



Improving major project performance through  
establishing the right culture and leadership behaviour



Although not widely researched or discussed openly, the right leadership behaviours at project reviews have the potential to improve project performance and potentially the performance of our industry. **Project reviews are the cornerstone of any major project for the regular and formal review of performance reporting and decision-making.**

Typical project reviews (normally following a monthly cycle) provide clear and independently validated information to project stakeholders, facilitating understanding and early identification of risks and issues.

Whilst all project reviews will be specific to their project needs, they will normally cover attributes such as: objectives status (vs baseline and forecast schedule, budget and deliverables), risk position, product quality and process adherence/maturity. They should be the driving force for positive progress and action, but they frequently do not deliver their potential because of leadership and participant behaviour. Testing this hypothesis began at an industry roundtable Costain hosted with attendees from academia and industry to debate the impact behavioural science and behavioural economics can have on changing behaviour and improving culture to ultimately achieve value for money outcomes.

*If cultural and behavioural change can make a positive difference at an organisational level, are we making enough of that connection in the area of leadership, explicitly in relation to project reviews and the way they are chaired, managed and executed?*



## SETTING THE SCENE

Most professionals share a desire to improve performance and enhance personal and organisational reputation. Academics, engineers and thinkers from all sectors in the audience at the UK Project Controls Expo in London in November 2019 agreed, through a survey Costain conducted, that project reviews were the kind of situation that most had assumed had been studied in-depth but, it turned out, hadn't been explored from a practical behavioural perspective. Project reviews are critical to the continued progress and achievement of milestones – a chance for the project family to come together. The project team, including the client, needs to have a clear view of project performance, senior stakeholders and the executive will need to see impacts and interdependencies across a portfolio and the discipline leads can learn immediate lessons for future stages of work. However, how they are conducted and led can have significant impacts on onward reporting, actual progress of the project and ultimately performance to meet set outcomes.

Behaviour is a function of that environment and is an observable action i.e. an action that can be seen and measured. Culture on the other hand is more difficult to define and includes the behaviours,

values and beliefs of a group of people. **Leaders at project reviews are therefore responsible for shaping the project culture and creating the right environment where behaviour is an enabler of good practice; some get it right and others don't.** The most effective leadership style focusses on positive reinforcement which, if done correctly, leads to discretionary effort which creates value for the immediate project team as well as the client and senior stakeholders.

So what makes a good leader? Leaders set clear expectations so there is no ambiguity and they actively ask if support or help is needed. Leaders do what they say they are going to do and create the white space needed in their diaries for strategic thinking time. Leaders acknowledge performance improvement (no matter how small), they provide positive and constructive feedback and always use fact rather than assumptions and opinion.

**A project, programme or portfolio leader all need to be self-aware and understand the environment they create** – your team(s) are all working towards the same end goal so thanking and acknowledging effort is key.



Behaviour is  
an enabler of  
good practice

**This paper sets out the common challenges we all experience, the barriers and hurdles in relation to the environment and ambiguity of certain situations as well as the potential for change and improvement. We all want the right result but sometimes we don't know how to enable it.**

We live in a world where pressure to deliver value for money on high-performing, complex infrastructure projects is relentless. Coupled with a desire for organisational leaders to dominate their reports back to stakeholders with positive news, there remains a strong incentive for optimism bias.

A 2002 study of 50 major projects, commissioned by HM Treasury, analysed the effect of optimism bias and **found that civil engineering experienced cost and schedule overruns of up to 30% more than building projects.** In 2013, supplementary Green Book guidance was issued that identified a tendency for project appraisers to be 'overly optimistic'. It recommended three main strategies for reducing optimism bias: full identification of stakeholder requirements, accurate costing and project and risk management. However, there is no mention of behavioural leadership and direction to cultivate the right culture. **It's unsurprising that the 'watermelon effect', where projects show green (healthy) on the outside but red (troubled) on the inside, is an all too common phenomenon.**

There are many examples of over budget and over running infrastructure projects in the UK. According to the Infrastructure and Projects Association, of the major projects identified between 2012-2019, the number of projects classified as "probable of a successful delivery" has fallen steeply from 48% in 2013 to just 10% in 2022.

In 2015 Gartner reported that 75% of organisations report more than 20% of 'healthy' projects which, in fact, concealed problems and, according to McKinsey, **98% of mega projects face cost overruns or delays.** These huge issues have led to a plethora of potential remedies. In this report we look at how leaders with an awareness of the desired behaviours for effective project reviews, could help solve watermelon reporting and have a transformational impact on project performance. We'll look specifically at monthly project review meetings. They can be stressful occasions, eliciting exaggerated behaviours, and they are a shared experience which facilitate the transmission of either good or poor behaviours from leaders to others.



## Common challenges

**Project reviews play a fundamental role in ensuring the nation's critical infrastructure gets delivered on time and on budget. When properly run they enable the teams involved, and their leadership, to see through the fog, evaluate a project's underlying health and make effective decisions on future activity. This all centres on the encouragement of desired behaviours and the discouragement of undesired behaviours through different consequences.**

However, they are beset by problems which often originate at the top. With leadership style identified as the joint-most important success factor for projects in a 2016 TU Delft and Brooke Institute report on project controls, it is clear that this is critical. P3M consultant at Costain, David Chard, has spent many years observing behaviours in reviews for clients: "The conduct of reviews is driven by the leader's style. I often see senior managers turn up to meetings without preparing adequately and having to respond to questions ad hoc. There's no doubt that leaders who request data and information up front and take the time to read the reports run far better meetings."

This issue can be aggravated further when project professionals are required to provide numerous detailed reports and have no time to analyse and assess them and provide adequate guidance and input to project leaders. "Leaders will then not talk to the

data and put it to the back of the pack, with decisions being made on gut instinct."



Figure 1 illustrates the typical hierarchy of portfolio, programme and project management, supported by delivery teams. Reviews are held at each level, with differing emphasis on steering, leading and managing.



## 'Fear factor'

**We are all born with the skills to observe and analyse others' behaviours, right down to the most subtle.**

We will do more of the behaviours that get us the consequences we want and less of the behaviours that get us the consequences we don't want. For example, 'I asked the boss for some help and he is assigning me an assistant'. Any behaviour that avoids a negative experience such as criticism, is also repeated. So, 'I volunteer a new idea every month in our project review meeting, because if I don't, the boss and everybody else just stares at me'. But any behaviour that leads directly to a negative experience such as discipline or embarrassment, is not repeated in the immediate but may resurge at a later point. There can be a fear factor during review meetings, often as a result of the way that leaders have handled team members and their reports in previous meetings.

An aggressive approach by project leaders can have disastrous results and is a major factor in the proliferation of the watermelon effect. Unless properly taught, we may also inadvertently or deliberately punish a desired behaviour. With 20 years' experience of working on engineering projects prior to his

consultancy role, Peter Mill is focused on positive discourse: "The best run programmes are led by people who understand the value of reliable, high integrity programme control data, which drives objective understanding of performance, highlights areas that need support and can be used to support control decisions. This is only possible if the right culture is established from the top down."

Unfortunately, all too often, corporate culture and associated leadership styles end up suppressing positive review, synthesis of information and informed decision making:

"We've seen conversations and interactions shut down abruptly, requests for help ignored and programme control data disregarded and devalued by leaders. If leaders display aggressive behaviour and demand 'bring me solutions not problems', there's a fear factor. You have to report everything as rosy and that flows up the organisation and is communicated to stakeholders."

Leaders can be prone to handing out reprimands in project reviews, and this can cultivate a culture of trepidation, where others in the meeting are reticent and won't engage.





This atmosphere can also make meetings ineffective in another way. If leaders develop a reputation for aggressive cross examination, there is likely to be a 'cast of thousands' attending each meeting. Peter: "You end up with a core senior team sitting around the central table and a supporting team around the edge of the room. If the leader asks a difficult question, managers are afraid of not having the answers at their fingertips and so bring half a dozen deputies with them to cover their knowledge gap. The deputies are there for hours waiting for their 30 second input." Not only is this bad practice and poor use of skilled professionals, but the culture of fear and defence is cascaded to the next level of employees.

## Dealing with data, environment and ambiguity

**A leader's style is drawn from a range of factors which can also affect their decision making abilities. Their background and life experience, what they have seen and achieved in their careers to date and also their profession, whether they are engineers or have other skillsets.**

Peter: "I'm convinced that no one goes to work to do a bad job. Everyone is driven by their own beliefs and paradigm. The people who are gung-ho and aggressive believe it is the best way to achieve tough objectives."

The use of data during project reviews presents a huge, yet critical challenge. When used well, data can inform effective decision making but when ignored or

twisted the results can be damaging. Data needs to be up to date to be meaningful and access to real-time data presented in a consistent manner helps prevent misinterpretation, ambiguity and confusion.

David: "It's tense when you know the data is wrong. It takes time to get it right and needs help from the project managers. Good leaders will work at owning the data and making sure that it's right."



Peter: "Maturity in programme controls can be thought of as a spectrum of Hindsight-Insight-Foresight. We know that the past is behind us and can't be changed. So why is so much effort spent worrying about the minutiae of previous months' data? The focus should be on making informed control decisions that drive a better future.

In this simple model, hindsight is where data is used in a passive way, purely focusing on what has happened. The next level is insight, where the hindsight is used to gain a deep understanding of the story the data is telling us. Applying the 'so what' test to synthesise useful information from the huge amounts of data.

Ultimately we should aim for foresight, which is where programme monitoring is the servant of programme control. The synthesised information supports reliable forecasting and most importantly drives positive decisions.

If a team is not using data correctly, or even ignoring it, none of these steps can be taken. If accurate data is informing your forecasting you can be mature enough to decide a direction of travel."

Where a project throws up ambiguity and incorrect data, the role of leaderships style and behaviour can become more acute. David: "If reported project data is perceived as incorrect, it works well when a leader presses for the data to be fixed rather than reply on out of date data or data from other 'unofficial' sources." In the absence of clear data and a defined way ahead, it is natural that behavioural factors will fill the void. Not only does this underline the importance of strong and accurate data, which is used correctly to minimise ambiguity, but also supports the Costain position of embracing behavioural science to build positive decision making.

As a practitioner of applied behavioural sciences and executive coach, Claire Fryer takes great fulfilment in empowering others to understand why behaviours occur and how to influence behavioural change: "When I'm invited to attend any meeting to observe and measure behaviour the intention is always to follow up with feedback and strategies for demonstrable improvement. I cover the basics such as does it start on time, finish on time, are all agenda items covered. This can be a baseline and often an





We are all individuals and there is a spectrum of behavioural responses in project reviews.



indicator of the prevailing culture. I then go deeper, measuring the frequency of the discussions, positive responses, dysfunctional practices; the key is that it is all observable and therefore measurable. From the frequency of a person speaking, the responses of those being spoken to, the language used, the visual cues right down to micro muscle movement”.

Dr. Frederic Bosche, senior lecturer in the school of engineering at the University of Edinburgh pointed

to a strategy that could take some ambiguity out of review meetings: “You can do a lot with voice recognition when meetings are recorded. Identify if the chair is talking 90% of the time, or if certain people don’t speak at all, is there any discussion in groups?”

In these instances, Claire recommends the use of confidential executive coaching. **“Observation, feedback and confidential executive coaching can**

help to shift the behavioural patterns within such meetings where leaders can create the desired environment. Teams are encouraged to have open and honest discussions and focus on what can be done to resolve or improve situations, as well as give each other genuine offers of support. How the leader deals with these situations, and their current behaviour can be an indicator of future behaviour.”

## CASE STUDY ONE

### Improving programme performance through internal change

#### Client needs:

Costain took on a major client challenge where many projects and programmes were behind schedule and over spent, with no reliable forecasts for cost and schedule. There were huge internal pressures from senior management and the finance department to understand the outcomes from the change projects and improve confidence in programme delivery. Additionally, the projects' delivery needed to be aligned to business outcomes and corporate objectives.

#### Benefits:

- Through the application of behavioural change, we embedded a benefits management culture with the adoption of principles to ensure benefits analysis – a link from the business case to the funding for change projects.
- Management information improved in quality and reliability with the addition of a 'collection at once' principle for efficient decision making and manipulation.
- Confidence in forecast accuracy was greatly increased resulting in improved delivery performance, achieved through effective review and reporting, and project governance.





## Structuring good reviews

The Association for Project Management cited in its 2018 report 'Project leadership: skills, behaviours, knowledge and values', the development of eight project leadership survival skills, shown in figure 2.

These factors all require the right culture and behaviours to be established and this can be a complex, long term process. It often involves changing the way both companies and individuals have operated for long periods of time. Ultimately, the performance of a project team and project review is a direct reflection of the leader and the environment he or she has created for it. Gordon Masterton, Chair of Future Infrastructure at the University of Edinburgh:

"Reviews should be a place where everything is revealed and there are no surprises, nothing held back because of fear of impact on career progression. On the contrary, participants should be rewarded for identifying early warning signs so corrective action can be taken."

Bad habits can be deeply engrained and very personal. Gary Jackson, who helps Costain's clients to improve their performance in complex projects: **"The only way to make it effective at the leadership level is through confidential coaching. That's where we're really seeing it have an impact. It's a personal thing how you behave toward and appear to others. The private**

nature of our training builds confidence with clients. When they return to an open forum there are tangible differences in the way people respond. The changes might be as simple as accepting the data through to openness to those asking for help, but that's how we're having the greatest effect."

### Interventions

Costain's approach to improving leadership behaviour requires clear interventions to be made. First the behaviours you want to increase or decrease need to be identified. Claire: **"We use a systematic, data-based approach to specifically pinpoint behaviour. We identify the prompt and analyse the**



Figure 2 illustrates APM Project leadership behaviours

consequences experienced; it is the consequences which subsequently determine whether a behaviour is repeated, decreased or even stopped. This can be a result of a leader's own behaviour at the project review or that of others.

Once changes have been made and implemented, they need to be measured for impact over time. Successes should be reinforced, and help given where required. Finally give positive feedback and make the positive behaviours stick."

It is all a balance though. Recognising and sharing what works well and ensuring the environment stays consistent for new behaviours to continue is just as important as identifying and eliminating the undesired behaviours. As Claire explains: "We assess the downstream impact of the consequence chain and interlocking behaviours, providing opportunities for change and reinforcement. For those who create trusting, truthful and honest environments, having difficult conversations where needed and acknowledging success is absolutely key to the behavioural science approach."

Gary believes the strength of Costain's behavioural consultancy is in its simplicity: "The techniques we use are quite obvious in some ways. There's a truth to it which is simple and straightforward. But applying it in a consistent way is where the investment has to be."

David: "Good leaders are supportive and get people to work at problems jointly. They should not be quite so directive. But there has to be some tension in the room and that comes down to getting those in the group to feel like they own the problem AND the solution."

## Respect the data

Peter: "Good leadership means respecting the data. This in turn requires good reporting and data sets. Once leaders and their teams have good data, it's about being clear on meeting objectives and making decisions, while being open to challenge.

"With Rolls-Royce in the defence sector, we worked toward a real clarity of master data, a single version of the truth that was understood and accepted. Their senior leadership drove a culture where they would not tolerate poor quality data or presentation of alternative data. That's exactly the approach you need from the top down."

There also has to be a willingness by leaders to listen to requests for help and support. Peter: "Project review meetings should drive action and make things happen. We need to have cultures where senior people can ask more senior people for help and be confident that they will get it."





## CASE STUDY TWO

### Building programme management capability through behavioural coaching

#### Client needs:

Our client invested significantly in the upskilling and training of its project management function but they required support in managing effective governance and assurance reviews, in particular the evaluation of reported programme information. Our role was to support the development of this learning and apply targeted technical and behavioural coaching to the client's specific work requirements.

#### Benefits:

Our overall value was from providing an unbiased opinion on areas of best practice, areas of improvement and benchmarking against others to help our client meet their objectives.

- We mentored senior stakeholders through an Executive Performance Improvement programme to improve their ability to interrogate data, make deductions and direct actions based on our observations of technical and behavioural conduct.
- Executives were provided personal coaching in behavioural science to improve governance review meeting conduct, attendance and efficiency as well as to help identify and recommend practical interventions for resolution.





## Cultural behavioural leadership can support your organisation to:

- Understand what applied behavioural science is and the impact and consequences it can have on our own behaviour and the people around us
- Recognise the impact of the environment on behaviour and how you can modify the environment to increase the likelihood of desired behaviours occurring
- Discover the true power of positive and constructive feedback in a behavioural change process and how the insights can help shape transformation.

## Conclusion

Costain believes it is at the start of a growth story in behavioural consultancy with the possibility to unlock potential in people and the projects they lead. Gary: **“Our services are picking up on experiences and feedback we’ve had for a while. Clients are saying it’s about everything we do and the way we do it.”**

We’ve seen how behaviours can negatively impact project reviews and know that these issues can be effectively addressed through long term training of leaders and their teams. Often, leaders will revert to looking at technical solutions to problems because

that is where their comfort zone is. In fact the issue may have personality as its root cause and unlocking solutions has the potential to be transformational.

Gary: **“It would make everyone’s life better if major projects are not in the news for being late and it was routine that they were delivered well and ran smoothly. Tools are not the answer alone. It really is about getting the behavioural basics right from the start and investing in them through the whole project”** Claire agrees: **“Behaviours and culture are just as important as process.”**

Although not wholly integrated into project delivery, Costain is starting to see behavioural science successfully impact project reviews and the project family, as a central component of delivering great infrastructure.

Having leaders within your organisation who can run project, programme or portfolio reviews that live and breathe the desired behaviours aligned to your organisational culture will improve project review outcomes and ultimately deliver more efficiently and effectively.



Over the last 17 years Costain has been developing, refining and delivering cultural and behavioural leadership training internally and to clients. Beginning as a health and safety initiative, behaviour based safety and cultural behavioural safety, looked to increase the safety of frontline employees and those of management that may indirectly impact site or project safety. In December 2011, The Cambridge Center for Behavioral Studies formally accredited Costain making it the first company in the UK to have an independent Third Party Accredited Behavioural Safety Programme.

Since then, the remit of the programme has been extended to cover leadership behaviours and culture which includes executive coaching. Claire: **“Our own experience has led us to constantly develop our training and areas of influence. Not only do we apply the principles to ourselves but we work closely with our supply chain and our clients to have the right culture where open and honest conversations are had, feedback is constructive and a positive experience reinforces the way forward.”** The real test of the training has been how individuals apply it in their day to day roles. As Gary explains **“Once you identify the consequences that individuals deliver or receive during the project review process, you can also reshape the environment, designing interventions that lead to improved outcomes. With focus and attention**

**these behavioural shifts build, creating measurable improvements.”**

In any environment we want people to do the right things because they want to, not because they have to. In a project family, the leader is key to setting the desired behaviours and expectations so there is no room for ambiguity and interpretation. In the context of the chair or leader of a project review, these behaviours are even more important to drive collaboration, create an open and honest forum where asking for help is the norm, provide the opportunity to give and receive constructive feedback and acknowledge successes, however small, towards achievement of the end goal.

Think about your last project review meeting – can you say you observed desired behaviours? If you did, try and evaluate the prompt for that behaviour and the consequence in order to encourage more of that behaviour. There isn't an overnight fix but there is a path to incremental improvements that will deliver benefits to you, your people and the outcomes of your project reviews.







**Peter Mill**

*Discipline Lead for Portfolio, Programme and Project Management (P3M) consultancy*

[www.linkedin.com/in/pete-mill-costain-p3m/](http://www.linkedin.com/in/pete-mill-costain-p3m/)



**Claire Fryer**

*Director of behavioural management, practitioner of applied behavioural science and Executive coach*

[www.linkedin.com/in/clairefryer](http://www.linkedin.com/in/clairefryer)



**Gary Jackson**

*Programme director, Rail*  
[www.linkedin.com/in/garyjackson2/](http://www.linkedin.com/in/garyjackson2/)



**David Chard**

*P3M consultant and training and education lead for Earned Value Management*

[www.linkedin.com/in/davidchard/](http://www.linkedin.com/in/davidchard/)

For more information visit [www.costain.com/consultancyandadvisory](http://www.costain.com/consultancyandadvisory)

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References:

‘Review of Large Public procurement in the UK’ commissioned by HM Treasury (2002) [https://www.parliament.vic.gov.au/images/stories/committees/paec/2010-11\\_Budget\\_Estimates/Extra\\_bits/Mott\\_McDonald\\_Flyvberg\\_Blake\\_Dawson\\_Waldron\\_studies.pdf](https://www.parliament.vic.gov.au/images/stories/committees/paec/2010-11_Budget_Estimates/Extra_bits/Mott_McDonald_Flyvberg_Blake_Dawson_Waldron_studies.pdf)

The Green Book – HM Treasury (2018) [https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/685903/The\\_Green\\_Book.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/685903/The_Green_Book.pdf)

Green Book Supplementary Guidance: Optimism Bias – HM Treasury (2013) <https://www.gov.uk/government/publications/green-book-supplementary-guidance-optimism-bias>

‘Managing Troubled Projects’ – Gartner (2013) <http://www.baldrover.com/wp-content/uploads/CEB-Managing-Troubled-Projects-v1.pdf>

‘The construction productivity imperative’ – McKinsey (2017) <https://www.mckinsey.com/industries/capital-projects-and-infrastructure/our-insights/the-construction-productivity-imperative>

‘Fit-for-purpose project controls’ - TU Delft (2016) <https://repository.tudelft.nl/islandora/object/uuid:e9ba3992-a7e9-469c-a53c-425a8a171b60?collection=education>

‘Project leadership: skills, behaviours, knowledge and values’ - The Association for Project Management (2008)

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