



National Audit Office

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Measuring Success Through Collaborative Working Relationships

Summary

The NAO has undertaken research to examine how experienced practitioners have achieved significant improvements in the successful delivery of projects by developing collaborative relationships. We commissioned Soma Consultants Limited¹, who have a long track record in the oil, gas and construction industries, to examine how experienced practitioners within these industries have achieved project success through both development and subsequent measurement of collaborative working relationships.

Our research is intended to help share experience from other industries in order to demonstrate the benefits of collaborative working and suggest there are benefits in adopting this approach for the delivery of major defence projects by the MoD and its industry partners.

This paper provides background to the research and a summary overview of the evidence supporting our three key conclusions, that:

- Strong collaborative relationships go hand in hand with good project performance;
- Successful collaborative working tailors best practice to specific project circumstances;
- Measuring relationships can help underpin effective collaborative working.

Using the evidence collected by the study we have developed a web-based framework tool to assist project teams in finding their route towards a successful collaborative relationship. The tool is based on a four-step approach and is supported by continuous measurement.

- Step One – is about Familiarisation, using our as a basis to build the awareness and understanding of partners ways of working;
- Step Two – focuses on understanding critical issues and developing a Vision of how the project will be executed in all of the areas identified by the Framework;
- Step Three – is the definition and measurement of Key Performance Indicators focusing on the relationships and interactions between all involved;

- Step Four – is commitment to an Action Plan that will deliver the key performance indicators and embed relationship development in project plans.

The results of our work are available in two forms. The summary of our evidence collected and our conclusions are outlined in this report and are intended to help ensure all defence projects routinely adopt practice of developing behaviours and relationships. In order to make the framework tool accessible to the widest possible community we are publishing it, in addition to the evidence collected on our website www.naodefencevfm.org.

Users of the website can explore the evidence underpinning our recommendations in more detail in order to better understand the gold standard criteria we have developed from other studies.

¹ www.soma.co.uk

Background

1. For the last 20 years the annual Major Projects Report² has highlighted the variable performance of the Ministry of Defence's (MoD's) highest value defence equipment procurement projects, many of which have suffered cost overruns and delays.
2. Despite a number of sensible reforms, for example Smart Acquisition, sustained improvements in acquisition performance are proving so difficult to deliver. To help understand why we are undertaking a series of studies working with the MoD and its industry partners to understand how best to manage some of the key influences on successful project delivery³. Each report compares current defence performance to a theoretical "Gold Standard" developed from the best defence projects in the UK and overseas and from commercial comparators. All of the work undertaken to date has re-affirmed that where they are good UK defence projects compare favourably with any in the world. However, performance is variable and our recommendations are intended to help all defence projects routinely adopt practices closer to the Gold Standard.
3. The first two reports in the series examined Project Control⁴ and Contracting Practices⁵ have both emphasised the importance of cultural and relationship issues and of having a common understanding of motivations and aspirations. Allied to the strong application of more traditional project and programme management tools and strong leadership, collaborative working has a central part in play in achieving consistently better outcomes from defence projects for all stakeholders. Figure 1 summarises the relevant good practice aspects of the Gold Standard, whereas, Figure 2 provides the relevant recommendations from the two gold standard studies.

1 Extracts from the Gold Standard	
Project Control	
Good practice sub-criteria	Enablers
Open, trusting and honest relationships between client, prime contractor and supply chain	<p>Explicit "no surprises/no blame" culture (defined as not penalising staff for bringing potential problems to light early) between all parties.</p> <p>Regular and timely discussion of all matters that affect the project with no no-go areas.</p> <p>Mutual benefits through shared ownership of end product or outcome between all parties.</p> <p>Clarity of purpose and common understanding at all levels throughout all organisations.</p> <p>Agreements between the parties to undertake a project as a partnership or alliance.</p>
Measurement of client/contractor relationships	Regular independent assessments of client-contractor relationships as these develop during a project.
Supportive and open corporate environment	<p>Explicit no surprises/no blame culture (defined as not penalising staff for bringing potential problems to light early) on the project and within the wider project-organisation.</p> <p>Clear information requirements with clear purpose.</p> <p>Clear boundaries of authority and action.</p> <p>Clear link between corporate and project governance.</p>

² The Major Projects Report 2005, HC 595-1, 21 November 2005

³ All of our gold standard work, and much of the underlying evidence, is available at our website www.naodefencevfm.org

⁴ Driving the Successful Delivery of Major Defence Projects: Effective Project Control Is A Key Factor In Successful Projects, HC 30 Session 2005-2006, 20 May 2005.

⁵ Using the Contract To Maximise The Likelihood of Successful Project Outcomes, HC 1047 Session 2005-2006, 7th June 2006.

Contracting	
Good practice sub-criteria	Enablers
Negotiating from a common baseline	<p>Common analysis of risks and opportunities undertaken early on in the process by all parties and with subsequent reviews</p> <p>Ensure full and real time access to common information</p> <p>Understanding the aims, aspirations and driving factors behind other parties in the negotiation</p>
Link the contract to the agreement of desired behaviours in executing the project	<p>Negotiate the contract and principles underpinning the behaviours expected of all parties to the contract as part of a coherent package</p> <p>Establish formal or informal codes of behaviour</p>
Use the contract to incentivise the achievement of the full range of desired outcomes with intelligent use of contract terms to protect the contracting parties	<p>Include provisions in the contract to resolve disputes quickly and in a non-confrontational manner</p> <p>Applying contractual remedies on the basis of an assessment of their cost, effect and likelihood of being used in the specific circumstances of the project</p>

2 Relevant recommendations from the Gold Standard Reports
Project Control
That the Department and industry use project charters at the start of projects to establish common goals and behaviours.
That the Department and industry regularly measure and develop client-contractor relationships on individual projects.
Through their actions, the Department’s senior management continues to foster a corporate culture of transparency based on no surprises/no blame (defined as not penalising staff for bringing potential problems to light early).
Contracting
To inform understanding of the implications of the commercial approach and how changes will affect behaviours and likelihood of delivering the desired outcomes, routinely map and share the roles and responsibilities of all stakeholders
Encouraging the development of codes of behaviour, either formal or informal, as part of a coherent package with the contract to underpin the conduct of the project.
The Department and its suppliers should jointly and explicitly consider the balance of contractual terms to underpin behaviours likely to lead to successful project outcomes and to protect both parties in case of problems.

- An aspect which became apparent to us in undertaking the study was the language of collaboration; and that what people really mean by “culture”, “alliancing”, “partnering” and other relationship-based working terms varies widely. In many cases this misunderstanding has caused confusion and adversely affected the successful application of the principles. To offer two definitions to help understand our analysis:

“Culture” – The way problems are solved

“Collaborative Relationships” – Investing in the relationships and behaviours of organisations and people in the long and short term to deliver superior project performance.

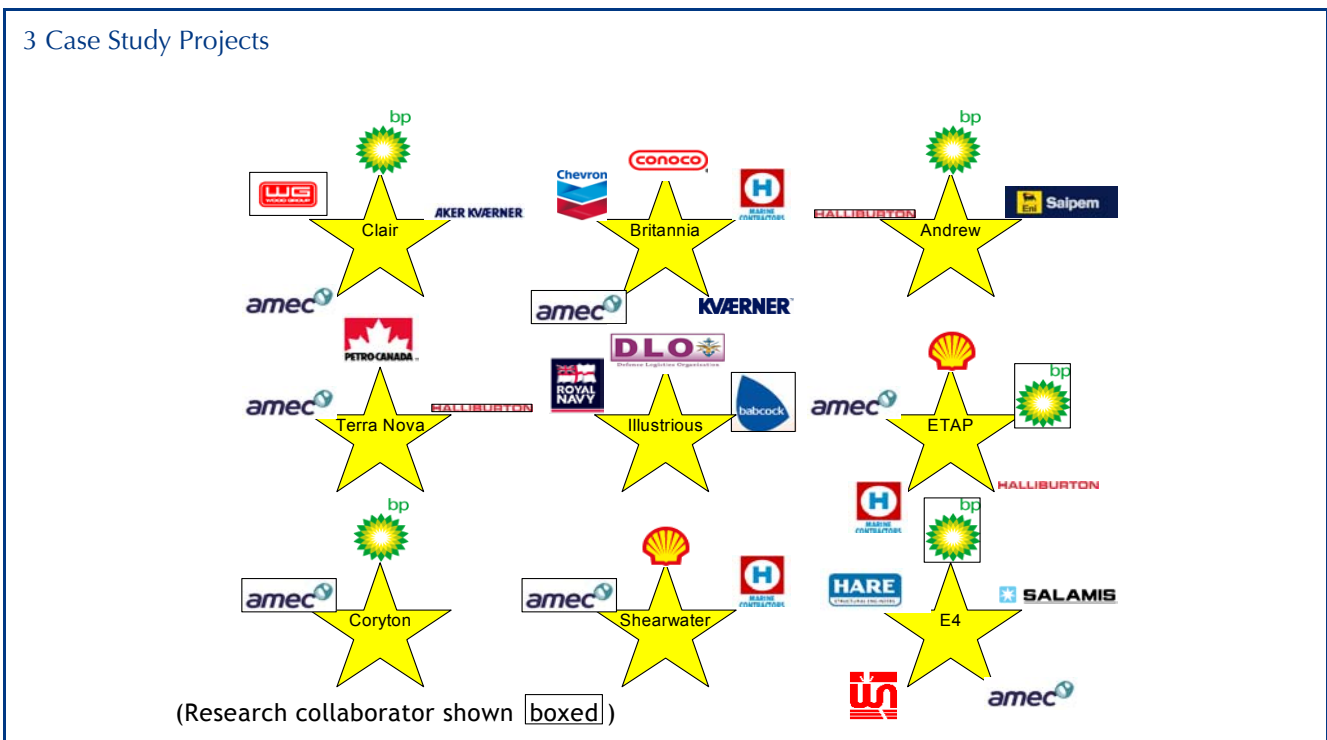
- The definitions are intentionally generic as successful project outcome will depend on the design of bespoke solutions which address the specific circumstances of individual projects.

Strong collaborative relationships go hand in hand with good project performance

The use of collaborative working is well established in sectors such as the oil, gas and construction; we are encouraged by its take-up on a number of defence projects. This section illustrates that collaborative working has a strong track record of increasing the predictability with which projects are delivered to meet the expectations of stakeholders.

Our review examined nine typical projects which use collaborative working principles

6. We examined nine projects involving respected companies such as AMEC, BP, Halliburton and Babcock all with a strong track record of collaborative working. The projects are summarised in Figure 3. Details of the projects are available at www.naodefencevm.org. The projects were selected on the basis that they provided a good spread of collaborative working activities; they were not selected specifically because they were successful. For each project we interviewed senior managers, with responsibility for project delivery, who had a clear insight into the activities undertaken to develop effective relationships and their impact on the project.



Virtually all of the collaborative projects out-performed most defence projects

7. Figure 4 summarises the outcomes of the nine projects we examined and compares these to the top twenty defence procurement projects as recorded in the Major Projects Report 2005⁶. Virtually all of the collaborative projects had out-performed most defence projects in terms of time and cost. Of course, this simple fact doesn't prove there is a causal link, but the project teams interviewed were in no doubt that their investment in collaborative relationships was worthwhile and were very clear about the hard benefits which investing in developing the right behaviours can bring in terms of profit and quality of delivery. The link is also supported by a survey of MoD and commercial projects conducted as part of our Project Control study which showed that whilst most projects use similar project management techniques, the key differentiator is the strength of the underpinning relationship.
8. Whilst a direct correlation between the investment of time and money in the quality of the relationship and the eventual impact on project results is hard to demonstrate; all of the senior managers we spoke to believed that improvements in the key performance indicators, such as cost savings, quality and safety, and early project completion, were attributable to investments in collaborative working and hence created the conditions for project success. For example:
- The Britannia gas field development, reduced costs by operating an open book system in the design process and challenging hard. – “all decisions were discussable”.
 - The level of cost savings was impressive on several projects – 40%, 33% and 18% are three examples. Cost savings also provided flexibility to spend in areas that would have been otherwise unaffordable.
 - Terra Nova, an oil production project within an austere environment, achieved a gain share of 1st year's oil production which was 25% higher than expected.

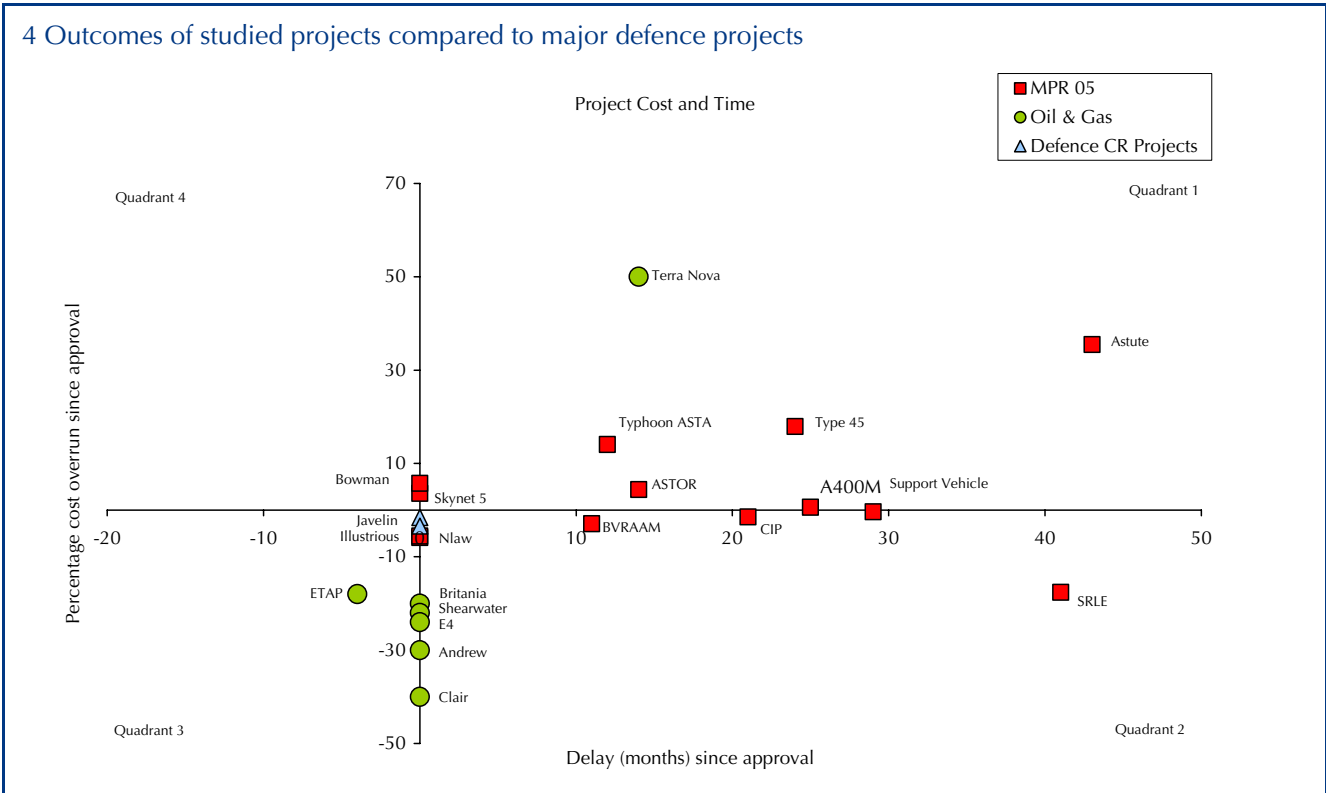
- Another key benefit listed by respondents was the enhancement to reputation through project performance that enabled successful bidding on subsequent projects.
9. In addition there were a number of specific improvements which interviewees attributed to improved relationships. These include increased levels of innovation, better industrial relations, a number of aspirations achieved at no extra cost and the amount of conflict dealt with locally rather than being referred up the management chain. As one senior manager at a global company summarised “We know it makes a difference. Why would you need to measure that difference, and if we weren't certain, why would we keep investing time and money to get the relationships working?”

Some defence projects are successfully using collaborative working methods

10. In 2005, Lord Drayson, Minister for Defence Procurement, launched the Defence Values “to provide a set of values and behaviours, to be applied across the acquisition community in both the public and private sectors.” Several of the values get to the heart of collaborative working: recognising and respecting the contribution made by industry; sharing objectives, risks and rewards while recognising that different drivers apply; valuing openness and transparency and sharing future plans and priorities wherever possible to encourage focused investment and avoid wasted effort. It is encouraging to note that some defence projects are already living the values and have applied collaborative working to good affect.
11. One of our nine sample projects was from defence. HMS Illustrious was a 30 month, £120 million refit. It delivered an extensive upgrade package within an ambitious timescale and came in under budget, enabling the savings to be re-invested in additional upgrades to the ship in the refit. In addition some of the savings were shared between partners with the MOD, for example, saving £1 million. The project was managed in a three way partnership between the MoD, Babcock BES and the ships' staff based on a charter setting out the partners' mission, conduct and objectives. The partners measured their relationship using a collaborative assessment tool facilitated by an independent third party.

⁶ The Major Projects Report 2005, HC 595-1, 21 November 2005

4 Outcomes of studied projects compared to major defence projects



12. Whilst it is probably the most widely recognised example of the application collaborative working practices in defence HMS Illustrious is by no means unique:

- The joint RAF - Rolls Royce ROCET (RB199 Operational Contract for Engine Transformation) project was established using a joint, open book, cost model enabling both sides to address affordability issues and to foster an increased overall awareness of project issues. The project goes further than a traditional gain-share relationship with maintenance and overhaul carried out by RAF personnel under the management of a Rolls-Royce team leader. The project is a success. Engine availability has improved and averaged virtually 100 percent over the first 6 months of the project. Closer working has meant that the overall numbers of engines requiring repair has reduced significantly and the resources required to support the engines at RAF Marham has reduced significantly.
- As part of the demonstration and manufacture down selection, carried out within the assessment phase of the LEAPP (Land Environment Air Picture Provision) project, a continuous assessment of the relationship between the department and each of the competing contractors was undertaken. The assessment included aspects such as

contractors' culture, internal teamwork and the relationship with the IPT during the Assessment Phase. The assessments measurement process utilised a traffic light approach to highlight the seriousness of any weaknesses observed by the IPT of the relationship with each contractor. This assessment gave the contractors periodic and structured feedback on their performance, which as well as giving them the opportunity to improve performance during the Assessment Phase, has provided the IPT with a robust record of the contracts' performances. Due to the nature of the programme, it is not possible to say whether the relationship assessment has resulted in programme cost savings or time reductions. However it has assisted the Department in making the down selection decision and identified the foundations for future relations with the contractors.

Successful collaborative working tailors common good practices to specific project circumstances

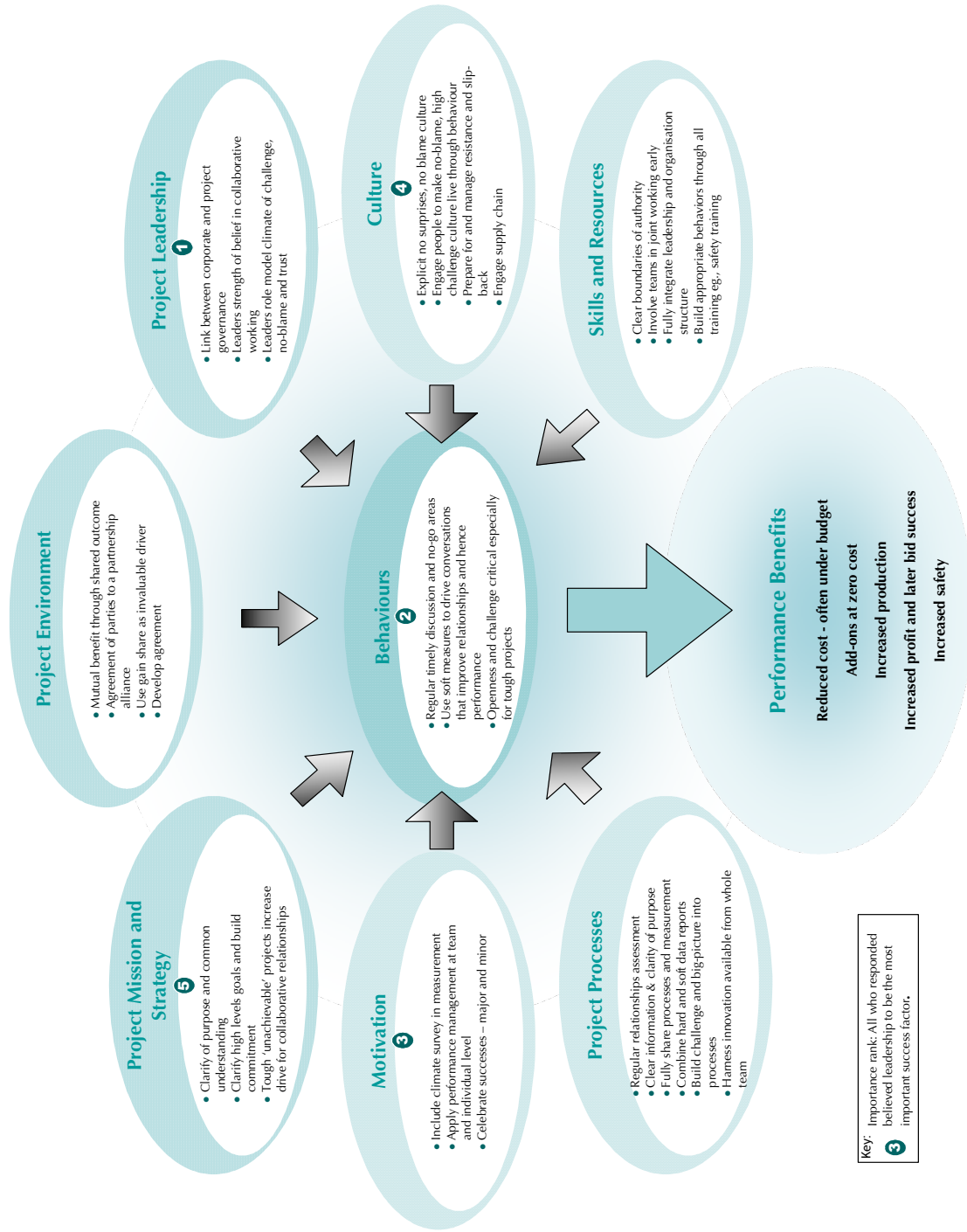
We analysed the data collected from each case study using a suite of Soma models developed over the past 20 years. This section sets out the best practice model derived from this analysis and explores two common messages emerging regarding the challenges of adopting collaborative working and the need for flexibility of thought and application.

There is consistency between projects and companies of what constitutes good practice

13. Our analysis shows that there is much consistency between projects and companies regarding good practice in collaborative working. Figure 4 sets out the good practice identified in a Collaborative Relationships Framework. As part of our interviews we asked project managers to rank the five most important elements of the framework. The following paragraphs explore each of these five elements. A more detailed explanation of all eight elements is given at www.naodefencevm.org.
14. Every case study ranked **leadership** as the most important factor in developing collaborative relationships. The research has showed that leaders can act, or fail to act, in areas that make an enormous difference to the success of the relationship and hence project performance. Leaders must have a firm belief in collaboration, as a way of doing better business and of making increased profit for their organisations in the long term, was expressed by all interviewed. Some leaders were ahead of their time in that their personal passion for this type of relationship, no matter the project, exceeded that of others in their organisation. Others were driven by a realisation that it was the only way to make the project they were leading profitable or feasible even.
15. All respondents pointed to the need for leaders to role model **behaviour** if other staff on the project were to take working in new more collaborative ways seriously. For example, if leaders talk about a no-blame, high challenge culture, they must behave accordingly; because people need encouragement to change behaviours in the face of well-established, adversarial ways of working. It was also deemed important that achieving the level of support from higher corporate levels above the project was strongly linked to achieving full alignment on both individual project and wider corporate goals.
16. Interviewees talked about how **behaviours**, what people at all levels said and did every day, were critical to project success. They invested heavily in getting people to behave in constructive collaborative ways including living up to defined behavioural standards. Regular and timely discussion of all matters that affect the project with no, no-go areas, was seen as a critical enabler to open, trusting and honest relationships; in addition to good listening skills, and the need to challenge openly and manage conflict.
17. **Motivation** and **culture** were closely linked. Concerning reward and recognition, the research pointed to problems in aligning reward systems from different parent companies as a blocker of successful relationship management. Conflict between corporate policy and systems meant that projects put more effort into other forms of recognition. Project managers most often used recognition, such as team celebrations of success, including the achievement of major milestones and small rewards to individuals for savings ideas. The difficulty of managing commitment and motivation of teams and individuals over the long term was seen as a potential issue on the projects with longer time scales. Performance Management systems were utilised by a number of projects, to maintain focus and commitment to the goals of the project.
18. Engaging those involved in the projects and developing a **culture** that supports a collaborative approach was identified as an important enabler in all the case studies. For many this included the participation of project teams to identify the characteristics of a successful project culture and the values and behaviour required to support it. Several of the case studies invested significantly in cultural alignment and common ways of working at the beginning of a project. They then found that resistance to new ways of working emerged later, often under pressure, prompting them to invest further to deal with emerging crises. The benefit of experienced external facilitators was also recognised.

19. The usefulness of a “no surprises” and a “no-blame” **culture** were reinforced by all interviewed. There is a strong link between this element of the framework model and both **project leadership** and **behaviours** because trust is primarily achieved through support and role modelling from leaders and especially through their own behaviour.
20. Respondents also indicated that involving the whole of the supply chain was important to spread the desired project **culture** fully. It also demonstrated, particularly in those projects that were deemed to be “unachievable,” that early integration supported innovation, decision-making, and the general collaborative approach.
21. The clarity of, and commitment to, high-level goals and a commonly understood project mission and strategy were seen as a key driver of project success as long as these goals are widely communicated and understood. It was recognised that commitment and clarity needs to include all stakeholders, those directly involved in the project and others, particularly those further up the corporate structure with a greater influence over the project success. This clarity of purpose and common understanding is critical to resolving difficulties that inevitably occurred in all the relationships.

5 Collaborative Relationships Best Practice Frame Work



Even the best organisations struggle to develop effective collaborative working despite the benefits being clear

22. All of the managers we talked to were clear that working hard to develop and manage relationships in high pressure situations is tougher than the traditional adversarial option. It is much easier to rely on a contract to deal with difficult issues than to face up to the fact that success means significant effort and taking risks with people whose actions you cannot control in order to get the best results for the project. It is not surprising that, although the delivery benefits are recognised, for many of the companies we approached collaboration is still not the cultural norm. In the projects we examined there was a common theme of having to overcome established traditional adversarial practices and culture to deliver success through new ways of working on a particular project.

Flexibility of thought and application are key

23. Our analysis shows that there is much consistency of what constitutes good practice, however, there was also a clear indication that different projects make different demands on the relationship. This points to the fact that successful collaborative relationships need flexibility of thought and application - no one size can fit all. As our earlier Gold Standard work highlights, projects are mostly likely to succeed if they are negotiated against a common information base and with an understanding of stakeholders' aspirations. Control must be shared rather than battled for and potential partners must understand the implications of alternative commercial approaches and how changes will affect behaviours.

24. Consistent with this view, interviewees emphasised that a common reason for the failure is that some relationships are built on unrealistic goals, aspirations and expectations. The framework highlights that the basis for a successful collaborative relationship is rooted in the mutual understanding of the benefits and material opportunities that exist. In short, the relationship must be underpinned by a shared understanding of the risks of not changing (colloquially 'feeling comfortable with the uncomfortable') and the benefits of working together.

25. Typical shared motivations quoted by interviewees are summarised below:

"Recognised that 'business as usual' would not deliver the required results"

"Could only be achieved collaboratively"

"Different approach needed to succeed"

"Drive for higher performance required a different approach"

"Recognised that there was a potential to earn higher margins"

"Drive to improve financial results"

"Client wanted improved quality and other stretch targets achieved"

"Needed to attract people to the project due to capability shortfalls"

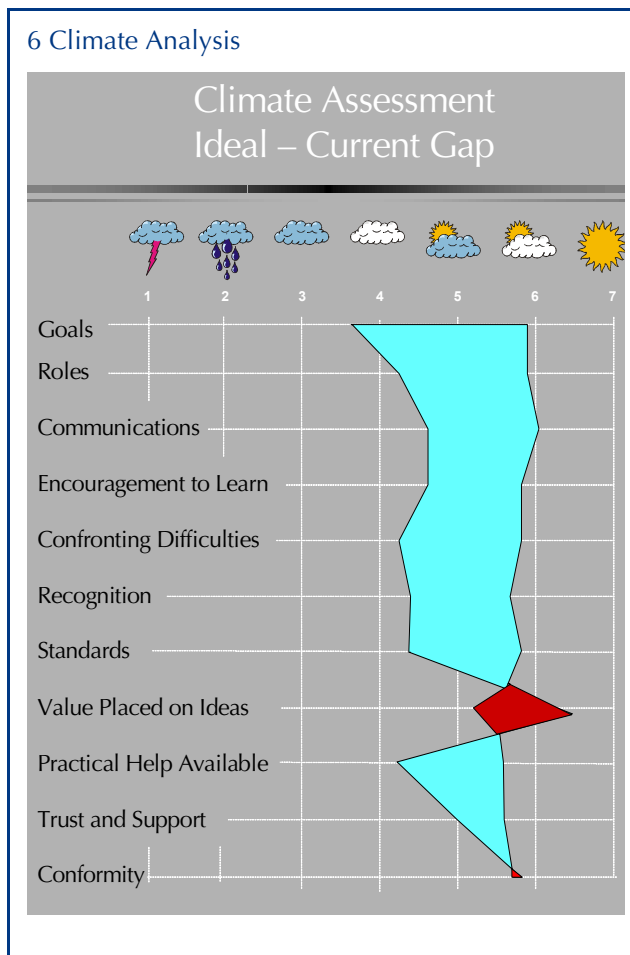
Measuring relationships can help underpin effective collaborative working

Five of the nine projects we examined measured relationship issue; they envisioned the benefits of building an open and trusting collaborative working relationship, can make doing business together easier and more productive. This section examines the approach taken.

26. Those projects that did measure their relationships used a variety of approaches, primarily focusing on finding out what people are experiencing in working together and what they felt the ideal relationship was. Aspects typically covered by relationship surveys included

- Goals** – What is the team trying to accomplish?
- Roles** – Who should be doing what to help the team reach its goals?
- Communications** – How open and free is the flow of information? Do people express ideas and opinions easily and openly? Can the team members express their feelings openly without fear that others will take offence?
- Learning** – To what extent people feel encouraged to have ideas, take risks, experiment and learn new ways of doing old tasks.
- Facing Difficulties** – Are uncomfortable or difficult issues worked through openly? Can the team members openly disagree with the team leader? Does the team devote much energy to working through difficulties thoroughly?
- Recognition** – How well rewarded are people for effort? Is recognition given for good work, or are people punished and blamed?
- Conformity** – To what extent are people are expected to conform to rules, norms, regulations, policies rather than think for themselves.
- Innovation** – How much are ideas, opinions and suggestions sought out, encouraged and valued?
- Practical Assistance** – The extent to which people help each other, lend a hand, offer skills, knowledge or support.
- Trust and support** – How friendly are people in the team? Do people support and trust one another?
- Standards** – What was the emphasis placed upon quality in all things; were people set challenging standards for themselves and each other.

27. Figure 6 shows how the outcome of the survey can be used in a “climate” gap-analysis to identify where the relationship is progressing well and where further investment is required. The gap between the ideal and currently achieved target is clearly visible blue “gap”, the red sections highlight areas where the targets are met or exceeded.



28. One valuable approach, used on the HMS Illustrious re-fit project, was to combine both technical and behavioural monitoring. This maintained the behavioural data at the forefront, as it was always visible alongside the traditional harder measures of project success. In order to reduce the resistance to the measurement of the more qualitative data, the Illustrious Refit project used a traffic light system rather than numerical measurements.

29. In every case, interviewees emphasised that the important learning came from how the surveys were used as a tool to build relationships, rather than focussing on the precise measurement of the results. Most projects felt the process worked best where there was independent facilitation.

30. The best practice process followed a simple pattern:

Measure – collect a little data regularly from the whole population concerned. This involves listening and talking to people widely and is better than collecting a lot of data from a few people.

Review – take time together with all stakeholders to understand the messages in the data – good and bad – and their impact on the relationship and the ultimate project aim.

Act – make a joint commitment to do things that will have the most impact on the health of the relationship and project aims and communicate what has and will be done.

31. Using the evidence collected by the study we have developed a web-based framework tool to assist project teams in finding their route towards a successful collaborative relationship. The tool is based on a four-step approach and is supported by continuous measurement.

- Step One – is about Familiarisation, using our as a basis to build the awareness and understanding of partners ways of working;
- Step Two – focuses on understanding critical issues and developing a Vision of how the project will be executed in all of the areas identified by the Framework;
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