# Developing a Flexible Royal Air Force for an Age of Uncertainty

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In the era of contingent operations, the range of threats that UK Defence may be called on to address far exceeds the financial resources the country can afford to provide. The challenge for the future, therefore, is to ensure that the Armed Forces adapt to the circumstances they face. Moreover, the perception of a lack of will for prolonged interventions means that the Services will need to identify and adapt quickly so that they maximise the capabilities that are available. This paper argues that flexibility will become essential to operational success. Adapting to a strategy of flexibility requires changes across a range of domains, covering: structures and governance; processes; people and; rewards. As the first of a two part series, this paper focuses on the options that may be available to the Royal Air Force in relation to its structure and processes. It proposes an adaptable design model that builds on the Whole Force Approach but with more diversity and differentiation of the various component parts of the structure. The second, companion, part will consider the people and reward issues that are needed to complete the picture of coherent organisational change. Together the papers seek to excite debate about how the RAF could change to become more flexible and thus better suited to the dynamic and unpredictable world it faces.

## Introduction

The National Security Strategy places UK strategy in 'an age of uncertainty'.[1] With the end of combat operations in Iraq and Afghanistan the UK is no longer committed to a known conflict ('The War') and has to be ready to face a range of possible scenarios whose character is as yet unknown ('A War'). However, the UK can neither afford the luxury of second guessing the future and reconfiguring wholescale for a conflict that may not happen, nor develop forces with the disparate capabilities needed for the full range of potential scenarios in the numbers that may be needed. Whilst we can speculate that the future might be characterised by increasing competition amongst a broader range of adversaries using novel approaches that exploit their relative advantages, the equipment and people with which the UK faces that future are likely to be those developed for the challenges of the past. The equipment may no longer provide a quantitative or qualitative edge over potential adversaries,[2] and the UK's continuing financial challenges mean that the 2015 Defence Review is unlikely to reverse this relative decline. Consequently, whatever the future holds, the UK Armed Services will have to 'muddle through', doing their best with whatever they have got at the time they are next called on to act in support of UK national interests.[3]

The Royal Air Force has always been able to adapt, typically the result of technological innovation, but this has not always happened quickly and, given the current political and public reluctance to become engaged in protracted operations, the Service will probably have little time in which to adapt to the demands of specific operations. Greater flexibility will be increasingly important if the Royal Air Force is to succeed in future conflicts. For the purposes of this paper, flexibility is defined as '*the ability to change readily to meet new circumstances; it comprises agility, responsiveness, resilience, acuity and adaptability*'.[4] In the past, flexibility came from a balanced force, but this can no longer be assumed: Future Force 2020 reduces mass and takes risks with a number of capabilities that impact on areas essential for flexibility; the increased reliance on multi-role systems, that by implication are not optimised for any specific role, and reduced levels of systems and personnel redundancy.[5] However, whilst this lack of mass undoubtedly erodes physical resilience, the Royal Air Force's smaller size may help enhance its organisational flexibility; commercial experience shows that smaller organisations can be more agile than larger ones.

This paper is the first part of two think-pieces that considers how the Royal Air Force could organise to place flexibility at the heart of its strategy. Together, they seek to prompt debate about the choices the Royal Air Force should confront about how it is organised and peopled. Building on Galbraith's 'Star Model' for aligning organisations with their strategy, and Mintzberg's analysis of an organisation's component parts, the papers argue that flexibility is needed in the Royal Air Force's structure, processes and people. They identify a need to move from the current, rather mechanistic, structures to a more organic approach that can adapt to the changing demands of the environment. Fundamentally, therefore, these think-pieces seek to be provocative and stimulate a debate about what the organization is, and what it

should become. They do not claim to have answers to the challenges the Royal Air Force faces. However, they share a view that a creative tension between structure and environment is essential to stimulating thinking about change and is best achieved through workforce diversity, individually through different backgrounds and ways of making sense of the world, and collectively through cross-functional teams and partnerships that bring individual differences into contact with each other, generating new insights into old and emerging challenges.

This paper focuses on the need for diversity at the structural and process level, proposing an 'Adaptive Design Model' (ADM) comprising a reduced core of Regular personnel around which more capability (mass and specific skills) would be held in an expanded group of partners, including Reserves, contractors, academics, civilian experts etc. In many respects, it represents an evolution of the Whole Force Approach, but in a more organic form that provides for greater differentiation within the various components comprising the Core and Periphery; moreover, the ADM itself needs to remain adaptive to the changing circumstances in which it operates. The changes advocated in the people and reward domains are addressed in a companion paper, largely because they are concerned with nuanced change to the current Regular employment model rather than fundamental matters of substance.[6]

## Organising the Royal Air Force Around a Strategy of Flexibility

Organisations are complex social models and, like the people who comprise them, can be motivated as much by self-preservation as by a rational assessment of their circumstances: an anonymous senior US Army officer is alleged to have stated during the Vietnam War, 'I'll be damned if I permit the US Army, its institutions, its doctrine and its traditions, to be destroyed just to win this lousy war'.[7] Change in the external environment, therefore, may not be enough to ensure that organisations adapt; internally, enough of the organisation needs to be convinced that the proposed change is worth the costs.[8] This requires effective internal communication, not just to explain the new strategy but, crucially, the reasons why it is being changed. If the new strategy is to be accepted by enough of the organisation, the consent of the leaders of the informal power network is at least as important as securing support from the formal hierarchy.

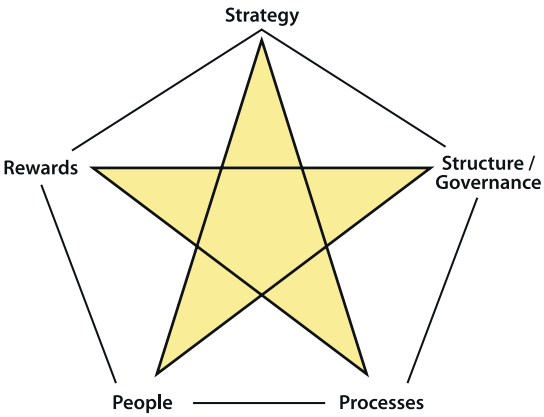

Figure 1. Galbraith Strategy Alignment 'Star'

Galbraith argues that changes to an organisation's strategy must be supported by mutually reinforcing action in four other organisational

domains (structures, processes, people and rewards) - Figure 1.[9] These domains are linked in a complex set of internal relationships, where activity in one domain impacts on all of the others, potentially destabilising the whole. Change is, however, dynamic and a holistic view is needed of the domains if the new strategy is to be successful. UK Defence's current (fragmented) approach to flexibility in which the Defence Reform Review's structural changes seem to have happened in advance of process reform and independently of the New Employment Model's developments in people and rewards.

**Strategy.** Strategy seeks to balance and be consistent with the organisation's external environment by setting the overall direction and providing the framework within which business units and people act. The strategy should be a lens for focusing the organisation's efforts, including informing decisions on priorities and resources. Galbraith describes three components of a strategy: what to do; where to play, and; how to win. 'What to do' refers to the organisation's goals and objectives. 'Where to play', in the context of the UK Armed Forces, covers whether the UK should be capable of autonomous action or not, full-spectrum or niche capable and within which regions do its interests lie. 'How to win' deals with how the organisation will secure its competitive advantage, although as Galbraith warns, no strategy for competitive advantage is permanent and a crucial part of any strategy, therefore, has to be an appreciation of its duration.[10]

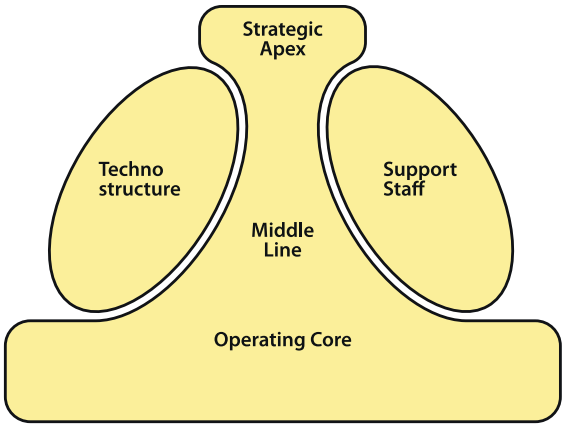


Figure 2. Mintzberg's Organisational Components

**Structure.** Structure (or Governance) is about the nature and distribution of power and authority in the hierarchy, both formally and informally. Organisations, however, are rarely monolithic, and different parts of the structure will require different approaches. Mintzberg identifies five parts to an organisation – Figure 2. The 'Strategic Apex' provides the overall direction and control for a 'Middle Line' (or management) that oversees production by the 'Operating Core', supported by a 'Techno-structure' that designs, plans and changes the operating workflow and trains people to implement the processes. Finally, a 'Support Staff', including procurement, finance, HR and training functions, supports the other parts of the organisation by providing specialist advice and acting as the lubricant that reduces friction in the other components, especially where the different organisational elements come into contact.[11] If Mintzberg is right, it becomes appropriate to talk about an organisation of

multiple workforces, not just based on regular or Reserve service, but within each element based on the outputs expected of the different areas. A 'one size fits all' employment model thus looks increasingly unhelpful to creating true workforce flexibility.

The Royal Air Force still represents a largely bureaucratic structure based on industrial age concepts – what Mintzberg calls a 'Machine Bureaucracy'. Organisations of this sort rely on formalised behaviour to reduce variability and improve prediction and control, which they do through standardising procedures and skills. In many respects, such as predictability and accountability, bureaucracies are effective and suit governmental activities because such organisations are less likely to make arbitrary decisions with public money or abuse their power. Moreover, military operations need predictability in the behaviour of their component parts. In contested environments, such as war, centralisation supports cooperation amongst units, even to the extent that one unit accepts higher levels of risk/attrition for the greater good,[12] such as those squadrons conducting JP233 missions against heavily defended Iraqi airfields to allow other squadrons and land forces to enjoy more permissive environments. This need for cooperation is particularly acute in coalition operations, even where the battlespace can be divided into discrete operating areas based on national responsibilities. However, bureaucracies do not cope well in dynamic environments: where the environment is prone to unpredictability, organic structures that allow decentralised decision making tend to be better at adapting quickly. Mintzberg calls these structures 'Adhocracies', which he characterises as having small organic structures and the ability to adapt quickly.[13] This does not mean that the adhocracy has to be chaotic; clarity of structure and process is still needed, but what characterises innovative organisations is their ability to change their structures when circumstances change and the old configuration no longer supports the organisation's strategic objectives.[14] Guerrilla movements are classic examples of adhocracies, although they also have a tendency to ossify their structures as they morph from being organisations in opposition to taking on responsibility for delivering the services of the replaced state. This is not just the preserve of guerrilla movements however, and Special Forces represent a form of adhocracy within a wider bureaucratic military structure. It could also be argued that the Servicing Commandos formed within the Royal Air Force to support the expeditionary fighter units operating from makeshift airfields in western Europe immediately after D-Day represent a form of adhocracy.

Militaries are multifaceted and there are clear attractions in having some bureaucratic elements within the structure, but if the bureaucratic component is too extensive, the organisation is likely to be slow to adapt. On the other hand, adhocracies provide flexibility but little consistency, and are expensive in terms of the effort needed to manage the frictions that arise from their more fluid nature. There is also a danger that local flexibility in an adhocracy can be delivered at the expense of the flexibility of the organisation as a whole if the adaptation works counter to other initiatives being adopted elsewhere.[15] Successive Defence Reviews have often stripped out those elements of the structure that manage friction in a belief that it is possible to isolate the efficiency of the 'front line' from the 'non-frontline' functions acting in support. A crucial issue, therefore, is to understand the main driver for the Royal Air Force's operating

model; if it is finance, then centralisation under a bureaucratic structure is more likely to reduce operating costs. If however, the driver is effectiveness through improved flexibility, then a decentralised structure, with a greater demand for 'non-frontline' activity, is probably more suitable.

The choice between being centralised or decentralised need not be entirely binary, however, as flexible organisations can support different organisational structures simultaneously, enabling them to move people and information rapidly to where they are needed.[16] Consequently, it should be possible to have elements of both bureaucracy and adhocracy in the same organisation, either in different components (e.g. a bureaucratic Operating Core and adhocratic Techno-structure that provides the flexibility the organisation wants) or within a model that contains a stable (bureaucratic or functional) element, and a more dynamic, flexible component, potentially within the same part of the structure. Galbraith calls this hybrid structure the 'Reconfigurable Functional Organisation' (RFO).[17] The stable element is functionally organised, with high levels of standardisation and routines with a more innovative element operating organically, moving people across functions or Services, and forming collaborations in cross-functional teams, of which Jointery is but one example. One of the challenges of this type of organisation is how to manage its dual nature in such a way that still protects the balance between stability and innovation.[18] The rapid disbandment of the RAF Servicing Commandos once their role had been fulfilled is largely attributed to the failure to fit the dominant organisational culture or approach, and indicates that accommodating diversity is not without cost or the occasional casualties.[19]

Diversity, including but not limited to the protected characteristics under discrimination legislation, makes a crucial contribution to flexibility because the individuals bring different perspectives to the problems the team jointly faces. The value of diversity was clearly evident in US adaptation to meet the challenges of counter-insurgency (COIN).[20] New structures were put in place, including Modular Brigades and a rebalancing of the Active and Reserve Components,[21] that sought to create heterogeneous teams that replicated the range of capabilities of larger formations but within smaller, more adaptable structures, in much the same way that Napoleon I used Corps as smaller and more agile armies in the late 18th Century.[22] US Brigade Combat Teams (BCTs) attempt to lower the level at which cross-functionality occurs within the Operating Core, but crucially, they integrate different functional skills within the main structure. Combined planning to exploit the capabilities in each of the functional components is thus done *ab initio* rather than as 'best effort support' to a predefined plan favouring one component's contribution. Another success born from diversity was the US Joint Improvised Explosive Device Defeat Organisation (JIEDDO), whereby bringing together individuals from across the Services, academia and industry, a difficult problem was addressed quickly and with considerable success.

The time is ripe for the Royal Air Force to reconsider its Cold War structure, in particular the relative position of station and squadron. Although the flying squadron is the primary unit

of Royal Air Force fighting power, the station seems to have been elevated to the position of primacy. Station command is seen as the job to which ambitious officers should aspire, to the extent that UK Main Operating Bases have had first pick of the command talent and those (still undoubtedly talented individuals) unsuccessful in selection for a Main Operating Base are appointed to command Expeditionary Air Wings on operations. One could argue that only those who had proved themselves in the UK environment should be appointed to operational command.

In the Inter War years, squadrons were seen more like Army Regiments, with embedded life support functions that made them autonomous operating entities with a spread of capabilities (cross-functional teams).[23] It is noticeable that until 1940, Royal Air Force stations did not even have crests as such symbols of loyalty and identity were the preserve of the squadrons. Being fixed around permanent bases during the Second Word War changed this and gradually support functions have been stripped from the squadron and held centrally, leaving squadrons to focus on flying. Centralising in this way allowed for greater efficiency in support staffs and made sense during the Second World War and Cold War where squadrons depended on operating from fixed stations but, in an era of expeditionary warfare, this is now less relevant. Royal Air Force stations do not deploy forward, squadrons do, and we should be reinvesting in the squadron as a cross-functional team. Whilst Expeditionary Air Wings provide a deployable structure, they are more akin to deployable stations rather than making the combat element truly deployable. Refocusing on the squadron by embedding its organic support so it becomes a deployable entity in its own right would move the Royal Air Force closer to the adaptability of an adhocracy. It would also provide lower level commanders with the freedom to act in a manner that could encourage genuine innovation, much as the German Reichswehr in the 1920s and 1930s encouraged combat commanders down to company level to operate with other arms as highly mobile units innovating responses to the changing battlefield circumstances without waiting for directions from above.[24] Outsourcing much of the running of the permanent bases[25] and centralising back office functions could offset the cost of expanding the techno-structure and support staff elements of the squadrons. This approach is arguably closer to Trenchard's original conception of the Royal Air Force of the Inter War years when the Service needed to be both cost effective and adaptable to new situations that lacked precedent, such as air policing actions.

**Processes.** If structure is the organisation's skeleton, the processes are its physiology - the way its decisions are made and how information is shared.[26] The processes include the formal components of doctrine, management procedures, priorities and the corresponding resource allocation, and the informal means by which work is done in practice. The formal processes are those most clearly under the control of the system because they are explicit and generally owned by people recognised to have the authority to effect changes. The informal processes are less easily manipulated in a conscious way as they tend to be bottomup and continuously change as working relationships change. Physical location is perhaps one of the easiest ways to effect change on the informal processes, forcing interaction amongst groups that changes

the way people see each other, but the spread of mass communication and data access, such as email, shared filing and social media have all impacted on the communication arteries that feed the organisation's muscles and sinews.

Processes have to be responsive and adapt to the organisational structure that the circumstances demand. Accepting that a strategy of flexibility requires the preservation of a potential for adaptation, irrespective of the organisation's form at any given time, the processes need to support future change. As effective change depends on information, developing processes for better sharing of information across Defence is essential.

A particular challenge today, for which our processes are currently ill prepared, is in capturing experience and the lessons that flow from that experience. Defence has over a decade of continuous combat and thus a cadre of highly experienced operational commanders. As combat operations end, there is a need to ensure that the experience of those serving is captured, and mechanisms are put in place to grow the next generation of operational commanders who cannot rely on being forged in the caldron of battle. Experience is a highly perishable commodity – senior commanders are perhaps within five to seven years of retirement – and a robust process for capturing their learning is needed now. Regrettably, cuts have often fallen disproportionately on the support staffs responsible for the corporate memory because losing a Lessons Team has no immediate impact, even if the long term effect is significant – McNeill attributes Prussian success in the latter part of the 19th Century to their capacity to learn from deficiencies in their past performance.[27] Developing a mentoring process for new operational commanders by using those with recent experience needs to be part of the solution, as will be some form of structured history project to ensure that the enduring lessons are captured for future generations. This cannot be left to individuals to do for themselves, but needs to be systematic and have academic rigour if it is to have most value.

Flexibility will probably always be frustrated by the time it takes to acquire new equipment. The complexity of modern military platforms is such that, unless the UK were to buy off-the-shelf from others, the procurement process is unlikely to be sufficiently responsive to provide new platforms in the timescales needed. Given the economic and strategic benefits of defence industrial capability, such as preserving the capacity for independent national action, the UK is highly unlikely to sacrifice its industrial capacity to produce or extensively modify new platforms. Moreover, with the lifespan of existing major equipment items being measured in multiple decades, an item purchased for today's threats cannot expect to face the same challenges when it is eventually retired. If the procurement of major platforms will never be sufficiently responsive to meet emerging requirements, a solution may be to invest in the weapons those platforms carry, which would have a lower unit cost and lesser complexity, hence they should be quicker to bring into service and easier to withdraw them when they are no longer relevant. Investing in cheaper, less capable but more numerous major platforms, and relying on the adaptability and procurement responsiveness of the

weapons and sensors they carry may be a better way to field the capability that the nation needs at any given time.

## An Adaptive Design Model

A truly flexible organisation will always looks like its circumstances, thus, whilst structure and processes are crucial elements in successful adaptation, they are contingent. They must have tangible form but, as the future is unknowable, we can neither be certain what it will look like, nor can we develop today the organisation that is configured for the specific conditions the Royal Air Force will face. What is needed, therefore, is an organisation that can adopt a resting form from which it has the potential to change quickly to match whatever challenges it is asked to confront at any given time. However, the breadth of action the Royal Air Force may have to cover is probably beyond the ability of a single (small) workforce to confront or adapt to in sufficient time for all eventualities. Instead of trying to do the impossible, therefore, an alternative model would seek to find a resting place in which structures, process, people and rewards could rest pending the call to change. The strategic end becomes that of ensuring enough flexibility to adapt quickly to future demands and, as soon as the Service was committed, it would adapt and take definite form; flexibility is then the means to the end. Once the operation was over, the 'return to contingency' becomes a return to contingent flexibility until the next time the Royal Air Force needs to take a definite form. The challenge

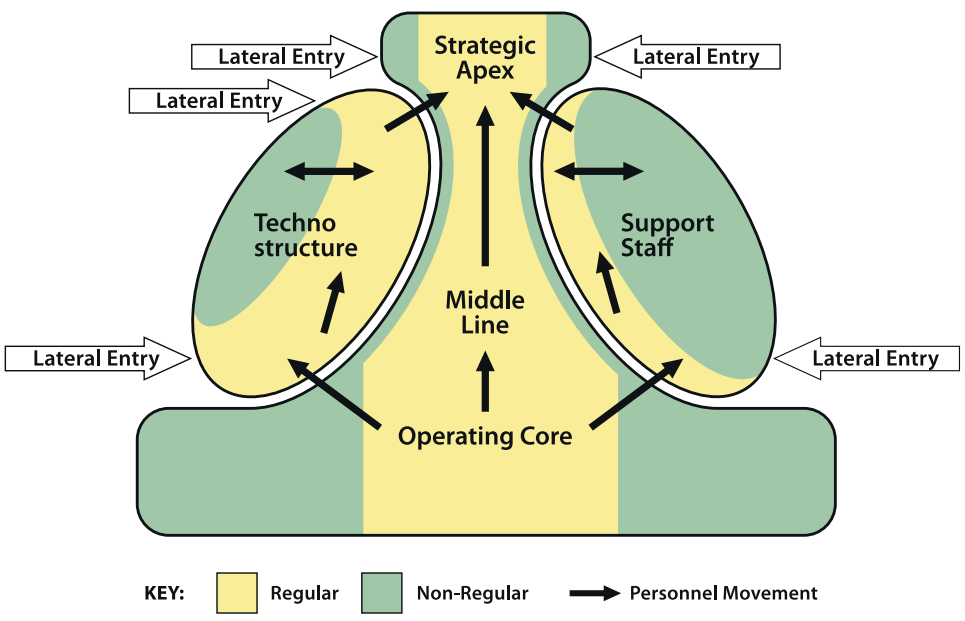


Figure 3. The Adaptive Design Model (Indicative)

becomes how to prevent the organisation, having assumed its resting form, from solidifying in such a way that it is unable to adapt to new circumstances.

The ADM envisages a Core and Periphery workforce continuum comprising regular and Reserve Service personnel, Civil Servants, contractors and partners operating across all the different parts of Mintzberg's organisational model. Although similar in many respects to the Whole Force Approach, it seeks to move beyond this by challenging some of the current limitations, including conceptual, and encompassing structural and process components from the RFO model by including bureaucratic and adhocratic elements. It requires much greater differentiation in how different groups are organised, viewed, managed and rewarded – Figure 3.

The idea of a core/periphery workforce is hardly new: the Reichswehr (restricted to no more than 100,000 personnel, and only 4,000 officers, by the Treaty of Versailles), and the US Army and Royal Air Force in the inter-War years all adopted a nucleus approach whereby they invested heavily in the human capability of a small regular force as the core around which they could regenerate capability as required. The specific approach adopted by each differed in its details, with Lord Trenchard emphasising the Operating Core, partly because the Royal Air Force was engaged on operations throughout the period. In 1919, Trenchard planned an organisation around a nucleus with 'deep roots' that would support future expansion when the circumstances required. To achieve this, he prioritised investment in the training systems and facilities, even at the expense of frontline capability. He gave particular importance to engineering skills, partly because the rapid development of a still immature technology posed enough challenges to safety even without enemy action, and because he had seen at close hand the high rates of attrition from accidents during the First World War.[28] The Reichswehr on the other hand adopted a different approach that sought to raise standards across all elements under the term '*Fuhrerheer*' (Leaders Army) in which every officer, NCO and soldier was expected to be able to function at the next higher rank.[29] Even within this, however, they continued to place particular emphasis on the General Staff, which was their Techno-structure.

The brain and skeleton of the new structure (the Professional Core) would largely be comprised of Regular personnel, acting as a nucleus around which other elements would be added to suit the operational requirements. The skeleton would be relatively consistent across time, but its outward appearance (the flesh provided by the Periphery) would change in size and shape according to need. The Periphery would include Reserve and civilian elements, and include space for contribution from a wide range of partners offering access to skills and insights that would be beyond the capacity of the Regular force.

Across the Operating Core and Middle Line, the Reserve component specifically would be larger than it is today, trained for distinct tasks, such as conventional warfare, COIN, capacity building etc, mobilised as the task demanded and bolted on to the Regular core as necessary. This would operate much like an American Football Team that has bespoke players/teams

for attacking and defensive play. The Reserves would remain largely base-rank fed, save for some specialists whose technical civilian skills were of direct relevance to the military. The primary means of growing the human capital in these parts of the organisation would be through training, with contractors brought in to support non-combat roles, such as logistics and engineering.

The Techno-structure, Support Staffs and Strategic Apex would also comprise Regular, Reserves and contractors, but with a relatively smaller Regular uniformed presence and expansion of the Reserve and Contractor contribution. Lateral entry into all these areas would be possible, in addition to the traditional career path that sees talent grown from within. The primary form of development would be through education, albeit more targeted to meet the specific outputs of the different areas. Structurally, these areas represent the reconfigurable component of Galbraith's RFO, and so cross-functional teams are likely to be the norm.

One of the problems with the current approach to the Reserve component[30] has been a focus on the numerical challenge of their expansion under the 2010 Strategic Defence and Security Review, which has been particularly acute for the Army. This is not a new problem as historically, militaries faced with significant drawdown have often looked to retain a small Regular nucleus around which capability can be held at lower levels of readiness (and cost) waiting to be used. The idea that the Reserve offers a cheap way of accessing volume that is unaffordable in the Regular component has been the dominant narrative underpinning current Reserve thinking. Such an approach offers contingent mass and is most appropriate where the required military skills can be generated within an acceptable period of time. This might occur where either a purely military skill is of a low enough level for rapid generation, or where commercial skills are equally relevant within the military, such as medical, cyber and media etc. Conceptually this makes sense, but the quantitative challenge under the 2010 Review has masked the wider opportunities that rethinking the approach to the Reserves could provide in squaring the vicious circle of a reducing regular mass having to face an uncertain world demanding forces that can meet a range of contingencies.

If Reserves are seen merely as cheap Regulars, an opportunity to enhance Royal Air Force capability will be missed by failing to harness the Reserves as a source of bring skills and experiences that the Service cannot obtain from its Regular component. Taking the second path opens the possibilities of the military having access to new capabilities that it would otherwise not possess. Using this model, alongside the first, the Reserve could provide a consultancy-like service for a wider range of skills, such as cultural advice, language expertise or where civilian skills are relevant, most notably perhaps in capacity/state-building activities. The newly formed Security Assistance Group, siting as part of the Army but delivering a Joint capability, is an encouraging start to a more systematic and intelligent use of some types of Reserve and needs to be supported and used more effectively by the Royal Air Force. This could include using the UK's expatriate populations as potential cultural advisors, interlocutors and linguists should the UK need to operate in that part of the world.

Where Reserves form part of the consultancy capacity, there should be no need to force them, Procrustes-like, into the existing (Regular) branch/trade/rank constructs, or impose the same strict criteria about factors such as nationality requirements, medical standards etc. There could also be merit in offering a non-uniformed Reserve service, as the uniform itself could constrain innovation if the Reservist feels that they have to approximate and be recognisable to the Regular component if they are to be accepted. The non-uniformed Reserve component could also provide a vehicle for the Stabilisation Unit's Deployable Civilian Experts who currently lack the employment protection and mobilisation mechanisms available to the Reservist. Ultimately though, greater flexibility in the types of relationship the Royal Air Force can have with partners would broaden the pool of potential Reserves and contribute to the Service's intellectual capability by increasing its diversity.

A second consideration in rethinking the Reserves component would be to challenge its limited ambition in terms of scale. In other nations, such as the United States, Reserve numbers exceed that of the Regular Force, e.g. the US Army Reserve Component, which includes the Army Reserve and National Guard, is actually larger than the Active Duty Component. There may, therefore, be merit in removing the current ceilings on Reserve numbers. Whilst this may seem counter-intuitive given the difficulties of recruiting Reservists, part of the problem is that there is no clear idea about how they are going to be used (the 'Concept of Employment'). The ADM, including the wider utility piece described above, could provide a way of improving the Reserve 'offer' and make it more attractive and retention positive.

There are of course challenges with expanding the Reserve component. The strategic challenge is the difficulty that the UK economy could face if large numbers were taken out of income generation and put into uniform. The difficulties of supporting Reservists are particularly acute for Small and Medium Enterprises (SMEs), still the largest group of employers in the country, if they lose key employees to mobilisation. There is also evidence that some Reservists do not want to be mobilised merely to do their day job in khaki and may avoid joining the Reserves in a capacity that brought them no intrinsic reward. The experience in attracting Cyber experts may be more instructive in this regard than the success of the medical reserves during operations in Iraq and Afghanistan who were exposed to trauma injuries that they were unlikely to face in civilian employment. However, with a clear concept of how the Reserve would be used within a flexible framework that stressed the value they bring rather than their lower cost, and a stronger understanding of the benefits to individual and employer, it should be possible to hold both the mass and specialist expertise Defence might need in a way that institutionalises manpower flexibility. Reserves are most likely to be attractive to civilian employers where an individual's service brings reciprocal benefit to the civilian employer.

Partnerships represent another aspect of the ADM. The complexity and breadth of tasks that a military may be asked to engage with is vast and it is difficult to be ready for all eventualities

when the culture, people and equipment remain the same.[31] Moreover, no organisation, let alone a military of the size of the UK Armed Forces, would want or be able to retain within its regular structure the full range of skills at the maximum volume that contingency might demand. Relationships beyond organisational boundaries that secure access to the skills that an organisation is unable or unwilling to provide for itself, therefore, become a crucial part in delivering flexibility. This is more than just the Reserves, important though they are, but needs to consider a more systematic investment in developing links across nations, perhaps routinely training with other nations during Tier 3 exercises, across Government departments, with industry, third sector (including those charities who operate in parts of the world in which we may have current and/or future interests), and academia. Clearly, links of this sort already exist, but a better gearing mechanism is needed to ensure that the organisational cultures and capabilities align.

As well as the Royal Air Force calling on industry to provide people and skills, opportunities may exist for a reverse Reserve arrangement in which Regular military personnel would be 'loaned' to other employers as a means of preserving or developing their skills when they are not productive for Defence. For example, the difficulty in preserving paramedic skills during peacetime perhaps could be resolved by a reverse Reserve workforce where Regular medical personnel were embedded within the Ambulance Services until needed for operations, with a concomitant benefit to the NHS and society at large. Alternatively, a form of cross Government Sponsored Reserve arrangement working in the public sector could help improve workforce productivity. Amongst other areas in which a Reverse Reserve arrangement might work, policing, capacity building through local government and in engineering (civil and equipment) with industry contractors would be worth investigating, building on the air traffic model adopted by the National Air Traffic Service.

## Conclusion

Placing flexibility at the heart of Royal Air Force strategy requires balanced change across Structure, Process, People and Reward domains, all of which have to be aligned towards the same strategic goal. This paper has considered changes within the structural and process elements and has advocated greater use of cross-functional teams with diversity at their heart. It does not seek a radical overhaul of all elements of the Service because the ADM allows both for bureaucratic elements and (wider use of) the adhocracy.

The ADM reconceives the Royal Air Force in such a way that it expands the scope for innovative groupings of the Whole Force in delivering outputs. There would still be a strong role for regular personnel adopting the current model of developing talent from within, but this is likely to be most prevalent in the heart of the Operating Core and Middle Line. Within these components, the paper advocates a rethink about the nature of the flying squadron as the nucleus of Royal Air Force capability, arguing that the squadron needs to be elevated above that of the station, with a concomitant investment in the squadron as adhocracy and disinvestment in the station. The Techno-structure, Support Staffs and Strategic

Apex would be more diverse in their mix of Regulars, Reserves, contractors and other partners as diversity of views in these areas would help inspire innovation and deepen essential skills that the baserank fed system currently struggles to deliver. Lateral entry would be possible, as would more flexible ways of working to harness the strengths of the various parts of the workforce.

Large parts of the Operating Core and Middle Line may remain unaltered, however, where structural changes are needed in the Techno-structure, Support Staffs and Strategic Apex, new processes should follow. Perhaps the most challenging process issue at the moment is providing a robust Lessons Process that can capture the last decade's worth of experience amongst our senior operational commanders so that those who find themselves leading operations without ten or more years of practical experience can access the learning of their predecessors – the Royal Air Force needs to become an agile learning organisation.[32]

Investing in flexibility is expensive as the costs of managing the friction and developing the agile warriors of the future will rise. Alternative employment models may help mitigate the costs, but it is likely that a strategy of flexibility will only be financially viable with a further reduction in volume across the Regular Component and more capability being moved into the Reserve and held as a contingency. A Core/Periphery Model may enable this, with a smaller number of Regulars at the Core around which more of the capability (mass and specific skills) would be held in an expanded group of partners, including Reserves, contractors, academics, civilian experts etc. In many respects, the ADM represents an evolution of the Whole Force Approach, but in a more organic form that provides for greater differentiation within the various components comprising the Core and Periphery. Within this, there is a need to rethink how the Royal Air Force can derive maximum benefit from the Reserves. This needs to be more than just trying to squeeze increased numbers into the existing branch and trade structure and a more innovative solution is advocated in which the Reservist's civilian skills and experiences are leveraged, potentially holding entire capabilities in the Reserve component that have no equivalent in the Regular Force. The paper also argues for a more fluid interpretation of Reserve that could dispense with the need for them to be uniformed at all, and/or encourage a 'Reserve as Consultant' model. However, the ADM itself needs to remain adaptive to the changing circumstances in which it operates.

However, merely attending to structure and process will not develop the Royal Air Force into a strategically agile organisation. A flexible organisation looks like its surroundings, which means that its structure and processes must be contingent. Preserving the potential to change quickly, therefore, resides in the people component; the organisation's capacitors. This requires an investment in human capability to ensure that the people are willing and able to adapt quickly to meet the organisation's challenges. The people dimension is considered in Part Two.

## Notes

[1] 'A Strong Britain in an Age of Uncertainty: the National Security Strategy' (October 2010). HMSO at **https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/61936/national-security-strategy.pdf** (accessed 18 March 2105)
[2] Future Character of Conflict (FCOC) Paper, Defence Concepts and Doctrine Centre, 3 February 2010 p.35 at **https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/33685/FCOCReadactedFinalWeb.pdf** (accessed 18 March 2015),
[3] What Professor Cornish calls 'muddling through'. Conversation with the author, 11 November 2014. See also Cornish & Dorman, (2012). 'Smart Muddling Through' in *International Affairs*, Vol.88(2) at pp.213-222.
[4] Defence Concepts and Doctrine Centre, Joint Doctrine Publication 0-01. UK Defence Doctrine, at p.31.
[5] M. Finkel (2011). On Flexibility: Recovery from Technological and Doctrinal Surprise on the Battlefield at pp.73-97.
[6] P. O'Neill (forthcoming). 'Driving Flexibility through People: Harnessing Human Capability', will consider HR practices for the regular component in more detail.
[7] B. Jenkins. (1970) The Unchangeable War.at p.3.
[8] R. Downie. (1998) Learning from Conflict at p.230.
[9] J. Galbraith (2014). Designing Organizations: Strategy, Structure and Processes at the Business Unit and Enterprise levels at p.19.
[10] Galbraith, *ibid*., at pp.20-22. A strategy of flexibility is likely to have greater longevity than one seeking a specific competitive advantage but, as the German experience of World War Two shows, even flexibility can be derailed by individuals, such as Hitler's centralised decision making process once he lost confidence in his generals.
[11] H. Mintzberg. (1983) Structure in Fives at p.11.
[12] A. Sinno. (2008) Organisations at War in Afghanistan and Beyond at pp.59-60.
[13] Mintzberg, *ibid*., at p.268.
[14] C Schoonhoven & M Jelenik. 'Dynamic Tension in Innovative, High Technology Firms: Managing Rapid Technological Change Through Organisational Structure', in Tushman & Anderson, *ibid*., at p.240.
[15] Sinno, *ibid*., at p.50.
[16] J Baker. (1996) 'Agility and Flexibility: What's the Difference?' *Cranfield School of Management* at p.3.
[17] Galbraith, *ibid*., at p.140.
[18] R, Miles et al. (1978) 'Organisational Strategy, Structures and Process'. *Academy of Management Review, Vol.3(3)* at p.555.
[19] See for example S. Ellard. (2007) 'Are the Experiences of the RAF Servicing Commandos During World War Two Relevant to the Support of Current RAF Expeditionary Operations? *RAF Historical Society Journal Vol.39*.
[20] D, Ucko, (2009) 'The New Counter-insurgency Era'.
[21] Ucko, *ibid*., at pp.152-156.
[22] E, Shamir. (2011) 'Transforming Command' at p.32.

[23] J. James. (1991) The Paladins at p.100.
[24] S. Corum. (1992) The Roots of Blitzkreig at pp.183-184.
[25] Adopting a European model whereby the RAF operated from mixed civil/military bases could help with sharing infrastructure and base support costs and deliver savings in the long-term, although there would be costs in transition that could make such an approach unaffordable in the short term. RAF Aldergrove provides an example of how a military enclave can operate as part of a civilian airport.
[26] Galbraith, *ibid*., at p.37.
[27] W. McNeill (1983). The Pursuit of Power, at pp.251-252.
[28] AP3003. (2004) 'A Brief History of the Royal Air Force' at p.52.
[29] Corum, *ibid*., at p.69.
[30] The Reserves are an eclectic mix of contracts, ranging from full-time Reserves, to those who are only activated (mobilized) to meet particular organisational needs, and a multitude of types in between. For the sake of simplicity, the following paragraphs refer to those individuals for whom the work for UK Defence is not their primary activity, such as those in the Army Reserve and its equivalents in the Royal Navy and Royal Air Force.
[31] Sir J Kiszely. (2007) 'Post-modern Challenges for Modern Warriors'. Shrivenham Paper No.5 at p.10.
[32] The cultural and educational aspects of becoming a learning organisation are addressed in the second paper 'Driving Flexibility through People: Harnessing Human Capability'.

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