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Integrated Project Teams:

The Way Forward for UK Defence Procurement

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This paper looks at a particular aspect of the Smart Procurement Initiative which was announced in the Strategic Defence Review, that of Integrated Project Teams. These teams aim to bring together all the relevant stakeholders from the Ministry of Defence, armed forces and industry. Much has been written on the perceived benefits these teams will bring to the procurement process in their management of a project from 'cradle to grave'. This paper examines the potential pitfalls that lay ahead and the factors the Ministry of Defence will have to take into account in order for them to succeed.

Project management; United Kingdom defence procurement; Smart Procurement

Introduction

"*We trained hard….but it seemed that every time we were beginning to form up into teams we would be reorganised, [and] I was to learn later in life that we tend to meet any new situation by reorganising: and what a wonderful method it can be*

for creating the illusion of progress while producing confusion, inefficiency and demoralisation."[1]

"*History knows many more armies ruined by want and disorder than by the efforts of their enemies*."[2]

With the end of the Cold War and collapse of the Warsaw Pact and Soviet Union, the monolithic threat to Western Europe disappeared and many governments took the opportunity to obtain a 'peace dividend'. This has meant the reduction of defence spending and the reallocation of those funds to other areas of public spending. However, the 'New World Order' has taken a direction, which is rather different from that forecast. Instead of the one major threat, there is now a multitude of smaller ones, which cannot be met with large conventional forces stationed in the Central Europe, but will have to be countered by smaller intervention forces capable of rapid deployment.

This reorientation, so far as the United Kingdom's Armed Forces were concerned, was announced in the Strategic Defence Review, in July 1998. It also recognised the need to do more with a smaller budget, given the rate of defence inflation (which is generally above normal economic inflation). Faced with criticism stretching back many years which accused the Ministry of Defence of having an over bureaucratic approach to procurement (Kincaid, 1997, 1998), failing to prevent high defence inflation and in-service date slippage, the Smart Procurement Initiative was announced as part of the Strategic Defence Review. It

[1] Petronius, Arbiter, Greek Navy, 210 BC.

is hoped that these "*radical changes … will deliver a forward looking organisation using up to date acquisition processes and procedures. The emphasis will be on flexibility … and continuous evaluation to avoid any danger of stagnation*." (Ministry of Defence, 1998, Supporting Essay 10, Paragraph 6) 'Faster, better, cheaper' (Ministry of Defence, 1998, Chapter 8, Paragraph 161) has become the new catch phrase for the supporters of change but for others, the change in mindset is a difficult proposition.

Smart Procurement involves a change from the previous Downey procurement cycle and a move to a more streamlined Acquisition cycle. The structure of this cycle aims to reduce risk by carrying out a more comprehensive assessment of projects at an earlier stage, while streamlining the approval process. (Jdir, 1998, p. 7) Formal approval has been reduced from three to two occasions, the first time is during the concept phase (Initial Gate) and between the assessment and demonstration phases (Main Gate).

Central to the implementation of Smart Procurement is the introduction of Integrated Project Teams, which are part of the drive to move from a functionally based management and reporting structure to a project based organisation. They will drive the management of major defence equipment procurement, balance the trade-offs between performance, cost and time, within boundaries set by the approving authority. These Teams will bring together all defence stakeholders and industry under a single team leader. They will be responsible for overseeing the complete lifecycle of the piece of equipment, and once in service, will move from

[2] Richelieu in Van Creveld, Martin. *Supplying War*, Cambridge University Press, 1995, p. 17.

what was the Procurement Executive, now the Defence Procurement Agency, to the Defence Logistics Organisation where they will manage equipment support.

Since the announcement of Smart Procurement much has been written on the potential benefits that Integrated Project Teams will hopefully bring. It is supposed that they will improve the interface with industry, create a better understanding of requirements and establish an environment where industry is motivated to perform (DPA; Galloway, 1998; The Financial Times, 1998) and so reduce cost, risk and time into service while improving product quality. The formation of a team should provide continuity, consistency, flexibility and increased performance due to the integration of a wide-range of functional activities and decision-making, as well as increased motivation. These may well be gallant objectives, but how achievable are they? What obstacles does the Ministry of Defence face in the implementation and running of these Teams?

A Not-So-New, New Idea

Integrated Project Teams have been described as the "*centrepiece of Smart Procurement*" (Nolan, 1998, p. 14) which itself has been described as a "*revolution and complete cultural change in MoD procurement*". (Cook, 1998, p. 37) Many of the initiatives in Smart Procurement may well be revolutionary, but the Teams themselves is not a new idea. The US Department of Defense adopted the concept in 1995 and introduced Integrated Product Teams, which consisted of "*everyone with a stake in the outcome or product of the team, including the customer and suppliers*". (US Department of Defense, 1996, p. 2) Also, the

Society of British Aerospace Companies states that such Teams have been an integral part of the aerospace industry for the past five years. They refer to them as "*cells of individuals, whose skills span the design, development, manufacture and through-life aspects of a platform or weapon system*" and maintain that such Teams are a key element wherever lean manufacturing is practised. (Cook, 1998, p. 37)

Similar thinking was expressed in the 1983 'Value for Money' paper, where the Government recognised the need for improved management practices and "*sharing the risks and costs, through international collaboration and/or joint ventures with industry*." (Pattie, 1983, Section II, p. 5) These ideas have been known variously as Integrated Procurement Management Teams, matrix resourcing or Multi Disciplinary Groups. (Ministry of Defence, Smart Procurement: The Integrated Project Team, p. 2) However, they were organised along functional lines, and according to McKinsey, characterised by an arms length relationship between the Ministry of Defence and contractors. This in turn inhibited the full exchange of information thereby preventing effective problem solving. (McKinsey & Co, 1998, p. 1) Integrated Project Teams could be viewed as another name in what is currently good management practice. The Challenger 2 project team for example, maintains almost daily contact with their opposite numbers in industry at Project Manager level. (Inglis, 1999) In terms of in-service support there are cases where Ministry of Defence and industry teams are closely integrated, one example being the joint Royal Navy and contractor project teams established at Devonport Dockyard to manage surface ship and submarine refits.

Industry: Competition, Participation and Partnership

Even after Smart Procurement, competition remains the Ministry of Defence's primary tool for achieving value for money in defence contracts. Industry participation in the Integrated Project Teams will vary according to where in the decision cycle the project is and according to the competitive situation of each phase. (Ministry of Defence, Smart Procurement: The Role of Industry, p. 2) Industry may be involved in one of two ways. Firstly, through the participation of selected individuals from potential prime or sub contractors and secondly through secondment of an individual who is not from a potential supplier to the project. In the second case, it would be possible for that individual to be appointed as team leader. (Ministry of Defence, Smart Procurement: The Role of Industry, p. 3) The introduction of Integrated Project Teams will make it harder to strike a balance between industry participation and competition, and this may well be difficult to achieve in practice, despite what the Smart Procurement documentation says.

Teams will form during the concept phase where it is quite likely that industry will be 'co-opted' on to a team, rather than being a full member. This is because several companies would be involved in providing solutions as part of the User Requirement Document process. (Ministry of Defence, Smart Procurement: The Role of Industry, p. 4) It is here that the first problem of competition is apparent. In order to produce an effective User Requirement Document, the Ministry of Defence requires industry to comment on aspects such as target costs, time scales and performance. Contractors will be loathe to pass on information that they feel will give a rival an advantage downstream. This will be even more apparent if

more than one company has been ‘co-opted’ into the project prior to the announcement of a prime contractor. At the same time, Smart Procurement concepts expect industry to be more willing to release data, than they have in the past. (Ministry of Defence, Smart Procurement: The Role of Industry, p. 4) Apart from stating that Team leaders will have to make arrangements to ensure that commercially sensitive information is protected from competitors, there is little advice on how this might be undertaken.

Once the competition has been launched by Invitation to Tender, the companies’ ‘co-opted’ membership of the Integrated Project Team will be temporarily suspended. Contributions made by contractors during the previous phase would however, be taken into account during the selection process. There is a fear that this process will not generate fair competition. The Ministry of Defence could be accused at first glance of using the ‘carrot’ of favouritism during selection as an incentive to contractors to share information during the User Requirement Document phase. Furthermore, there must be a question of fairness in respect of a contractor who joins at the Invitation to Tender phase without having been a ‘co-opted’ member.

Smart Procurement will see the introduction of a segmented approach to acquisition. There will be three tiers: low risk and unit cost items, minor projects of intermediate scale and technical risk, and major projects characterised by substantial risk and high unit cost. (Ministry of Defence, 1998, Supporting Essay 10, Paragraph 11) It is the latter tier (major projects) that has received most of the attention so far, and provided a number of the Integrated Project Team pilot

projects announced under Smart Procurement. Teams will be formed for Tier 2 projects as well, but will be capability based, and responsible for more than one project. As an example, the Land Systems section of the Defence Procurement Agency established a Dismounted Close Combat Team responsible for fifty-two projects. (Brown, 1999) In this sort of situation, it will be difficult to manage contractor participation whilst guaranteeing no party gains a competitive advantage. This view has been taken by the Defence Procurement Agency who suggest that multiple equipment Teams will work for Commercial-off-the-Shelf procurement but not developmental ones where developers are reluctant to pass on technological information. (Hudson, 1999)

Additionally, while there is no intention in the Strategic Defence Review to return to the cosy world of cost plus arrangements, post main production contract partnering seeks an environment where participants recognise common goals and work towards them creating a 'win-win' situation. This approach could invite accusations of mediocrity. The Defence Procurement Agency team members will be conscious of their responsibility for prudent management of the public purse, while industry members will feel a responsibility towards their shareholders. There is a danger that "*companies, confident that they will get work and support from their government, could lose interest in controlling costs and even quality*". (Taylor, 1998, p. 42) While there may well be a middle ground, human nature doesn't always naturally seek it, and when the necessity to cut costs is removed, inefficiencies may develop. In order to avoid this, both sides must remain convinced as to the benefits of partnership, and contracts must be structured so as to allow industry to benefit from efficiencies achieved. In the longer term,

partnering post contract must support the ongoing viability of both Integrated Project Teams and industry. The Teams need to support the equipment through its life, at acceptable cost, and industry must remain profitable to survive.

This is an area that must have further work. Industry must remain motivated so that it will enter a dialogue with the Ministry of Defence during the early stages of a project so that it can gauge requirements quickly and accurately. If this is not achieved, it is unlikely that equipment will be delivered on time, to specification or budget, and it will appear that the new procurement strategy is no better than the last.

Organisational Issues

There are a number of organisational issues that need to be addressed with regard to Integrated Project Teams. One of the major criticisms of previous efforts was the discontinuity and confusion arising out of the regular turnover of staff and the rotation of roles. (McKinsey & Co, 1998, p. 11) If the Ministry of Defence is not careful, Integrated Project Teams may repeat this mistake. Whilst Smart Procurement rightly acknowledges the need for the team leader to stay in post for four to five years, little attention is paid for the necessity for there to be continuity in the rest of the team as well. The McKinsey Consultency Report actually highlighted the need for the Operational Requirement or Capability Managers to stay in post for even longer (McKinsey & Co, 1998, p. 11), but no reference can be found as to the need to adjust military or civil service tour lengths.

The subject of the Ministry of Defence's 'ownership' of Integrated Project Teams is rife with confusion. The main purpose of an IPT is to manage the whole lifecycle of a product that will move from the Defence Procurement Agency to the Defence Logistics Organisation once the equipment is in service. The detail of the transfer process is yet to be resolved. Consequently, there is talk of running parallel project teams within the Defence Logistics Organisation. (Hudson, 1999) This is obviously contrary to the 'lean' intent of Smart Procurement. Additionally, it is unclear where the new Teams will sit in the new Ministry of Defence hierarchy. Smart Procurement sees the eventual creation of a central defence customer, the Capability Manager, whose relationship with Integrated Project Teams is seen as "*critical to achieving the full potential of Smart Procurement*." (Ministry of Defence, Smart Procurement: The Customer Supplier Relationship, p. 1) However, at this stage, it is unclear as to who will own the Teams in the future.

Integration of internal stakeholders is essential to the Teams success. Early signs have been that this may not always be possible. Operational Requirement branch is not capable of meeting its membership commitments, of the twenty-five IPTs within the Defence Procurement Agency Land Systems section, at the last count, only seven had Operational Requirement representation. (Hudson, 1999) To enhance stakeholder integration Team leaders are empowered to consider co-locating core members. (Ministry of Defence, Smart Procurement: The Integrated Project Team, p. 3) This however will be difficult as the three major internal stakeholders (Capability Manager, Defence Procurement Agency and Defence

Logistics Organisation) occupy three sites separated by between fifty and 120 miles.

Culture and Training – Converting the Dinosaur[3]

The creation of Integrated Project Teams will mean a coming together of people from different organisational and business cultures. Teams will have to overcome differences in public and private sector organisations where "*the former has a need to spend money legally, whereas in commerce it must be spent efficiently*." (Taylor, 1998, p. 41) A too closer relationship could see profit orientated companies exploiting the government by charging as much as possible. Industry tends to be less averse to risk than the Ministry of Defence and perceives that responsibility and authority are usually devolved to lower levels as well. Culture differences can be illustrated by the fact that some industrialists are yet to be convinced of the merits of Smart Procurement. For example, the chairman of the Society of British Aerospace Companies commented that "*our main worry is that Smart Procurement is full of good ideas, but will they ever be exercised?*" (Cook, 1999, p. 37) Industry and the Ministry of Defence operate different reward philosophies, which will be a barrier to cohesion. A good year for a civil servant or military officer means a favourable personnel report, for an industrial executive it is a decent bonus in a profit related pay scheme. (Taylor, 1998, p. 43) These differences will have to be carefully managed if team cohesion is not to suffer.

[3] In reference to the title of Bill Kincaid's book, *A Dinosaur in Whitehall*.

Integrated Project Teams will represent a shift from current procedures and it is inevitable that there will be some resistance to that change. According to the US Loral Federal Systems (who published ten lessons learned from operating Integrated Product Teams) resistance to implementation is a major obstacle to success. In their opinion, overcoming the resistance means people must "*understand the concepts, see the benefit to the project and understand the changes to their role*." (Popick & Shead, 1996) Strong leadership and change management are essential for these Teams to succeed.

It has been written "*no great improvements in the lot of mankind are possible until great change takes place in the fundamental constitution of their modes of thought*." (Mill, 1873, Chapter 7) The 1990s have seen substantial upheavals in the defence arena, and although Smart Procurement is not necessarily radical, it is being imposed on a traditionally conservative body. Commercially, value for money through the medium of competition has been the main driver for the Procurement Executive since the 1970s. Those involved have seen themselves in personal competition with both other Ministry of Defence employees and industry. This adversarial relationship was accentuated by the lack of accountability and delegated authority. (Kincaid, December 1997, p. 15) In short, for most Procurement Executive employees, there has been little incentive to achieve a closer relationship with Operational Requirements, the Defence Evaluation and Research Agency, or industry. Taken from an outside viewpoint, the rationale for reform is undeniable, but it is the people from each constituent body that will make the Teams work, and thus it is those people who must be convinced of the real benefit of change.

The answer is not an obvious one though, and a workforce does not tend to accept change lightly. Many civil servants who have been in their job a long time, are being asked to give up security for flexible employment, potential location changes and a more complex working environment. Integrated Project Teams are about co-ordination and empowerment, which could however be used as a reward. Potentially, those reluctant to change may be sidelined whilst the proactive are pushed forward to develop their careers. Fundamental to this process of change are education, leadership, the commitment of senior management, and a thoughtful personnel policy.

In this vein, it is encouraging to note the recognition that the skills needed in procurement can no longer be acquired by either osmosis or experience. The Integrated Project Team Pilot Guide and supporting information (Integrated Project Team Pilot Guide 4th Edition, 1999) outlines a series of core capabilities that are expected of Team leaders and their teams, and a comprehensive training programme in both technical and teaming / communication skills is intended. Additionally, innovative proposals for the establishment of Commercial External and Ministry of Defence Internal consultants will do much to set a solid foundation for an effective management structure.

To work effectively, the Defence Procurement Agency must attract and promote the highest quality personnel. Up until now, while a few civil servants have made a career from procurement, most senior managers have moved between the Procurement Executive, Ministry of Defence Headquarters and possibly the

Defence Evaluation and Research Agency. For the military, procurement specialisation is a rarity (compared with logistics). The introduction of an acquisition stream (Ministry of Defence, 1998, Supporting Essay 10, Paragraph 25) for both military and civilian personnel will bring a previously unseen professionalism to the process. Unfortunately, for the military, it is probable that acquisition will remain a second choice career path. What is true for the government is also true for industry. In the case of secondment to Integrated Project Teams, industry will probably provide their best people when they see it as in their best interest to do so. As regards the competition to lead teams, the situation is more complex. Recruitment from the commercial sector will be dependent not only on job satisfaction and long term benefits, but also on financial reward and flexible contracting not normally present for public employees. The Integrated Project Team Pilot Guide provides the capability to pay bonuses for exceptional performances but pitching them at a suitable level and paying realistic base salaries will be difficult issues.

Some Further Obstacles

'Faster, cheaper and better' has become the slogan for Smart Procurement, and for these Teams to succeed they must achieve this objective as a minimum. It is important to note that the Ministry of Defence does not itself see the Teams as a guarantee of success. They state that "*success will depend on the calibre of the team leader and their authority, both within the team and the quality of relations with industry and the customer*". (Ministry of Defence, Smart Procurement: The

Integrated Project Team, p. 1) In such an environment of uncertainty, how can Integrated Project Teams be expected to achieve the aim of Smart Procurement?

It can be argued that the ability of Integrated Project Teams to reduce costs in the short term is limited because so many projects are already up and running and well advanced. (Taylor, 1998, p. 46) Around twenty-five per cent of the projects covered by the 1997 National Audit Office Major Projects Report accounted for some fifty per cent of the annual procurement budget. The integration of current projects is an area that must be addressed. (Taylor, 1998, p. 46) A poor performance from an existing non-Integrated Project Team project that attracts criticism from the National Audit Office has the potential to undo all the good work of the Integrated Project Team pilot programmes.

Critics of Smart Procurement argue that the success of the Teams will be hindered by the lack of investment. These reforms have emerged in an era where the defence budget remains flat and unit costs of defence equipment maintain a rise of around 10 per cent a year. (Taylor, 1998, p. 41) To this must be added the probability that Integrated Project Teams will require a greater investment and rigour at the front end of the acquisition process in order to ensure capability specifications are met. (Smith, 1998, p. 38)

Conclusions

To conclude, following years of criticism, the MoD is attempting to modernise and update its procurement system. Central to these measures is the introduction

of Integrated Project Teams that bring together all the stakeholders into a single entity. In the course of this, much has been said about the potential benefits of the Teams but little about their limitations.

So, what factors does the Ministry of Defence have to consider, if Integrated project Teams are to fulfil their potential and deliver the benefits of Smart Procurement?

- Stakeholder Co-location – If one accepts that stakeholders should be housed together if Integrated Project Teams are to stand the best chance of success (Fleming, 1997), then it follows that Team leaders must have the ability to co-locate stakeholders. At the moment the main internal stakeholders are geographically separated and in the case of Operational Requirements branch cannot fulfil all their Team commitments. There is an urgent need for internal stakeholders to be brought together on one site. While some elements of Operational Requirements may join the Defence Procurement Agency at Abbey Wood, to improve the chances of the Teams succeeding and give industry a single point of contact throughout the whole lifecycle of the project, the Defence Logistics Organisation must join. If the site at Abbey Wood is unsuitable then an alternative site should be found. Eventually, both the Defence Procurement Agency and Defence Logistics Organisation could merge (along with their respective organisations) to create a Defence Support Agency (Materiel) or similar.

- Information Technology – If it is not possible to overcome geographic separation, Information Technology and Electronic Data Interchange must be exploited to the full to bring stakeholders together within a common electronic network. All parties, including industry, must have the ability to exchange information over an Internet, which must also have the ability to hold online conferences.

- Training and education – This is essential for all stakeholders so that cultural barriers can be broken down. The Smart Procurement documentation discussed the introduction of an Acquisition Stream with "*career paths and an endurable culture of change*". (Ministry of Defence, Smart Procurement: Personnel and Training, p. 1) For this to work, continuity must be provided to all posts, not just the team leader's, and the team leader must be able to adjust tour lengths at their discretion. Personnel must be thoroughly trained in Integrated Project Team practices. Smart Procurement proposes personnel attend modules at the time of appointment and at various stages of a project according to individual need. (Ministry of Defence, Smart Procurement: Personnel and Training, pp. 2 - 3) An Integrated Project Team training strategy is required urgently.

- Rewards – To offset the differences in Ministry of Defence and military remuneration, there is a need to introduce some form of reward scheme for civil servants and military officers. At the same time, incentives should be introduced to reward successful Team performance. Suggestions proposed

under Smart Procurement include performance-related bonuses and 'shares' in an Integrated Project Team terminal bonus.

- Industry Support – In order to ensure Team success, industry must be motivated to co-operate fully in the Integrated Project Team process. Without their full support, Integrated Project Teams will fail to improve the current procurement system. It is possible that this could be achieved through a combination of financial and non-financial methods. The former would include milestone payments and the offer of a completion bonus if the project were completed on or ahead of schedule, to budget and specification. Non-financial methods would be aimed at breaking down some of the cultural barriers and would include the involvement of industry in Team training and education. The US Department of Defense has found that these Teams work better when contractors have an established Integrated Project Team system. (US Department of Defense, 1996, p. 11) The existence of such an Integrated Project Team culture within a contractor should be included as a selection criterion.

- Independent Regulator – The appointment of an independent regulator would protect the Ministry of Defence from the risk of exploitation by single source suppliers. This idea has already been mooted, and the regulator would have the same role as OFTEL in regards public telecommunications and British Telecom. (Taylor, 1998, p. 42) A supervisory role during the concept phase of the Acquisition Cycle should be added as well as this would protect the Ministry of Defence from accusations of unfair competition when more than

one company is 'co-opted' into an Integrated Project Team. It may also give potential customers the confidence to share information, without fear of rivals gaining an advantage.

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