Value Co-creation in a UK Defence Availability Contract:
Opportunities from multiple client perspectives and diverse cultures

John Mills[a], Valerie Crute[b] & Glenn Parry[b]

[a]University of Cambridge, UK
[b]University of Bath, UK

ABSTRACT

The UK Ministry of Defence is increasingly opening the support of military systems to private companies. One example is ATTAC (Availability Transformation: Tornado Aircraft Contracts), a ten-year, whole-aircraft availability contract where BAE Systems take prime responsibility to provide Tornado bomber aircraft with depth support and upgrades, incentivized to achieve defined levels of available aircraft, spares and technical support at a target cost. This paper investigates client and provider value aspirations from multiple perspectives; identifies their status: covered by the contract, implicit in the contract, and outside the contract

In this environment the service provider manages combinations of their own and client staff at the client's base in facilities provided by the client. The provider is therefore dependent on actions by the client to fulfil the contract. The on-base location can be regarded as the front office for both client and provider where most client and provider value is co-created. However, off-base (back office) client and provider organizations are also required to support on-base activities. This study investigates the client value aspirations from multiple client constituencies in a large, industry provided, air defence availability contract and identifies their status: covered by the contract, implicit in the contract, and outside the contract. Client value aspirations documented in the contract were incomplete from the perspective of Royal Air Force end users resulting in an unexpected and ambiguous environment for front-line industrial providers. An environment where changes to plans were frequent and sudden, unexpected additions to the contract were the norm, and working outside the contract seemed essential to satisfy the on-base client. The study confirms previous advice for service providers to fully understand the value propositions of their clients and amplifies the importance of this advice when dealing with multi-faceted, public sector, organizations. It also suggests how needs outside contracts can be understood as additional services from both client and provider that, jointly recognized, may lead to improved mutual understanding, respect, and value co-creation.

INTRODUCTION

A clear trend toward increasing specialisation among firms (Mills et al, 2004) has inevitably been accompanied by the emergence of notions like "Extended Enterprise" (Dyer, 2000) - sets of firms that collaborate to produce a product, or "Virtual Organizations" (Ahuya & Corley, 1999) - a form of extended firm suited to the delivery of products and services that are competence-based. While firms have always been a part of multiple networks, their dependence on other network members and hence their inability to fully control their output, has grown alongside or as a consequence of the narrowing scope of their competences.. Thus calls for the need to take a wider "Enterprise" or "Network" perspective have grown.

Yet the concept of extended enterprises has moved beyond sharing operational information. For example, supply chain tiers are integrated through common objectives in order to facilitate *both* improved operational *and* strategic performance; knowledge sharing is emphasized to allow customers and suppliers to adapt readily to changing needs and circumstances (Coughlin et al, 2003). Similarly, the "Value chain" concept involves

organizations working together to co-produce value from a customer-centric perspective. As with supply chain management (SCM) (Croom et al. 2000), there appears to be ambiguity around value chain management (VCM) terms and practices (Rainbird, 2004). A common theme in the VCM literature is the concept that VCM is a co-ordinating management process in which a firm and its suppliers maximise customer satisfaction (Dumond, 2000; Svensson, 2003; Walters & Lancaster, 2000). Brandt (1998) identified that VCM focuses on the whole production process regardless of ownership; includes all customers at all levels within the value chain who insist on visibility and transparency. SCM precepts of vantage point and customer superiority therefore appear to contrast with VCM concepts of collaboration and transparency in much the same way as they did with Lean Supply (Lamming, 1996), and Extended Enterprise (Spekman and Davies, 2004).
There are major obstacles to taking a holistic enterprise perspective, as Spekman and Davies (2004) have pointed out, 'the mindset of many managers favours individual unit thinking over cross- functional and cross-firm thinking and performance measures which emphasize individual business success rather than supply chain success'. While researchers have advocated this view of the enterprise as an integrated whole regardless of organizational boundaries, there are few suggestions as to how a reconfigured/realigned enterprise working together to co-produce value might be co-ordinated; how their decision processes might work; where the locus of control might lie; or how strategy might be deployed. It is also unclear on the form that such *reconfigured relationships* or *realigned management activities* might take; how they would come about; how they would function; and the dynamics of their operation. Thus the path from company-centric to collaborative enterprise functioning is also yet to be described empirically or defined theoretically.

Logical first steps in taking an enterprise perspective are to define the boundaries of an enterprise, what is included and what is not? And then identify the interests and value propositions of the enterprise and its constituent organizations. Earlier research (Mills et al, 2009) developed a visualisation of a complex military support enterprise, a first step in developing a generic visualisation capable of improving understanding of the interfaces, leadership and managerial challenges in Business to Business or Business to Public sector support enterprises. The focus of this research paper is on client and provider value aspirations from this new military availability contract and the unexpected and ambiguous environment for front-line industrial providers arising from partial mis-matches between these aspirations. Within this environment, changes to plans were frequent and sudden, unexpected additions to the contract were the norm, and working outside the contract seemed essential to satisfy the on-base client.

The study confirms previous advice for service providers to fully understand the value propositions of their clients and amplifies the importance of this advice when dealing with multi-faceted, public/private sector, multi-organisational service enterprises. It also suggests how requirements outside contracts can be understood as additional services from both client and provider that, jointly recognized, may lead to improved mutual understanding, respect, and further value co-creation.

The paper is organized into 5 sections:

1. A brief literature review of research in the area of outsourcing complex services and the extra issues involved with outsourcing publicly funded services to industry.
2. A description of the research methodology used.
3. Background to the case
4. Case interview analysis leading to the identification of
    a. value aspirations covered by the contract, implicit in the contract, and outside the contract.
    b. behaviours resulting from mis-matches in the contract
5. A discussion of the questions raised and requirements for future research.

1. LITERATURE REVIEW

In this case study the services are highly customer specific, related to the particular requirements of the product in the customer's context. Mathieu (2001) deliberately used the term 'client' instead of customer to emphasize a major change in the relationship, 'client' implied a professional, expert service provider capable of providing confidential advice, attention, and support. The technical quality of the product might even become a hygiene factor in some contexts, for the client is looking for a 'solutions provider' (Galbraith, 2002; Davies, 2004; Davies et al, 2007; Windahl et al, 2004). The supplier charges a fixed price to provide specified services over a set period rather than charging for each service event (e.g., breakdown or upgrade). The supplier takes on the risk of equipment failure, establishing contracts that offer a set level of operational availability, often combined with a specified response time in the event of failure (Oliva & Kallenborg, 2003). The notion of *availability* enables the customer to evaluate the value or worth of the supplier's offer compared to their current internal and external costs of ownership. The profitability of an individual contract is largely dependent on the supplier's assessment of failure risk and the combined ability of supplier and customer to co-produce (Ramirez, 1999) improved returns from this new arrangement. The challenges to making this transition are wide in scope and time consuming to achieve for both main provider and client. In addition to responding to new sources of profit and cost (Markeset & Kumar, 2005) new capabilities are required in four domains (Windahl et al, 2004):

1. Technical & application
2. Partnering and networking
3. Systems integration
4. Market / business and consulting

Partnering skills between client and provider may be the most obvious capability development. However, researchers are increasingly realising that is a very limited view of the partnerships a solution provider must enter. Windahl & Lakemond (2006) emphasise the importance of partnerships within different departments in the solution provider, with the client and with other organizations necessary to produce the solution. Another difficulty is the need to share closely held design and/or financial data with partners and be honest about one another's performance (Foote et al, 2001). It is illuminating to view such service partnerships from the client's perspective. How can a customer, used to taking product from the solutions provider and developing their own critical services with embedded experts, staff and hardware, overcome that history and move to outsourcing? While such moves may make business sense there will be losers and a potentially difficult implementation process. To illustrate the nature of the solution provider - client relationship, Helander & Moller (2007) assert that the solution supplier's senior management and client peers must interact over the sensitive out-sourcing of key functions and co-development and management of solutions over the long term. In other words the strategic direction of each partner must be shared. It becomes very clear that the "co-creation" of value (Vargo & Lusch, 2006) requires 'co-management' by client and provider and that these capabilities may be central to contract success.

In a public sector context Jost et al's (2005) study of private consortia providing services that the UK public sector had provided illustrates factors that help build successful relationships within private sector consortia and with public sector clients. Figure 2 summarises Jost et al's (2005) findings from 35 in-depth interviews in two multi-billion pound contracts - with the Ministry of Defence and the National Health Service. Their findings show three activities at different levels of organization - individual (continuity); group (team-building); and organisation (reconciliation of objectives) - underpinned by the concept of trust (Vangen & Huxham, 2003). The study also drew attention to the

uncertainty in such contracts - all eventualities cannot be predicted at the outset and activities to reconcile objectives occur repeatedly in a cycle of negotiate, commit and execute (Smith Ring & Van de Ven, 1992 & 1994).

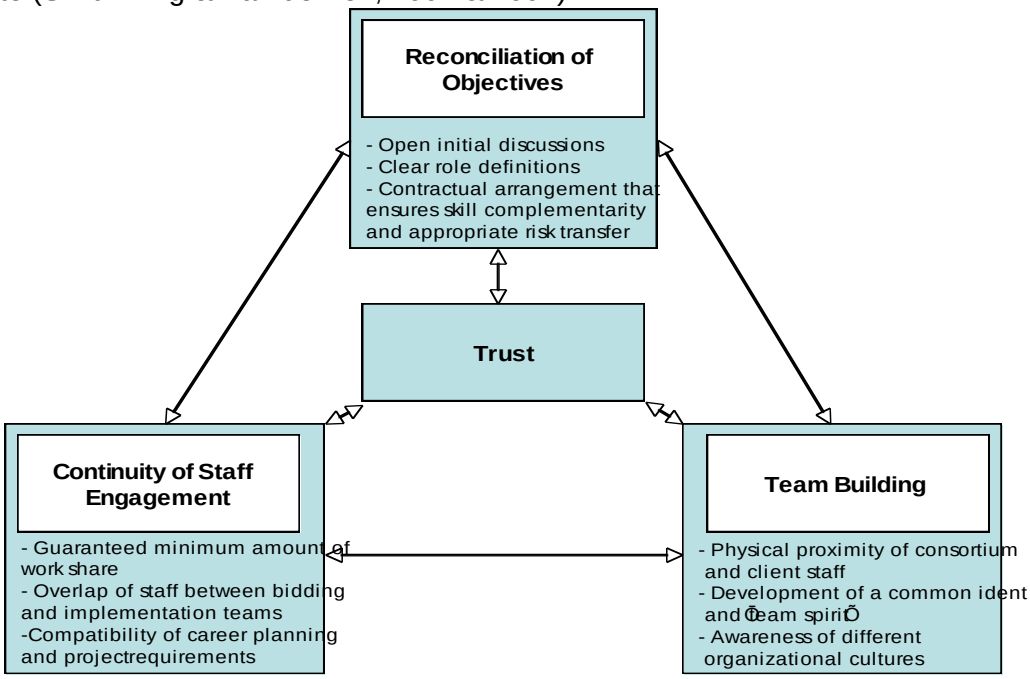

Figure 2: Drivers of successful consortium performance for a Public Sector Client. Taken from Jost et al, 2005, p.342

The diagram is largely self-explanatory though four points merit further illustration and this is perhaps best achieved using interviewee quotations:

Open initial discussions:

> "One of the really important things at the outset of any relationship between organisations like that is to say 'What are we working together for, why are we here?' […] And then to ask 'how do we reconcile that with our individual organisational objectives?' I think an organisation that can't reconcile its own sub-plot, its own objective, is going to struggle enormously" Jost et al,2005, p. 344

Guaranteed minimum amount of work-share:

> "You need some sort of guarantee that you get the kind of revenue you expected. Because when we don't get our revenues, we'll all get pretty upset, and the whole relationship starts to deteriorate and becomes very confrontational."
> Jost et al, 2005, p 344

Compatibility of career planning and project requirements:

> "It's all about how you make people want to stay, so people being promoted rapidly, people getting rewarded, interesting work, you know, these are all the reasons why people want to stay. […] The trick is to have some old trusty senior folk who are happy to run all the way through." Jost et al, 2005, p. 345

Awareness of different organisational cultures:

> "There often is a culture clash. There is the thing around 'Do I believe these people will deliver?', there is the thing around 'Why do we need these expensive consultants, why can't we do it ourselves?', there is the thing around 'Do I trust these people, do I like them?' There is a myriad of issues" Jost et al, 2005, p 346

While the co-creation of value remains central in these contracts the cultural differences between public sector and commercial constituencies may add another challenge.

2. RESEARCH METHODOLOGY

An in-depth case study of the ATTAC programme enabled researchers to examine and interpret phenomena in situ and to understand the meanings actors bring to such phenomena. Case study research is also useful when the aim of research is to answer 'how' and 'why' questions (Yin, 2003). This matches the wider aims of this research to gain an understanding of how and why such complex service provision contracts actually materialize in practice, as perceived by involved (and uninvolved) actors in the Provider and Client. Though our overall focus was on understanding the obstacles and enablers to effectively implementing the service provision contract our focus in this paper is on the service enterprise issues raised and how these might be better and more widely understood.

The particular case study was chosen for two main reasons - it was the first of its scale and complexity between the Provider and the Client. Though both parties intended to continue to let and bid for such contracts this first attempt was an opportunity for both parties to learn and this enabled the researchers to interview widely - 6 Client and 22 Provider interviews. These informants were classified into three groups - those involved in the design and implementation of the contract; those who supported implementation and those who viewed the contract from a distance. The interviews were conducted in 2008 and were semi-structured, face-to-face taking an average of 1.5 hours. Interviews enable researchers to uncover how informants perceive and interpret situations and events (Bryman, 2008). Themes covered were the scope of the contract; their role in implementation and the obstacles and enablers they met; their perceptions of issues in other areas of the implementation; and the management structures and processes used.

Key questions for this paper concerned the client motivations to involve industry in the provision of Tornado servicing and support and the motivations of industry to accept this opportunity. What value was expected to be generated for each stakeholder and had this materialised? These questions also provoked discussion from some client constituencies on what value had been put at risk by the contract; and from the provider on what value was at risk through unanticipated requirements and dependencies in the task.

All interviews were recorded and transcribed. The analysis followed the guidelines of content analysis, a method that "classifies textual material, reducing it to more relevant, manageable bits of data" (Weber 1990). The central idea in content analysis is that many units of texts with the same meaning are classified into much fewer content categories (Weber 1990). Categories can be either derived deductively or inductively, as this study was exploratory categories were inductively derived. Sentences were chosen to be the recording units because single words were not considered suitable to answer the research questions and coding whole paragraphs is associated with a loss of accuracy (Weber 1990). It is recommended that at least two independent coders should be used to enable the assessment of inter-rater-reliability, or the degree of agreement among coders (Weber 1990). In this case, three coders were used. Inter-coder reliability was developed using a pilot sample of independently coded discourse, and subsequent agreement on a coding scheme and rules. The coding scheme was validated through discussion with peers to enhance its quality. Due to the interrelatedness of issues identified in interviews, the categories were not mutually exclusive so that occasionally the same text passage could fall in two different categories at the same time. Anonymous results were presented back to managers to check validity.

The ethical guidelines outlined by Maylor and Blackmon (2005) were used in this research.

Thus research subjects were informed fully about the purpose, methods, and intended uses of the research. Moreover the confidentiality of the data was guaranteed by making the answers anonymous. In line with these standards the interviewees participation was voluntary, and free from coercion.

3. CASE BACKGROUND

The support contract is delivered through partnered on-base organizations at RAF Marham, supported by Client and Priovider off base organizations. In this paper the focus will be on on-base organizations of which there are three types (Mills et al, 2009), see Figure 1:

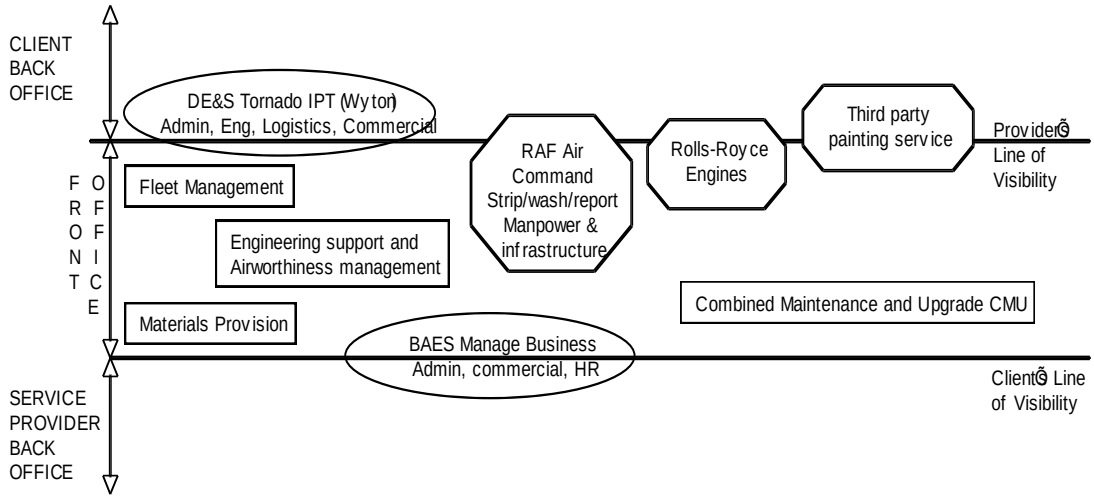

Figure 1: Enterprise Image (Mills et al, 2009) of on-base ATTAC organizations

3.1 Partnered Direct Service Delivery Organizations

These organizations are managed by the prime Service Provider(BAE Systems), located where the operational services are delivered and staffed by Provider and Client staff.
In ATTAC there are four such organizations:

- Combined Maintenance and Upgrade (CMU): covering most of the main hangar activities that carry out depth maintenance activities that result in aircraft with increased available flying hours.
- Fleet management: provide the planning activities that translate the Forward Squadron requirements for Tornadoes of particular configurations into the schedule of aircraft through CMU.
- Engineering Support and Airworthiness management: mainly located at RAF Marham, but represented at other RAF bases. This activity resolves technical queries and safety issues.
- Materials provision: covering spare part and repair requirements planning and expediting to supply CMU and Forward squadrons.

3.2 Independent Direct Service Delivery Organizations

Organizations that are not managed by or responsible to the prime Service Provider, but provide significant inputs to the support provision task of topping up the hours, they reside mainly where the operational services are delivered and are critical dependencies on the delivery of the service.
In this case there are three main Independent Organizations

- Rolls-Royce, who manage the repair and overhaul of Tornado engines via the RB199 Operational Contract for Engine Transformation, otherwise known as ROCET, a contract between Rolls-Royce and the MOD
- RAF Air Command, who retained management of several key areas of depth maintenance:
    - the strip and wash process and strip report carried out on receipt of aircraft into CMU, plus all work connected with ejector seats, weapons and pylons.
    - Air Command also provide and are responsible for the hangars themselves, the supply of all electric / hydraulic power etc. and Information Technology infrastructure.
    - Air Command also supply technicians, engineers and management personnel to the Partnered Direct Service Delivery Organizations
- A third party company provides a painting service, one of the later, inline processes in the delivery of maintained aircraft and therefore a significant dependency.

3.3 Specific Contract Focussed Organizations
Organizations that are managed by the Prime Service provider or the Client and are focussed solely on the focal contract. They may be located with the operational service provision, remotely, or spread between them.
In this case there are two Contract Focussed Organizations

- The “Manage Business” organization is controlled by BAE Systems and operates on-base. It covers the commercial, administrative, and Human Resource needs of the contract and operates as a front office, handling new contractual requirements, the acquisition of skilled industrial staff and technicians.
- The Tornado IPT (Integrated Project Team) is controlled by the MOD via DE & S and contains a staff covering administration, engineering, logistics, and commercial support of ATTAC. It is located at RAF Wyton - at the time the contract was signed the wide expectation was that much of this organization would move to RAF Marham.

Table 1 summarizes the operational services within the contract and those enabling services implicit in the contract. Here we deliberately take a “Service Dominant Logic” perspective (Vargo & Lusch, 2006) by expressing the contract as a set of services.

Contracted Operational Services	**Lead Organisation**
Depth maintenance service (CMU)	BAE Systems
Fleet management service	BAE Systems
Engineering support and Airworthiness management service	BAE Systems
Materials provision service to CMU and Forward Squadrons	BAE Systems
Enabling Services Implicit in the Contract	
A service providing trained Industrial technicians and engineers to the partnered Direct Service Delivery Organizations	BAE Systems
A cost reduction service	BAE Systems
A service providing trained RAF technicians and engineers to the partnered Direct Service Delivery Organizations	Air Command
A service to support and develop the hangar infrastructure	Air Command
A service providing the strip, wash, ejector seat and weapons aspects of depth maintenance	Air Command
A service to assist the integration of contracts outside ATTAC e.g. Engines and Painting	Air Command
A commercial / administration service providing open book data, quotations etc.	BAE Systems

Table 1: Summary of Contracted Operational Services and Implicit Services

4.0 CASE ANALYSIS

The analysis will examine the ATTAC case in terms of value motivations for each of the key stakeholders as reported within relevant documents and case study interviews. The research findings will be presented in three sections:

1. Service provider's strategic motivation.
2. Client motivations and requirements from the outsourcing, this includes Treasury and Ministry of Defence (MOD), Defence Equipment and Support (DE & S), and Air Command perspectives.
3. Un-contracted client requirements, their effects and the opportunities they present.

4.1 Provider motivations and requirements

The motivation for entering this contract was based on two major factors, first the Joint Strike Fighter contract, funded predominantly by the USA and UK appeared to be the last manned defence platform that would be developed for a considerable time. Defence air programmes were now much more likely to involve Unmanned Aerial Vehicles (UAVs). Second, the UK government (DIS, 2005) move toward partnering on support provided alternative income for Defence OEMs that could help maintain the capabilities necessary for upgrading manned aircraft.

BAE Systems are expected to continue support for Tornado, Harrier and the Eurofighter (Typhoon) and, since opportunities for OEMs and others to partner with governments in Defence support are increasing rapidly in the UK, USA and elsewhere, the support business will be an important new market.

This motivation was widely recognised by service provider and client respondents:

> "… if we can come up with a better procedure for deliverying the contract, then we will create additional value which will be reflected then through the commercial model - initially increased profits for BAE Systems and ultimately in gain share"
>
> DE&S

There were, however, tensions due to different values and a lack of trust in commercial values that were in evidence at the early stages of the contract implementation:

> "…even though we're joint partnered, they (industry providers) still see it as a game that they have to go out and win" DE&S
>
> .
>
> "… the big fears of giving a contract like this to industry partners is that they'll bid for it and then 5 years later, once they've produced a monopoly, they'll then rack the price up"
>
> DE&S

There was evidence, however, that such concerns reduced with experience of contract delivery. Significantly, on-base provider respondents did not tend to discuss their commercial motivations, focussing instead on the client's motivations and how the service provider might support the achievement of these objectives. This may have been due to an awareness of potentially conflicting values or may have been evidence of reconciling objectives through adopting the client's objectives.

4.2 Client motivations and requirements

The Defence Industrial Strategy White Paper (2005) set out MOD / UK government perspective on partnering with industry. It was widely accepted by all interviewees that the principal motivation for outsourcing Tornado support (and subsequently support of other

Defence assets) was to reduce cost per flying hour. The ATTAC contract offered savings of £510 million over 10 years. These savings arose from reductions in RAF and civilian related personnel and the improvements a commercial organisation would bring to the task.

From the DE&S perspective, the organisation previously tasked with Tornado support, their task became one of negotiating the contract and helping to implement it:

> "…we had to reduce the price per flying hour by 50% between 2002 and 2008 which, broadly speaking we've achieved" DE&S

Further reductions were also expected from a gain/share agreement within the contract - with an open book partnership, savings made in excess of target would be shared between Client and Provider. Particular areas were seen as ripe for cost reduction.

> "… the MoD traditionally put little horse-power or intellect into managing the supply chain. If we have a supply chain problem it gets left to some low level person to fix it. To me that was the potential jewel in the crown of ATTAC, to be able to improve the supply of spares… and reduce cost..." DE&S

There was thus a strong requirement that cost reduction would be ongoing.
However, reducing costs and RAF numbers, could not be achieved without other effects, firstly the reduction was felt to limit the flexibility of an organization whose purpose called for very fast response.

> "…there is a baby that we have thrown out with the bathwater here, and while that old organisation might not have been perfect it was almost infinitely flexible and it had the ability to cope with surges, and unexpected events…" DE&S

There is a strong requirement that the provider will be as flexible as possible. The importance of this aspect should not be under-estimated for the level of flexibility potentially required by a military defence client is difficult, if not impossible, to cover in a contract. However, this requirement was fully recognised by the on-base industrial providers:

> "One of the things they worry about in these long-term contracts is that they would lose that flexibility. Retaining flexibility is hugely important." On-base provider

> "… You've just got to stay really flexible. And don't fight it! They will change their mind. Or politicians will change their mind and they've got to go on operations somewhere else. So even carefully made plans suddenly fly out the window..." On-base provider

The manpower reduction had further consequences - potentially reducing the RAF's engineering knowledge and capability and implying changes in career structures:

> "…It is difficult to see what an engineering career in the air-force will be like now. Okay you're young when you come in, you will be excited, spend all your time on ops. But as you grow up and get a family then you are no longer on station posts, and the posts in Integrated Project Teams have been taken out so where you can use your knowledge and get a better understanding of the system?.." DE&S

> "We also need to grow the skills sets from the point of view of the officers and the future Integrated Project Team Leaders - the people who are going to be in X's shoes in 20 years time." DE&S

Having fewer graduate engineers implied a change in career pattern to maintain the required balance of scope and depth of knowledge and skills. Some on base provider staff could see future problems if their customer became less knowledgeable.

> "we've got twenty three intelligent RAF engineers sat there with nothing to do most of the

time, what are they going to do. They are going to think of difficult questions for me to answer, so I'd rather they were actually part of the team and contributing to the output, maintaining their currency, maintaining their intelligent customer status."
On base Provider

"I've also got experience of dealing with a not so intelligent customer, the X Air Force, it's a nightmare. If you've a customer that doesn't know what you are talking about, and he's very suspicious that you are trying to fleece him then you are always up against it, it's very difficult. So I am really keen to have an intelligent customer and in order to remain intelligent they will need to remain current with their knowledge." On base Provider

The Air Command perspective was not covered in depth in our interviews however two potential losses in value from the new arrangements needed to be guarded against. The first concerned the skills of the technicians and whether they would be as well trained as before in a hangar managed by an Industrial provider:

"Skills developed in depth give RAF technicians an understanding of the aircraft that can be used in the front line, if we just end up being an Air Force of box changers we shall suffer." Air Command

Thus having fewer service technicians implied an adaptation of training procedures to maintain net skill levels.

The second potential danger was a cultural factor:

"Okay you've been working really hard on operations being shot at here's your time for three/four years in depth just to you know see your family for a change. We need to give our guys a respite from going out and forward." Air Command

" … we don't want people coming from the forward squadron environment proud of what they are doing and then get the feeling that the Air Force is abandoning them for a few years in a civilian organisation" Air Command

"You need at least 50% military in there (the hangars) otherwise it's not a military organization. It's a civilian organization a few military people in it" Air Command

In the next section we summarize these additional factors as a set of un-contracted client requirements for further services.

4.3 Un-contracted Client requirements

As in many other outsourcing decisions reductions in cost for the Client and the prospect of profit for the Provider lie at the heart of the decision. A cost focus on the Client's part invariably leads to losses in value - increased dependence on the Provider, a potentially slower response to emergencies, and effects on careers in the Client organization. In table 2, potential new service requirements are set out and expanded upon.

Un-contracted Services	**Lead Organization**
A highly responsive service on all operational services	BAE Systems
A Forward data provision service on arisings	Air Command
A skills maintenance and development service for RAF technicians	BAE Systems
A skills maintenance and development service for RAF graduate engineers	BAE Systems
A respite provision service that maintains the RAF ethos	BAE Systems

Table 2: Un-contracted Client Service Requirements

Responsiveness: On-base provider personnel are well aware of the Client's requirement for fast response, indeed it is not advisable to refer to the contract when a new requirement arises. This need to be highly responsive does create some challenges for the service provider.

> "…very, very rare that we would say 'No', very, very rare indeed. It might be 'Yes, we'll do it. Oh and by the way much later…" On-base provider

> "…Personal relationships with the IPT are important, and it works both ways. An awful lot relies on our trust, to keep the pace up and then getting the accounting to catch up…" On-base provider

> "… we are effectively relying on the minutes of meetings as our authorization to do work because we haven't got a contract and the work is finished and the aircraft are flying…If we'd had to we could have demonstrated that the customer wished us to do it and they had asked us to do it…But not a brilliant place to be. …" On-base provider

Cost reduction: A cost reduction service led by the Provider is an implicit service, given specified expected contract cost reductions. However, cost reduction implies change and all stakeholders need to agree on changes as well as contribute to cost reduction. While more effective management of the supply chain is one major area of opportunity another is the faults that arise in the forward squadrons that are corrected without provider input. Good data on these arisings can be difficult to obtain and the Provider could justly ask that Air Command provide a Forward data provision service.

Skills maintenance: With lower numbers of RAF engineers and fewer opportunities for advancement, the maintenance of past levels of RAF capability will need active engagement from industrial partners in planning actual movements into the roles necessary to equip engineers for more senior roles. No longer does the RAF have full control over each role, in fact the two services in Table 1 that provide manpower from Provider and Client into the Partnered Direct Service organizations will need to be strongly linked. This issue, a problem for the RAF and an opportunity for the Provider is not unanimously appreciated. It may be regarded as a chore rather than a critical piece of value add for the client.

> "By the time we've trained them up they're thinking of the next posting" On-base provider

The point here may concern how quickly engineers are trained - it may be that training methods need to deliver more swiftly offering the Provider a useful engineer earlier and the Client the ability to maintain more capability than otherwise.

Respite: Finally the Provider is implicitly required to provide a respite service that maintains an RAF ethos. There is already a sensitivity to this on-base among BAE Systems managers in terms of what can't be done with the RAF technicians but, articulated directly as here, it could provide a trigger for ideas to further improve mutual understanding and respect in Provider-Client relationships.

5.0 CRITIQUE, DISCUSSION AND FURTHER RESEARCH

The ATTAC case study has demonstrated the challenges of identifying and reconciling multiple perspectives in complex service enterprises. A series of stakeholder motivations and requirements have been identified of which some are being met through the service contract while others are currently not met, or contracted for, in a systematic way. The case study findings strongly support Jost et al's (2005) findings on the importance of reconciling

partner objectives. They assert that there needs to be open initial discussions and clear role definitions. In this case study, there was evidence to suggest that the nature of partner motivations, requirements and therefore objectives is complex, interdependent and evolving. Partners in the ATTAC contract had diverse initial objectives and these objectives were openly recognised. The extent to which objectives were reconciled was less clear, and there was some evidence to suggest that some objectives were conflicting. For example, the Providers had become reconciled to the Client's need for flexibility and fast response. While further research is necessary to confirm Client perspectives, there was evidence that there was less acceptance of the Provider's commercial requirements.

Furthermore, the case study has also drawn attention to secondary needs and unintended consequences that influence partner objectives and lead to evolving requirements. It would seem that there is a need for continual discussion and review of objectives to ensure that evolving partner objectives are met. Whilst there may always be some focus on what Clients lose when outsourcing these issues provide significant opportunities for expanding service provision through co-creation or at least openly recognising Client needs in a way that can underpin mutual respect and understanding. It is interesting to note that the services in the case identified lying outside the contract are what Mathieu (2001) would call services for the 'Client'. While those covered by the contract are services aimed at the 'Product' - the operational support of Tornado aircraft.

It is clear that the contract was created around a proposition for cost reduction - not value creation and this may inevitably bias the nature of the partnership and slow the development of trust. However there is evidence that trust and mutual respect and understanding are developing in this contract, especially on base.

Practically further research will focus on means of identifying implicit and un-contracted services and their value to Stakeholders for it is clear that an explicit view of Client, Provider and Product services are required to reconcile initial and evolving stakeholder objectives and support an environment for value co-creation. Longitudinal analysis will examine the extent to which the ATTAC contract partners demonstrate 'continuity of staff engagement' and 'teambuilding' (Jost et al, 2005) and the organizational and managerial solutions they develop to achieve improvements in ATTAC performance.

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