development and delivery in the near future’.

For those that have the fundamentals in place and have begun to adopt BIM to various degrees, there have been positive reports of the impacts it has made. However, our survey findings indicate that the vast majority of our respondent’s organisations are not yet at the level of maturity required for it to be of benefit. These companies first need to focus on the fundamentals before taking the next step forward and harnessing the power of these frontier techniques.

4D planning enhances the way we visualise project information in comparison to Gantt charts which for certain types of projects cannot provide a complete view of all interactions and sequences of activities. It essentially consists of the integration between a BIM model with a project schedule to increase the level of BIM maturity.

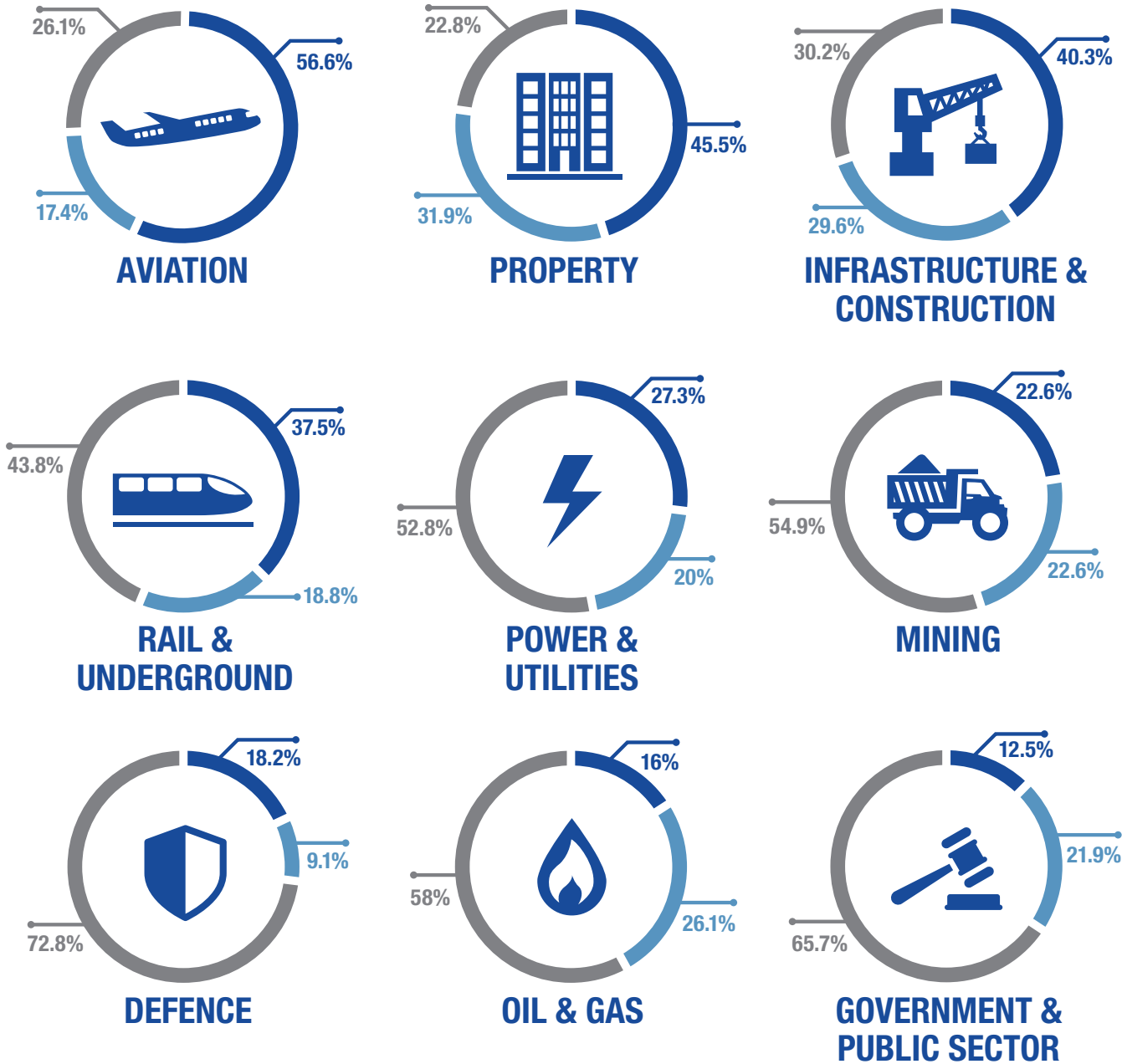
In order for it to be effective, it requires strong technical expertise and continuous engagement from project teams throughout the project lifecycle. Without these factors in place, it can become an expensive exercise that may deliver little value. However, for the organisations that are mature enough, 4D planning is a great way to improve their levels of success. Although only 7% of respondents use this tool regularly, they achieved 3x more success on projects than those that don’t.

Tools such as 4D planning can break communication barriers, meaning the information is

distributed accurately and effectively to all parties. Contractor organisations are most commonly using 4D planning, but client/owner organisations are increasingly seeing the value in 4D planning by employing it as a mandatory tool in a growing number of contracts. If a greater number of clients were to push the use of this tool in structured, mid-to-long term projects, it could provide cost benefits to both client and contractor. With the programmed objectives clear to all parties, project milestones can be more easily achieved, with a higher chance of the project being delivered on time and on budget. A win-win scenario for client and contractor.

Businesses that don’t embrace this new technology could soon be left behind and yet, 42% of respondents claimed they do not intend to use 4D planning. The main reasons given for preventing the use of 4D planning and embracing it further were ‘availability of skilled resource’ and being ‘unclear on the benefits’.

Industry type using 4D: ● Use it already ● Don't use it but intend to soon ● Don't use it & don't plan to



INTEGRATION

The integration of systems and processes is intrinsically linked with positive project outcomes. Companies that had at least partial integration saw higher levels of success. Project environments with siloed operations and multiple standalone systems are still prevalent indicating there are still improvements to be made in a lot of organisations.

PROCESSES

Our survey data tells us that full process integration achieves 5x the success rate in meeting all or most project objectives and delivering highly effective outcomes. There were instances reported by some respondents that, although they had fully integrated processes, they did not have the sufficient knowledge or skills within their team to be fully compliant with them. Processes only make up one of the three key elements required

in a successful project controls function, clearly without the skills in the team required to follow these processes, projects cannot be guaranteed success.

In our experience, developing the process from a technical perspective is just the first part of the solution and in many ways the easiest. **For processes to be integrated and ultimately effective, there is significant stakeholder engagement effort required.**

KEY FINDING

5x success rate in meeting objectives and delivering strong outcomes when processes are fully integrated.

KEY FINDING

2.5x higher rate of success for organisations that have effective lessons learned/knowledge-capture processes.

“Processes are hard to change and take time, senior management don't want to rock the boat.”

2019 Survey Respondent
(Anonymous)

Behaviours, individual, functional responsibility, ownership and discipline leads to an operational process which delivers benefits to all stakeholders.

We also asked our respondents about their lessons learned processes. Organisations with effective lessons learned or knowledge capture processes enjoy a **2.5x higher success rate** than those who do not. By transferring the learning between projects, both in the initial start up stage and at frequent gates/hold points during ongoing projects you can avoid wasting time and money by making the same errors and misestimations repeatedly. Lessons learned reviews should be held at the beginning

and end of each stage/phase/gate to ensure previous learning is captured and conveyed. Lessons should also be shared between concurrent projects within portfolios and throughout the organisation.

KEY FINDING

89% success rate for projects with full process integration and full compliance.

SYSTEMS

Integration of systems improves data quality and provides a positive shift in the mindset of teams in how they deal with project data. Organisations can be more efficient in their working practises and more accurate in the information they are reporting. This allows key management decisions to be driven by fact rather than intuition.

Overall, **82% of respondents** recognised that having integrated systems made a difference to project outcomes, however **less than 10%** said their systems were actually 'fully integrated'. This may be because businesses are too wedded to products like Microsoft Excel which is clearly holding many companies back. There is also a **perceived additional cost** to the project when the return on investment (ROI) is not fully understood.

This does not necessarily mean that a suite of new systems is required, in many cases existing systems can be used with integration tools to extract data directly from corporate standard software. Provided that there is alignment between the data structures used in each system, the systems can be integrated. There is not a 'one size fits all' solution; a full requirement gathering exercise needs to be performed prior to selecting and implementing any new systems.



KEY FINDING

4x success rate for projects with fully integrated systems.

Most commonly used project controls systems:



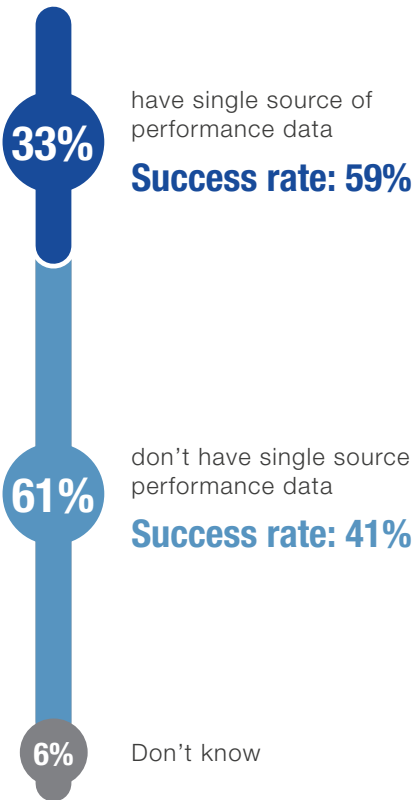
SINGLE SOURCE OF TRUTH

In project and programme environments, information is recorded and stored in a wide variety of systems and documents. Often the same information can be duplicated across multiple sources which is highly inefficient and potentially confusing when trying to establish a clear picture of the current status of project performance. In order to establish a single source of truth, you need to identify the master record for all pieces of information and determine where that information should flow to update other records and systems.

Achieving a single source of truth relies on complete trust through the supply chain. There is a strong need for

openness and transparency. Integrated systems enforce project discipline, leaving less room for data manipulation; this is vital to companies achieving a single source of truth. However there can be blockers in achieving this with organisational and project politics often playing a part, particularly in large, complex multi-stakeholder environments. The survey shows that there continues to be an aspiration for achieving this, with 33% already operating from a single source of performance data. However, without a strong team with broader experience across multiple project control disciplines, the ability to achieve an integrated single source of the truth in practice is often limited.

Single source of data success rate:



CONCLUSIONS



SUCCESS

91% success rate in projects achieving all or most time, cost & quality objectives when respondents had highly effective teams, fully integrated processes and fully integrated systems.



PEOPLE

There is an ongoing skills crisis with only 17% of our respondents believing that their teams have the necessary skills to perform their functions successfully.



SKILLS / TRAINING

Many organisations still need to improve their basic planning & project controls capability before beginning to think about taking the next step to using more cutting-edge techniques.



COMMUNICATION

Project controls teams in contractor organisations are more effective when embedded within the PMO. This ensures quick and clear lines of communication.



INTEGRATION

Process & system integration have a significant positive impact (5x success rate) on project success however some organisations are being held back by a lack of skills in the team to comply with processes and manage these systems.

82% of respondents believe that system integration has a positive impact on project success rates, yet only 9% have fully integrated systems.



BIM / 4D

For organisations that are mature enough, 4D planning and BIM techniques are adding real value and increasing levels of project success.

ABOUT LOGIKAL

We are an award-winning consultancy that helps businesses achieve better results in the delivery of projects, big or small. Our expert advice and performance management solutions improve operational performance, reduce costs and mitigate risks. Effective decision making is faster and easier with our unique mix of specialised and proprietary systems and services integrating your project controls.

Founded in 2002, we have project management and controls specialists in the United Kingdom, Europe, Australia and Asia. Each of them shares our vision for building and enhancing capability within teams so that they can maintain consistent and sustainable results.

Through LogiKal, you can leverage the value of our experience delivering projects around the world.

At LogiKal, we offer a range of services including consulting and our information management and managed services to help your projects succeed. To enhance industry capability, we also provide coaching, training and professional development services. This ranges from accredited to non-accredited specialist skills courses, necessary to deliver everything from small to complex projects.

To find out more about how we can help, contact us.



logikalprojects.com



info@logikalprojects.com



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