NATO Force Protection on a Knife Edge

A Think-Piece

**Joint Air Power
Competence Centre**

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FROM:
The Executive Director of the Joint Air Power Competence Centre (JAPCC)

SUBJECT:
NATO Force Protection on a Knife Edge – A Think-Piece

DISTRIBUTION:
All NATO Commands, Nations, Ministries of Defence and Relevant Organizations

Like previous Force Protection (FP) pieces published by the JAPCC, this work is designed to be a 'Think-Piece'. Its purpose is to provoke debate with the deliberate intention of engaging and challenging colleagues in that debate. In turn, any discussion will aid in establishing whether the thesis offered is true, false or indeed somewhere in-between?

The title of this paper, 'NATO Force Protection on a Knife Edge', was chosen because it is suggested that as we write, FP (and indeed one could argue other vital Air and Space Power Enablers) is in a perilous state and two potentially very different future possibilities exist. Either we accept the arguments put forward here and take steps to address the challenges facing FP or, we dismiss some or all of the arguments offered, continue as now and subsequently risk the consequences.

The thesis offered is simple: We have neglected and under-resourced FP for many years for a variety of reasons, both deliberate and unintentional, that are explained within the paper. The impact of this, it is suggested, is that an intelligent and capable adversary or indeed, one that just gets lucky, could have a devastating effect on military capability. Furthermore, this effect could be one that severely damages the Alliance's physical ability, or even its resolve, to respond!

The statement above is both bold and some would say controversial. However, the JAPCC's Vision to:

'Be NATO's catalyst for the improvement and transformation of Joint Air and Space Power; delivering effective solutions through independent thought and analysis.'

means that it is sometimes necessary to trade on that 'independence' by saying what we believe needs to be said, not necessarily what others want to hear. This of course comes with the understanding that what is said must be provable with examples, through the experiences of

authors or with the use of irrefutable logic. This paper uses all three mechanisms while remaining sufficiently generic to be both releasable and readable without causing offence to individuals or organizations.

The challenges the paper highlights have not been caused through any malicious intent or incompetent oversight, they are simply the result of the events discussed and exacerbated by the competitive nature of the world as we find it today. The structure of this paper is such that the reader is taken through the arguments offered in a step-by-step fashion so that one is led to the conclusions provided. Should a reader choose to dismiss some or all of the arguments as they are made, then the conclusion(s) reached will likely be different. The reader will therefore reach the end of this paper having decided for themselves whether the thesis offered is proven, somewhat proven or indeed disproven. By default, the readers will then be in a position to decide what action is needed (if any) to remedy the situation.

The genesis of this paper lies within the multiple FP projects that the JAPCC has either delivered or is currently working on. These include doctrine development, enhanced training, a FP decision support tool and work to support FP capability development within nations and organizations. The need for this activity having been the localized identification of some if not all of the challenges identified within this paper. The reach of this activity is such that it can be no coincidence that the same challenges are being encountered in many different locations and with increasing frequency. Therefore, this paper is an attempt to define the challenge, define the cause, suggest the impact and to some degree offer potential solutions.

While this paper is designed as a stand-alone document, it will be used to underpin and/or justify the JAPCC's FP work going forward. The purpose of this work will be, as it is now, for the JAPCC to assist in the development of an effective and resource-efficient FP capability for the Alliance.

Finally, having acknowledged that some will find elements of this paper controversial and others will recognize some or all of the challenges discussed, it would be remiss of me not to offer all readers the opportunity to respond. Any comments on this paper and its contents will be extremely welcome irrespective of whether they are supportive or dismissive of the thesis. Your constructive comments will assist in the shaping of the JAPCC's future work to the benefit of the Alliance. Thank you for investing your time to read and consider this study.

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Threats can be found everywhere and anywhere.

NATO FORCE PROTECTION ON A KNIFE EDGE – A THINK-PIECE

1. Introduction

'… the skilful leader subdues the enemy's troops without any fighting; he captures their cities without laying siege to them; he overthrows their kingdoms without lengthy operations in the field.'

Sun Tzu – The Art of War

1.1 Bottom Line Up Front. This paper will explore whether the changing nature of conflict and NATO's failure to sufficiently (re)adapt, has created a situation where, there is a real possibility that an inability to protect our forces will significantly reduce NATO's ability to respond.

1.2 Document Overview. It is offered that NATO Force Protection (FP) is currently sitting on 'knife-edge'.[1] Some may find the following text unpleasant

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1. Definition: 'In a difficult or dangerous situation in which a very small change can cause somebody / something to succeed or fail' OED.

The adversary of the future will target capability wherever it is most vulnerable.

reading and / or controversial, however, the concept of this paper is to promote debate with a view to either addressing the reality or correcting perception. This paper has evolved out of many discussions over a period of perhaps 18-months prior to the onset of the Pandemic. It came about as a result of the ever-increasing frustration of the small NATO FP community that believes that there is a dichotomy between the current NATO narrative and the day-to-day reality of trying to deliver effective and resource-efficient capability. Given that our World is now a very different place as a result of the COVID-19 Pandemic, it is offered that the challenges discussed here are going to be compounded by an almost inevitable return to severe resource constraints as nations struggle to recover economically. While this paper focuses specifically on FP, the reader is encouraged to think about how the challenges discussed may apply to other essential enablers? Furthermore, while this is an Air-

focussed piece in an Air and Space Power publication, the challenges discussed, it is suggested, are applicable to all components in all domains; therefore, this is very much a Joint and Comprehensive[2] discussion.

1.3 Approach. In an attempt to guide the reader through the subject in a step-by-step manner, this paper is divided into the following sections:

1. Introduction. What is the perceived problem, where has it come and how will this paper address the subject?
2. Setting the Scene. How did FP get to where it is today?
3. What is Force Protection? Definitions and a description of the NATO approach.
4. Where is Force Protection Required? A description of the Operational Environment.
5. Threats and Hazards. What Force Protection must be designed to address.

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2. Lessons learned from NATO operations show that addressing crisis situations calls for a comprehensive approach combining political, civilian and military instruments.
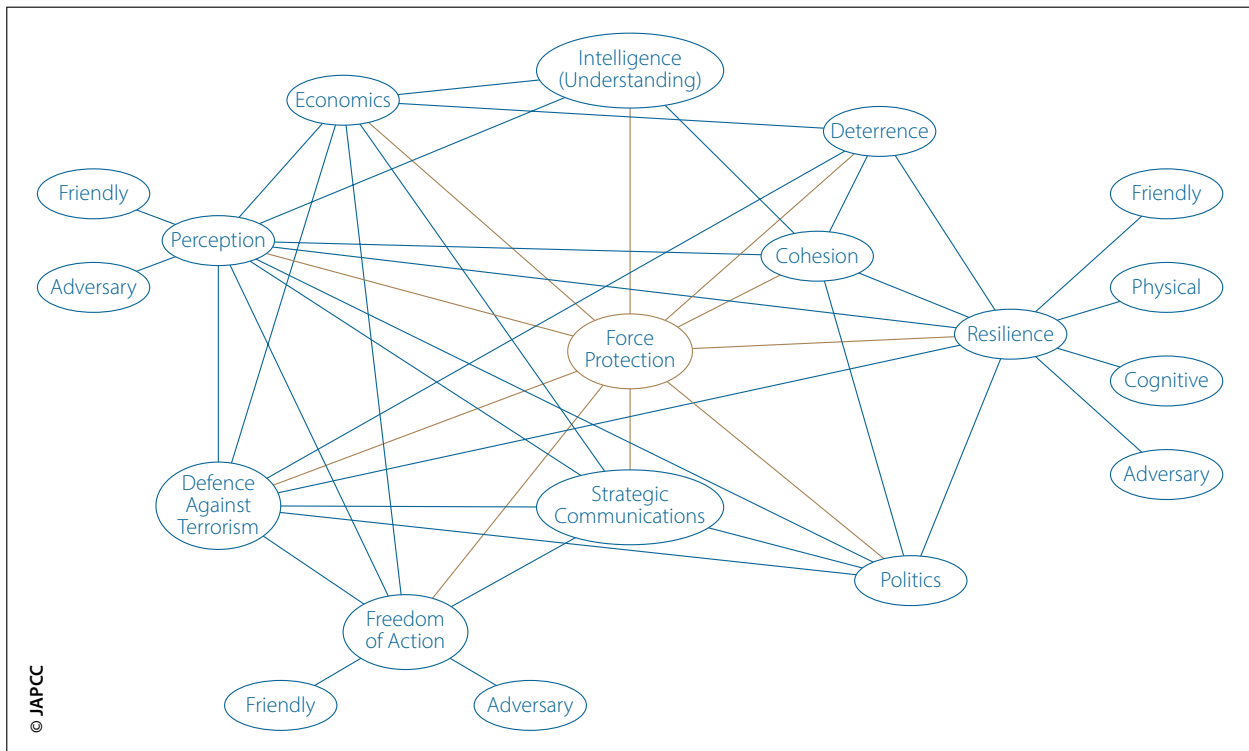
A very simple diagram for illustrative purposes only. Designed to demonstrate that Force Protection is linked to so many other things and vice versa.

6 Challenges Facing FP.
7. Possible Options for resolving the Challenges Facing FP.
8. Summary and Proposed Way Ahead.

1.4 The Conundrum. The phrase 'essential enablers' is used because it is offered that while the world is a very different place than in Sun Tzu's time, his words are if anything more important now. It is suggested that investment in highly capable and agile platforms is pointless if that capability can be rendered ineffective (neutralized or destroyed) before it can be brought to bear in the necessary operating environment. Therefore, the concept of this paper is to promote discussion over the balance of investment in effectors versus enablers (specifically FP).

'…investment in highly capable and agile platforms is pointless if that capability can be rendered ineffective before it can be brought to bear …'

1.5 The Challenge Puzzle. There are many elements to the challenge being faced by FP. A way to think about the subject could be to see FP as a puzzle (jigsaw) with many pieces and with each piece having a relationship with many if not all of the other pieces. It is offered that a way to conceptualize this challenge is to think of many points on a page, all being linked to all other points on the page with a line such that the resulting diagram resembles a mesh or web? It is therefore difficult to capture the challenge that FP faces, without first understanding each separate element and subsequently, the interrelationship between elements. While FP needs to be considered as a whole, FP is made up of many constituent parts in the same way that FP as a whole is only one small part of the complex web of things that need to be brought together in order to constitute a true operational capability.

2. Setting the Scene

2.1 Section Overview. This section is designed to explain how we have reached the situation that it is argued NATO has now reached with regard to FP. The basic premise of this section is that NATO has gone through several distinct phases or epochs in its history; it is offered that these may be encapsulated as follows:

a. The Cold War;
b. Demilitarization–the post-Cold War desire to obtain the so-called 'Peace Dividend';
c. Wars of Choice;
d. The Global War on Terrorism and Counter-Insurgency;
e. The return of peer / near-peer competition;
f. An age of 360° Threats.[3]

2.2 Is NATO's Current Approach to FP the Right One? The basic question that this entire paper explores (is NATOs current approach to FP the right one?) is entwined within the broader question of whether NATO has successfully adapted to the operating environment as it now exists? In order to set-the-scene for following sections, this element of the paper sets out to try and explain, in very simple terms, how we have reached the current position and what that position now means with respect to how we might wish to address the FP challenge as it may be perceived today.

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3. Brussels Summit 2018 Declaration extract: The political leaders affirmed the Alliance will meet the 360-degree challenge. The Alliance will defend against the threat posed by Russia and it will address the threats emanating from North Africa and the Middle East – primarily the risks of mass-migration and acts of terror.

2.3 The Cold War. During the 'Cold War', the World was in many respects a much simpler place. NATO faced the Warsaw Pact[4] and in the context of this piece, it was acknowledged that in order to prevail, NATO needed to Survive to Operate (STO). This precept was based on the belief that the Warsaw Pact would be the aggressor and any attack would be launched with little or no notice, in order to maintain the element of surprise and thus, set the conditions for Warsaw Pact success. The corollary to this was that NATO had to have a mechanism whereby it could both preserve its combat power while at the same time, generating a response that would ultimately overwhelm the aggressor. In other words, the ability to Survive to Operate or Survive to Fight was an absolutely fundamental element of Deterrence.

2.4 The Need to Respond. The concept of STO was designed around the need to respond to a spectrum of threats that would either escalate rapidly or could be encountered concurrently, e.g. an asset[5] would be attacked by special purpose forces (commonly referred to as 'Spetznaz') in order to degrade defences and prepare the NATO asset for a larger follow-up attack of some form.

2.5 Peace Dividend. While this paper will go on to describe in more detail the contemporary operating environment and the threats that exist within it, at this stage, it is suggested that at least some of the threats that we faced in the period 1947 to 1991

During the Cold War, NATO forces trained to survive and operate under demanding conditions.

disappeared in the immediate aftermath of the Cold War. Certainly, the likelihood of multiple concurrent threats reduced substantially. This led many nations to seek a so-called 'Peace Dividend' a phrase used by the then US President George H. W. Bush and British Prime Minister Margaret Thatcher; the simple concept being that there is a significant economic benefit to be gained from decreasing defence spending.

2.6 Wars of Choice. However, no sooner had the Cold War ended than we entered a period where many NATO Allies and later NATO itself became engaged in major operations if not wars. The 'New World Order'[6] promised German reunification, normalization of relations between East and West, the resolution of Third World conflicts, and the promotion of peace and democracy but, most of this failed to materialize. Some scholars describe this period as one where wars of necessity, usually for national survival, were replaced by wars of choice. In this later case, it was not just that nation-states chose to engage in military action but, that they do so while other non-military options to resolve a dispute, it could be argued, still remained.[7] This (first) paradigm shift saw Allies engaging in activity that could reasonably be considered 'major operations' (e.g. Operation DESERT STORM or NATO Operations in Bosnia and Herzegovina) but crucially, where the adversary was not a peer or near-peer adversary and military success could, in theory, be assured. This change in the type of military activity being undertaken brought about a change in the Allies' approach to protecting its combat power. Some of this was consciously undertaken (such as the drive to realize the

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4. The Warsaw Pact was a collective defence treaty created by the Soviet Union and seven other Soviet satellite states in Central and Eastern Europe: Albania, Bulgaria, Czechoslovakia, East Germany, Hungary, Poland and Romania (note Albania withdrew in 1968).
5. The term 'Asset' will be defined later in the course of the development of this document.
6. From President Bush's speech following the 1989 Malta Summit.
7. War of Necessity War of Choice – A Memoire of Two Iraq Wars. Richard N. Haass (2010).

Threats range from acts of terrorism perpetrated by lone actors through to increased competition with near-peer adversaries.

Peace Dividend), some driven by World events. While Alliance military assets remained a target, the full spectrum of threats that existed during the Cold War did not materialize and it was primarily the deployed element of any force (and possibly) the close-to-theatre or in-theatre end of lines of supply that could be targeted by an adversary; rear areas and safe havens existed. In this context, the 'old' concept of 'Survive to Operate' that existed for the whole force, morphed into the requirement to protect some of the force.

2.7 Divergence of Approach. At this stage, a more subtle change occurred, certainly with regard to FP (and probably in regard to other enablers not part of this discourse). Specifically, in the era of STO, all of the Alliance considered the threat in the same way and each member state acknowledged that it would have to protect its own assets against what was not an in-significant threat. Following what is described above as the 'first paradigm shift', Allies started to conduct operations from bases other than their own and often with many national contingents operating from the same location. The change that this brought about in terms of FP was that FP activity could no longer be considered as what is often termed a 'Host Nation' responsibility. Given that in the operations undertaken at the time, there were very few attacks, it is difficult to be critical of the approach to FP then being taken. However, it is suggested that it remained a matter for each participating contingent to deliver for itself; there was little in the way of a holistic approach and no coordination. Had the threat been higher and/or the number and scale of attacks greater, this would probably have been quickly recognized – a case of subsequent adaption being based on the wrong lessons being identified?

2.8 Early Warning. For the sake of completeness, it is offered that signs of what was to come were probably there, even before the end of the Cold War, e.g. the bombing of the US Embassy in Beirut in 1983 but, it is probably only with the advantage of hindsight that this could be recognized? The fact remains that immediately following the end of the Cold War, nations perceived a New World Order and pursued, some more vigorously than others, the so-called 'Peace Dividend'.

2.9 9 / 11. Moving forward, one could argue whether the events of 11 September 2001 were another (second) paradigm shift or a continuation of the changes that started in the immediate aftermath of the end of the Cold War? However, the declaration of Article V on 12 September 2001, certainly started a new era for FP.

2.10 A New Challenge. The decisions taken by individual Nations separately and as an Alliance collectively eventually led to major operations in Afghanistan, Iraq and Syria to name but three. In these theatres there were a variety of significant natural hazards[8] that the force had to contend with, populations with very different cultures and a capable, ruthless and determined adversary. From a FP perspective, we encountered a new type of adversary – the zealot.[9] Furthermore, the ideology of adversaries was now something that could be spread online and ultimately led to attacks on assets far removed from the military theatre of operations.[10] The concept of areas to the rear being safe havens started to erode, as did the idea that FP is something that can only be applied to military activity in an operational theatre. In many Nations, the concept of the civilian population being a target as a result of military action overseas became a reality.

2.11 A Blast from the Past. Now into the mix comes a resurgent and increasingly assertive Russia.[11] Having annexed the Crimea in the period 20 February to 26 March 2014, President Putin authorized a new military doctrine that while reiterating older themes, highlighted its continued opposition to NATO's reach and enlargement. Also, the ever-increasing role of China cannot be ignored (a complex mix of politics, international rivalries all underpinned by increasingly inter-connected economies). In simple terms, the requirement for NATO to consider conflict with a peer or near-peer adversary has returned.

2.12 The Dichotomy. The developments described above have taken place over a protracted period (1983–Present). No sooner had the Cold War ended than a new, albeit different, era of 'competition' began. However, in Western Europe and the US in the corresponding timeframe, there seems to have been almost continuous pressure to drive-down defence spending and reduce the size of militaries. While this is a gross simplification of the issue, the fact remains that many militaries are now significantly smaller than they were in the Cold War era. However, the reduced size of militaries does not paint the complete picture. As important is that militaries are now a very different 'shape' (or configuration) than they were previously. The focus seems to have been on reducing manpower and increasingly looking to technology for solutions. This then raises the question that, in what commentators and scholars have described as, 'an era of increased global competition', do the Nations have the correct size and shape of capability required and specific to NATO FP, can capability be protected, so that it can be used in the way that the Nations intend?

2.13 Defence Procurement. While in many cases militaries may be smaller and defence spending less, the cost of defence equipment has increased disproportionally due to the increased complexity of platforms and the associated huge development cost. This is coupled with lower order numbers leading to increased unit price. This means that while a single platform today (ship, tank, aircraft etc.) is far more capable than its predecessors, we have far fewer of each and their complexity means that while they are

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8. Extremes of weather, altitude, disease and earthquake etc.
9. A person who is fanatical and uncompromising in pursuit of their religious, political, or other ideals. OED.
10. E.g. Terrorist attack on the London Transport system on 7 Jul. 2005 or the attacks in Paris on 13 Nov. 2015.
11. Resurgent Russia? Continuities and Change in Russian Foreign Policy, Dr Tracey German, Kings College London, Regional Security Research Centre.

hugely potent in their intended use, they are potentially more fragile, as well as vulnerable to a wider range of threats specifically when not in 'combat mode'. In addition, they require far more dedicated specialist support without which they might be rendered useless. Furthermore, much of this support is now provided on a 'just-in-time' basis by industry, and while this might be the most economic option, its utility in a conflict situation is questionable. Basic military strategies to preserve combat power such as 'Dispersal' and 'Redundancy' while still entirely valid, are difficult to achieve. Little if any reserve is purchased and the cost of support is such that assets have to be concentrated to be maintained. Going further, the loss of hugely expensive, highly capable platform of which relatively few exist in any nation now has strategic significance, especially when the loss of any such asset will be sure to attract significant media attention; this concept will extend in many circumstances to the loss of personnel.

Vignettes: On the night of 25 / 26 February 1946 in what was then Palestine, Irgun terrorists simultaneously attacked the RAF airfields at Qastina, Peta Tiqua and Lydda. They targeted aircraft sat on dispersals and were successful in destroying five aircraft and damaging a further 17 beyond repair. Replacement aircraft were provided from a reserve held in hangars, in-theatre. On 14 October 2005, one RAF Harrier GR7A was destroyed and another damaged by a rocket attack at Kandahar Airfield, Afghanistan. The damaged Harrier was repaired on-site and a replacement for the destroyed aircraft was flown to Afghanistan that night from the UK. On 14 September 2012, Taliban fighters attacked Camp Bastion in Helmand Province, Afghanistan. Before the attacking force was killed or captured, they killed 2 x US Marines and destroyed or severely damaged 8 x US Marine Corps AV-8B Harriers. This was the largest loss of US airpower since the 1968 Tet Offensive in Vietnam. Research using unclassified sources suggests the US Marine Corps had a total of 336 aircraft delivered over the course of the AV-8B programme. The key points to extract from the three brief extracts above are:

i. Reserve or replacement assets were readily available;
ii. The forces (nations) suffering the loss could absorb it and still function effectively;
iii. In the last two cases, media attention and political scrutiny were significant.

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Jump forward to 2018 and the loss of the Norwegian Frigate HNoMS Helge Ingstad. While this loss affected the Maritime Component and occurred as a result of an accident, the frigate was one of five ships ordered at a cost of $2.54 Billion and the loss was not only a cause of some national embarrassment but a loss of 20% of capability, at a financial cost of $510 Million.

2.14 So What? The Vignettes above are designed to highlight the point that as Nations and the Alliance as a whole move forward, the impact of any loss to any nation, irrespective of component, is becoming increasingly significant in every respect. When this is then coupled with the changing nature of politics and a shift to more introspective, nationalist policies, gaining consensus for any collective NATO response becomes more challenging. One could argue that since the end of the Cold War and up until relatively recently, NATO and the Nations could choose the time, space and scope of conflict? It is offered that this era is now unequivocally over and it will increasingly be our adversaries that

decide, when, where, how and at what scale they attack; furthermore, any attack will not necessarily be military or even 'kinetic' in nature. Finally, because of what is described elsewhere in this paper, it will actually be very difficult to define the start-point of any conflict.[12] When all the issues briefly

'The action of discouraging an action or event through instilling doubt or fear of the consequences.'

If doubts or fears can be minimized through action that degrades capability and the underlying will to fight, Deterrence fails. This paper now goes on to ex-

discussed here are considered together, the inevitable conclusion is that it is going to be increasingly difficult to gain consensus on a response and, crucially from the point of this paper, this may then only be after substantial damage has been done. Damage which could either, bring about the shattering of Alliance Cohesion to include an unwillingness to endorse Article V and / or significant reduction in capability, as a result of adversary pre-emptive action. Therefore, the fundamental question is:

Do we need to substantially enhance our FP capabilities or even, return to the concept of STO?

2.15 Impact on Deterrence. As the reader will be aware, there is a huge amount of literature about the concept of Deterrence. However, in its most basic form, it is about discouraging any action through instilling doubt or fear of the consequences. The Oxford English Dictionary (OED) defines Deterrence as:

plain how an adversary might undermine NATO's ability to deter.

2.16 Section Summary and Next Steps. This section has set-the-scene by attempting to look at 'the big picture' of how NATO has come from the Cold War, through a number of different challenges and now arrived at a situation where all previous threats now exist as one series of concurrent threats; the so-called '360° Challenge'. The next steps are to examine:

a. What is FP from the NATO perspective?
b. What is the Operational Environment and what does it look like?
c. What is the FP challenge – the Threats and Hazards?
d. Why is effective FP required now?
e. Why effective (and resource-efficient) FP is perhaps not being provided.
f. What options exist to resolve this challenge?

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12. See JAPCC Conference 2018 Proceedings, The Fog of Day Zero – Joint Air and Space Power in the Vanguard.

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3. What is Force Protection? (The Agreed NATO Approach)

3.1 Section Overview. This section describes what FP is in the terms that the Nations have agreed to. In other words, it is NATO's approach in terms of policy guidance and the promulgated, doctrinal approach to the subject of FP.

3.2 Military Committee Guidance. The importance of FP for NATO-led forces is reflected in Military Committee (MC) 400/3, Military Committee Guidance for the Military Implementation of Alliance Strategy, where Protect is identified as a main capability area. The Protect Capability area is defined as follows:

'The capability to minimize through a common multinational and holistic approach to FP, the vulnerability of personnel, facilities, materiel and activities to any threat and in all situations, to include towards the effects of Weapons of Mass Destruction, whilst ensuring the Allies freedom of action and contributing to mission success. During deployed operations, it includes lines of communication and lines of supply and cyberspace.'

3.3 Definition of Force Protection. Force protection (FP) is subsequently defined as:[13]

'Measures and means to minimize the vulnerability of personnel, facilities, equipment, materiel, operations, and activities from threats and hazards in order to preserve freedom of action and operational effectiveness thereby contributing to mission success.'

3.4 Force Protection Applicability. FP is a joint function and essential to all operations.[14] All of the

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13. MC-0656, MC Policy for the Force Protection of Alliance Forces.
14. The other joint functions are command and control, intelligence, manoeuvre, fires, information, sustainment and CIMIC. While each joint function is unique, they also have related capabilities and tasks that, when considered in harmony, provide a solid framework for planning and conducting joint operations. For more on joint functions, see AJP-03, Allied Joint Doctrine for the Conduct of Operations.

Joint Functions need to be considered by the Joint Force Commander (JFC) in determining the capabilities required for each activity. Nations have differing FP philosophies, policies, and priorities. In a multinational force these differences, where possible, should be reconciled taking into consideration national caveats. Then an overall combined joint FP approach should be established, along with appropriate Tactics, Techniques, and Procedures (TTP), to facilitate unity of effort and enhance the effectiveness and resource efficiency of FP measures.

3.5 So What? Taking all of the above, it is offered that the conclusion should be that the ability to protect ourselves, and thus deliver the Mission, is based on our ability to deliver effective and resource-efficient FP. Current Joint Doctrine[15] depicts FP – see Figure 1 below.

Figure 1: Force Protection Fundamental Elements.

While Joint Doctrine incorporates the diagram in the Main Body with a description of each Element in Annex A, Air FP Doctrine[16] incorporates both and a further development provided in Figure 2, next page.

3.6 The Conceptual Web of Force Protection. Taking the concept espoused in Paragraph 1.5 (The Challenge Puzzle) and applying it to what is described as FP above, one can create a complex 'web' of relationships between elements. Each 'element' (e.g. Counter-Improvised Explosive Devices (C-IED) or Chemical, Biological, Radiological and Nuclear (CBRN) Defence) is a standalone subject but, needs to be considered alongside all of the other elements that are deemed necessary based on an understanding of the nature and scale of the threat and the application of Risk Management.

3.7 Risk Management. FP should be based on Risk Management. Casualties, deliberate or accidental, are a reality of military activity, and the desire to avoid them totally may impact adversely on the achievement of the Task or Mission; a balance of risk is required. Effective Risk Management allows the Commander to identify and implement mitigation measures in a continuum to minimize the likelihood and / or impact of threats and hazards. In addition, it is necessary to demonstrate that in planning for FP activities, a comprehensive Risk Assessment has been undertaken which is subsequently reviewed and updated regularly (or when the situation changes). Such an approach must also take into account time, as risk can accumulate as a function of exposure. FP Risk Management should aim to follow the principle of risk being As Low as Reasonably Practicable (ALARP). In addition, any risk needs to be demonstrably shared between Partners. It should be noted that some Nations may request others to provide FP capability to help mitigate their own risks. Equally, a Host Nation (HN) may request FP capability, the provision of which could build trust and maintain the moral authority of the Alliance. All of this said, it should be noted that in the contemporary environment, political appetite (driven by public opinion) for casualties could be such that there may be circumstances where risk elimination is deemed

15. The diagram is extracted from AJP-3.14, Allied Joint Doctrine for Force Protection promulgated 2 Apr. 2015 and remains in Study Draft 1 of AJP-3.14 Edition B, Version 1 posted on the Allied Joint Operations Doctrine (AJOD) Working Group Forum on 3 Jun. 2020.
16. ATP-3.3.6, NATO Force Protection Doctrine for Air Operations.

appropriate and necessary and as a result, will be directed by the Chain of Command. This will be because casualties and / or capability losses, were they to occur, could undermine resolve at the Strategic level. In such cases, achieving any given military Task or Mission will be challenging, and FP will need to be at the forefront of both planning for and conduct of activity. In this case, the arguments advanced here for re-investment in FP capability become even more imperative.

Force Protection Command and Control (FPC2) (Integrated Off and On-Base, Integrated with Air Operations) + FP Intelligence						
ACTIVE		PASSIVE		RECUPERATION		SECURITY
GDA Domination	GBAD	CBRN Defence	Resilience	Consequence Management	Medical	Security
• C-Surface-to-Air Fires (C-SAFIRE) • C-Indirect Fires (C-IDF) • C-Improvised Explosive Devices (C-IED) • C-Direct Fires • C-Recce • Influence • C-Intruder/Perimeter Defence (outside)	• Theatre Missile Defence (TMD) • Ground-Based Air Defence (GBAD) • Sense & Warn (S&W)/C-Rockets, Artillery & Mortars (C-RAM) • All Arms Air Defence (AAAD) • C-Fratricide	• Detection, Identification & Monitoring (DIM) • Warning & Reporting (W&R) • Hazard Management (HM) • Physical Protection • Medical Countermeasures (Med CM) • Sampling & Identification of Biological, Chemical and Radiological Agents (SIBCRA) • Release Other Than Attack (ROTA) • Toxic Industrial Hazards (TIH)	• Dispersal • Concentration • Redundancy • C-Surveillance • Physical Protection • MILENG Support to FP • Defence Against Electronic Attack. • Mutual Interference Prevention • Contribution of all personnel to FP of Self, Workplace & Base	• Post-Attack Reconnaissance (PAR) • Explosive Ordnance Disposal (EOD) • Restoration of Aircraft Operating Surfaces (RAOS) • Restoration of Essential Services (RES) • Fire Prevention, Fire Fighting & Rescue • Joint Personnel Recovery (JPR)	• Public Health • Health Maintenance • Treatment • Restoration of Health • Enhancement of Performance • Evacuation	• Entry Control • Operational Sy (OPSEC) • C-Intelligence • Info Sy • Cyber/Computer Sy • Physical Sy • Personnel Sy • Close Protection • Air Transport Sy (AT Sy) • C-Crime & Policing • Road Safety • C-Intruder/Perimeter Defence (inside)
Joint / Combined Force Protection Training (Pre-Deployment and In-Theatre)						
National Specialist Force Protection Training						
National Individual Training / Individual Common Core Skills (ICCS)						

Figure 2: Elements of Air Force Protection.

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4. Where is Force Protection Required? (The Operational Environment)

4.1 Section Overview. This section has three distinct parts. Firstly, a series of extracts from a variety of NATO and non-NATO publications that are offered for the purpose of demonstrating what is currently perceived and generally accepted as the place in which we exist and are expected to function, i.e. the Operational Environment. At this stage, it is suggested that the Operational Environment exists discreet from the spectrum of conflict. This is to say, it is irrelevant in the context of the definitions in the first part of this section, whether a state of peace, war or anything in-between exists. The second section looks to explain, again using extracts from publications, how the components see themselves within the Operational Environment. Finally, the third section looks to take the next step and develop a succinct description of the current environment in which FP must be effectively (and efficiently) delivered – a suggested FP-specific Operational Environment?

4a. The Operational Environment Described

4.2 Operational Environment. NATO defines the term 'Operational Environment' as follows:

'A composite of the conditions, circumstances and influences that affect the employment of capabilities and bear on the decisions of the commander.'

NATO Term

Continuum of domains

© JAPCC

4.3 Operational Environment. The Land Component adds more detail:

'The Operational Environment of today will consist of factors and conditions that must be understood to successfully apply military capabilities, protect the force and complete any task. It extends beyond the physical boundaries of a defined area. The operational environment includes the sea, land, air and space, the enemy, neutral, friendly and other actors, facilities, weather, terrain, the Electro-Magnetic Spectrum (EMS), CBRN threats and hazards, and the information environment. Most if not all of the factors that combine to create the Operational Environment, affect all of the domains and therefore, all of the military components; this is particularly true for the EMS as the Figure below highlights.'

*AJP-3.2, Allied Joint Doctrine for Land Operations*

4.4 The Electromagnetic Spectrum.

'The Electromagnetic Spectrum (EMS) is the range of frequencies of electromagnetic radiation and their respective wavelengths and photon energies.'

Encyclopaedia Britannica

4.5 Cyberspace.

'Cyberspace is defined as a domain characterized by the use of electronics and the electromagnetic spectrum to store, modify, and exchange data via networked systems and associated physical infrastructures. According to this definition, cyberspace
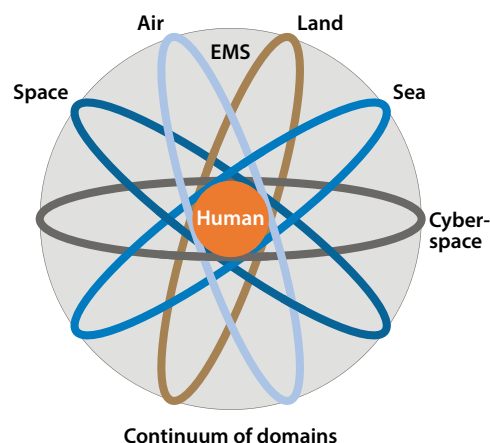
is a very real, physical domain that is comprised of electronics and networked systems that use electromagnetic energy. Cyberspace exists across the other domains of air, land, sea, and space and connects these physical domains with the cognitive processes that use the data that is stored, modified, or exchanged. Cyberspace is therefore distinct from the information that may be resident in or transferred through the domain.'

US National Military Strategy for Cyberspace Operations

4.6 The Information Environment.

'An environment comprised of the information itself; the individuals, organizations and systems that receive, process and convey the information; and the cognitive, virtual and physical space in which this occurs.'

AJP-3.10, Allied Joint Doctrine for Information Operations

4b. The Component Approach

4.7 The Components Within the Operational Environment. Moving on from describing the Operational Environment, in order to understand where FP will be required, it is first necessary to understand how each of the three main components view themselves within the Operational Environment.

a. Maritime Power.

'Maritime power is derived from the ability of a state or non-state actor to use the freedom of movement provided by the sea to exert diplomatic, economic, and military influence at a time and place of choice. Maritime power has traditionally been employed globally to maintain the freedom of navigation essential to the general economic welfare or survival of states. Conversely, it has been regularly used to disrupt an opponent's sea lines of communication (SLOC) as part of a wider Allied, joint, or combined operation.'

AJP-3.1, Allied Joint Doctrine for Maritime Operations

b. Land Power. NATO Doctrine provides no definition of Land Power; however, the following is offered for consideration:

'The use of the term "land power" reflects the dynamism of the strategic environment over the past 15 years. Land power encompasses the employment of an array of land capability – from Army and across government – to achieve specified objectives. The Army must always view itself not in terms of simply "winning the land battle", but as a force capable of exerting land power for strategic effect across the modern spectrum of peace, crisis and war. The term land power also raises [the] Army's concept of itself above this tactical "win the land battle'" and accepts that the generation of effects on the land also has strategic impact. It is multidimensional: land power may involve the employment of capabilities from all the operational environments (land, sea, air, space and cyberspace) to achieve results on land.'

Australian National Land Doctrine

c. Air Power.

'The ability to use air capabilities to influence the behaviour of actors and the course of events.'

AJP-3.3, Allied Joint Doctrine for Air and Space Operations

**4c. Where is Force Protection Required? –
A Suggested Approach
(The Operational Environment From
a Force Protection Perspective)**

4.8 The Force Protection Environment. Having looked at what constitutes the Operational Environment and seen how the main components view their role within the environment, to complete the picture, it is necessary to add FP to the mix. The UK's Royal Air Force has taken steps to define the 'world' in which their specialist FP practitioners operate; something that they describe as the Complex Air Ground Environment – see next page:

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4.9 Complex Air Ground Environment.

'The delivery of Air Force Protection (FP) demands an understanding of the airbase, and surrounding ground and airspace. This operational setting routinely comprises a significant number of high-value assets operating in three dimensions; a vast Electromagnetic (EM) signature; a diverse population (both military and civilian); and large quantities of volatile, and fragile materiel, all within a confined space. Within this context, FP activities must be coordinated with air operators, enablers, co-located units and adjacent ground-holding units; any of which may be coalition partners. Conceptually, this battlespace may be described as the Complex Air Ground Environment (CAGE).'

<p align="right">UK AP3002, Air and Space Warfare</p>

4.10 Going Further. Taking the above concept and associated UK definition and applying it to the other components delivers two further conceptual environments:

a. Complex Littoral Environment.

'The delivery of Maritime Force Protection (FP) (Harbour Protection and the protection of assets in port and at anchorage) demands an understanding of the harbour / port facility / anchorage, and surrounding ground and airspace. This operational setting routinely comprises a significant number of high-value assets operating in three dimensions; a vast Electromagnetic (EM) signature; a diverse population (both military and civilian); and large quantities of volatile, and fragile materiel, all within a confined space. Within this context, FP activities must be coordinated with maritime air operators, enablers, co-located units and adjacent ground holding units; any of which may be coalition partners. Conceptually, this battlespace may be described as the Complex Littoral Environment (CLE).'

<p align="right">Author-devised food for thought</p>

b. Complex Ground Environment.

'The delivery of Force Protection (FP) in the land environment demands an understanding of the asset to be protected and its function, the surrounding ground, airspace and if applicable, any maritime, littoral or riverine environment. This operational setting routinely comprises a significant number of high-value assets operating in three dimensions; a vast Electromagnetic (EM) signature; a diverse population (both military and civilian); and large quantities of volatile, and fragile materiel, all within a confined space. Within this context, FP activities must becoordinated with all actors, enablers, co-located units and adjacent ground-holding units; any of which may be coalition partners. Conceptually, this battlespace may be described as the Complex Ground Environment (CGE).'

<p align="right">Author-devised food for thought</p>

4.11 The Penultimate Step. It will be noted that there are many aspects of the definitions offered above that are similar if not identical. Given this linkage and what is offered as the generally accepted description of the Operational Environment, can a single conceptual approach be created? A suggestion for such a conceptual approach is offered below:

'The effective and resource-efficient delivery of Force Protection (FP) demands an understanding of the asset(s) to be protected and the surrounding environment. This setting routinely comprises a significant number of high-value assets operating in all dimensions; a vast Electromagnetic (EM) signature; a diverse population (both military and civilian); and large quantities of volatile, and fragile materiel, all within the delineated, NATO-owned space. Within this context, FP activities must be coordinated with all operators, enablers, co-located entities and adjacent units; some of which may be non-NATO partners. Conceptually, this operating space may be described as the Complex All Domain Environment (CADE).'

<p align="right">Author-devised food for thought</p>

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4d. What Should NATO Be Protecting?

4.12 Assets. The word 'asset' is used extensively throughout this paper. The term is suggested as the single word that best encapsulates everything that we may wish to protect. The term appears as a proposed input into a revised C-M(2002)50, Protection Measures for NATO Civilian and Military Bodies, Deployed NATO Forces and Assets Against Terrorist Threats, where 'asset' is defined as:

'NATO assets are installations, facilities, structures, equipment and other items, including systems and resources.'

This is an important consideration in this section as it makes the point that NATO will not be protecting everything within the Operational Environment but, only those NATO assets that are of strategic importance to the Alliance and where no one identifiable nation or group of nations could reasonably be made responsible for the provision of FP. This is because all Nations (to include Partners) will be present on and / or making use of the asset and the size, scope or duration of the FP task would be unmanageable as well as unsustainable for a single nation or, indeed, a group of nations. This is because:

a. Few nations are capable on their own of providing the full spectrum of capability likely to be required, particularly in a complex, high-threat environment and / or over a protracted period.
b. Likely threat scenarios show there is a need for an approach that facilitates nations working together to deliver a single, coherent FP effect.
c. The range of capabilities required to deliver FP can be considerable and an approach that creates a framework for the integration of capabilities from multiple nations is required.
d. Some NATO HNs through a simple function of scale will be unable to provide necessary levels of FP without significant reinforcement.
e. Non-NATO HNs and local authorities in any deployed theatre of operation may or may not be able, or willing to provide FP assistance to Allied forces.
f. The protection of the force from effects delivered through the cyber domain must always be considered.

In simple terms, the only way to protect large strategically important NATO assets such as those described in the following Paragraph is through a Joint, Comprehensive and whole-of-Alliance approach. Noting also that the requirement for FP applies across the entire spectrum of NATO activity, not solely to military operations in the context of Article 5 and Non-Article 5 Operations.

4.13 Assets to be Protected. The Paragraph above makes it possible to be specific in terms of defining what will need this 'whole-of-Alliance' approach, the list includes but, is not limited to:

a. NATO Headquarters facilities;
b. NATO Aerial Ports of Debarkation (APODs);
c. NATO Sea Ports of Debarkation (SPODs);
d. NATO Logistics facilities (other than APODs and SPODs);
e. NATO Lines of Communication (LOC).

Fixed installations in deployed operational environments, offer a ready target for attack as they are often large, static facilities, the location of which will generally be known to the adversary; this allows for detailed planning and preparation for an attack. NATO installations are limited in number and disrupting them could significantly restrict NATO Forces' freedom of action. FP of any fixed installations needs to extend beyond the installation boundary, as protection, influence and Command, Control, Communications, Computer, Intelligence, Surveillance, Target Acquisition and Reconnaissance activities must be conducted in the surrounding area to achieve effective protection of the installation and any vessel, vehicle, aircraft or personnel operating from it. The deployed operational environment and the HN's legislative framework, when and where available, will dictate how and by whom any activity beyond the installation's perimeter

is conducted. Note also that in addition to the above, proper consideration of the need for effective, 'real-world' FP is also essential for NATO training and exercise events.[17]

4.14 Provision of Capability. Clearly NATO, FP capability will predominantly be provided by the Nations and any Partners.[18] However, experience has demonstrated that there will be occasions when this approach is either impractical or impossible.[19] In this case, and where deficiencies exist, or where interoperability could be enhanced, Common Funding may be considered. However, for this to be an option, the requirement has to be properly justified. This includes within NATO documents[20] and the Threat Assessment.[21] In addition, there should be no viable alternate means of providing the capability, and the Risk and/or Impact Assessment is such that the capability gap cannot be tolerated.

4.15 Section Summary and Look Ahead. This section set out to explain the Operational Environment in which NATO FP exists. It is suggested that this environment can be described as the 'Complex All Domain Environment or 'CADE'. Within the CADE, NATO will need to take responsibility for protecting certain assets; these assets can be identified as those things that are strategic in nature, and as a result, operationally essential. All Nations as well as Partner Nations are likely to be present or use these assets and no one nation, or identifiable group of nations could reasonably be expected to provide the complete spectrum of FP required due to a function of scale and/or duration of the task. A Joint, Comprehensive whole-of-Alliance approach will be necessary, especially in complex, high-threat environments. A discussion of threats and hazards follows.

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17. Training events make an ideal target for an adversary noting that personnel could well be especially vulnerable if, for safety reasons, they are not provided with the means to protect themselves. In this type of scenario, separate, dedicated non-exercising personnel and equipment will be needed to provide FP.
18. National caveats on the employment of forces will always need to be considered, particularly when considering Rules of Engagement for Self Defence.
19. For example, for the FP of Critical Theatre Level Enabling Capabilities.
20. To include but not limited to: Doctrine, Standardization Agreements, Operations Plans, Standard Operating Procedures (SOPs) and/or a Combined Joint Statement of Requirement (CJSOR).
21. Noting that Threat Assessments are dynamic and will likely change over time, i.e. threats can increase and reduce over time.

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5. Threats and Hazards

5.1 Overview. Having defined what is meant by the term FP, described the Operational Environment in which it is likely to exist and what might need to be protected, the next step is to attempt to analyze the threats and hazards. Threats, hazards, and risks to the Alliance, its forces and activities are an extension of the day-to-day Operational Environment. As a start point when considering threats and hazards, because the scope and scale of Alliance activity is considerable, a number of 'Threat Environments' can be defined.

5.2 Threat Environments. In the absence of a common threat to all regions, local threat assessments may help focus FP efforts. Threats may range from lawlessness, terrorism, insurgency, and insider threats, through developing aggressor nations to major opposing forces. The terrorist threat may involve a full spectrum of activities ranging from intelligence gathering and kidnapping to large scale mass casualty attacks. When Chemical, Biological, Radiological and

Nuclear (CBRN) incidents or toxic hazards occur, the NATO-led force should be able to take appropriate countermeasures. Asymmetric threats should be considered by commanders and staffs when planning and implementing FP measures, tasks, and activities. NATO-led forces face an increased vulnerability to other asymmetric threats as well, including those conducted in cyberspace. The potential threat may be described in terms of five generic environments.

a. Negligible Threat Environment. There is no known entity with the capability and intention of conducting adverse actions against NATO interests in the country or location of current activity.

b. Low Threat Environment. The low threat environment recognizes that a general threat may exist and envisions an inherent risk of peacetime incidents, such as accidents, crime, disease, and fire, as well as increased threats which could include lawlessness, sabotage, and other irregular or asymmetric threats. Within a low threat environment, the possibility of air

and missile attack may be extremely remote. A State or non-State actor has been identified who may possess either the capability or intention of targeting NATO forces or individuals. Although possible, there are no specific indications of use of CBRN. Toxic Industrial Material (TIM) release is possible; however, industrial infrastructure and security levels are robust. The possible use of Improvised Explosive Devices (IEDs) and other explosive devices should be taken into account.

c. Medium Threat Environment. Recognizes that there are indications of attack planning based on intelligence without concrete information on the specific nature, target or timing established. Adversary propaganda portrays NATO in a generally negative light and attempts to capitalize on any operational setbacks. Forward NATO formations and areas could be attacked using conventional weapons against vital facilities. The threat faced over the entire NATO area of interest may range from unconventional warfare to limited conventional attacks. A State or non-State actor has been identified as possessing both conventional and CBRN capabilities with possible intentions of targeting NATO forces or individuals. There is an increasing risk of TIM release due to a decay of industrial infrastructure or a degradation of the security of industrial infrastructure. Enemy use of IEDs may be a major concern.

d. High Threat Environment. Recognizes that an attack is likely based on intelligence that an organization, nation, or group has been identified as possessing both the capability and intention to target members of the international community, including NATO, and will likely attempt to do so in the near-term. Adversary propaganda likely targets audiences in the HN and may be increasing in its intensity. Specific timings and targets have not identified. A State or non-State actor has been identified as possessing both conventional and CBRN capabilities with probable intentions of targeting NATO forces or individuals to include CBRN, and will likely attempt to do so in the near term. Release of TIM may occur with little additional warning due to weakness of industrial infrastructure or insufficient security of industrial infrastructure. Although enemy employment of nuclear weapons could be low, the risks posed by environmental hazards and CBRN contamination exist. Enemy use of IEDs is a major concern.

e. Critical Threat Environment. Recognizes that a specific threat exists or that an incident has occurred. Adversaries will not only attempt to communicate to target audiences in the HN, but also to audiences in NATO and non-NATO contributing nation to discredit HN and NATO-led forces, capabilities, and justification for action. Critical assets such as air and sea-ports of debarkation, Command and Control (C2) facilities,

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and key personnel may be targeted. A State or non-State actor has been identified as possessing both conventional and CBRN capabilities with clear intentions of targeting NATO forces or individuals within a specific timeframe or against a specific target. There is an immediate risk of CBRN or TIM release, without warning, due to damage to industrial infrastructure or a lack of security of industrial infrastructure. Enemy use of IEDs remains a major concern.

5.3 Hybrid Threats. No discussion of threats would be complete without discussion of the increasing presence of what are termed Hybrid Threats. Hybrid threats occur where conventional, irregular and high-end asymmetric threats are combined in the same time and space. Conflict could involve a range of trans-national, state, group and individual participants operating both globally and locally. In some conflicts, concurrent inter-communal violence, terrorism, insurgency, pervasive criminality and widespread disorder could occur.

5.4 Presence Posture Profile. The very presence of NATO Forces, how they appear and how they behave in an area or theatre of operations is likely to change the threat dynamic. Further, the nature of the contemporary operating environment is also such that the Alliance will always be targeted by, and be vulnerable to, cyberattack, particularly if any such attack is both sophisticated and sustained. Threats to the NATO Force may also arise from opponents opportunistically taking advantage of environmental hazards, such as climate or disease, or from human hazards such as TIM or Road Traffic Accidents (RTAs).

5.5 Scale. It is offered that the issue of the sheer scale of the NATO FP task is not something that is often recognized or discussed. This section discusses threats and hazards but, imagine if the types of things discussed here were present across a huge geographic area and affected significant numbers of NATO assets,

albeit at differing degrees of severity. At Paragraph 4.13, the types of NATO assets that are likely to need protecting are suggested. If NATO were looking to function at what has become known as Maximum Level Effort (MLE), the Alliance would need to protect a significant number of assets across a huge geographic area as well as the (NATO) LOC that would be necessary to keep these assets functioning. While assets and LOC in Afghanistan were targeted regularly during the International Security Assistance Force (ISAF) era, the adversary then did not have the assets to overmatch the Allies efforts. This would be a completely different case should we ever need to confront a peer or near-peer adversary. Such an adversary would be able to target a significant number of locations simultaneously across all domains. Examples include: APODs, NATO Maritime Facilities (SPODs, harbours, anchorages etc.), NATO Headquarters facilities, Logistics facilities, Lines of Communication and even irreplaceable civilian law enforcement and commercial facilities which, if denied to Nations and hence the Alliance, would have catastrophic consequences for the Alliance's ability to prosecute a successful campaign.

5.6 Exemplar Threat. In order to complete this section, what is now offered to the reader is a description of a possible threat. This 'model' dates back a number of years and was created by a multi-disciplinary group of specialists[22] for the purpose of developing a generic FP Estimate[23] for a NATO asset. The purpose of that exercise was to determine the necessary scale of FP footprint for a single location. Classification prevents more detailed discussion; however, the following is offered for consideration:

Individuals or small teams who may on occasions, for larger more complex actions, come together to work in groups of up to infantry section strength.[24] They will be well trained and motivated but, equipment whilst effective will be limited in sophistication such that if

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22. The threat described was developed by a working group with a number of nations represented; those nations agreed that it was credible. NATO intelligence specialists have stated that it represents a viable scenario.

23. The FP Estimate is a decision-making tool designed to deliver a course of action from a body of information. See AD 80-25, Allied Command Operation Force Protection Directive.

24. For the purposes of this paper, the term 'section' is used to describe a military sub-unit that could consist of between 6 and 20 personnel and is usually an alternative name for, and equivalent to, a squad. Two or more squads would make-up an army / marine platoon or an air force flight.

captured, the sponsoring nation will be able to maintain plausible deniability. Any enemy will not be identifiable as Regular Forces and will likely be able to move freely, without risk of identification, amongst the civilian population. It should be considered that the first 'Indication' or 'Warning' that threat is about to increase, is the occurrence of an actual attack on NATO forces which, at the time, will likely be reported by the media as a 'terrorist' or 'terrorist-style' attack.

5.7 Threat Manifestation. The reader will recognize similarities between the above and the occurrences in Ukraine/Crimea. The more senior reader will probably recognize a threat not dissimilar to the 'special/specialist forces' threat facing NATO assets during the Cold War (see Paragraph 2.4) during what was then termed as the 'Transition to War' phase. Also, note that this is a very simple, single-dimensional threat created for a specific purpose. Full exploitation of the Electromagnetic Spectrum will be inevitable and attack from other dimensions should be anticipated as any situation deteriorates/tension increases. This escalation of threats could be described as follows:

a. Threat – Low. At the lower end of the threat spectrum would be propaganda activity, escalating to protests which may become increasingly violent. Asset Entry Control Points (ECPs) and any personnel off-base identifiable as military[25], would be an obvious focus. As tensions rise, protests could be used as a 'front' for more kinetic activity and a capability to counter and disperse a 'Lethal Riot'[26] will need to be considered. Espionage activity will peak, and NATO forces security posture will regularly be probed to identify any weakness for future exploitation.

b. Threat – Medium. As the situation develops, acts of violence will become more widespread, and personnel outside of the base will be a particular vulnerability. Logistics supplies and accommodation areas are likely to be targeted. The adversary's weapons will range from knives and clubs, through petrol bombs, to small arms. At this stage, it is likely that the IED will emerge as a threat, and will be increasingly present at higher Threat Levels.

c. Threat – High. At the higher-end of the threat spectrum will be the use of crew-served weapons, mortars and Man-Portable Air Defence Systems (MANPADS). These will not be used in the conventional military sense but will be employed in specific, well-coordinated actions designed to have maximum media impact (and corresponding political impact in NATO/Europe). Adversary tactics will likely be 'shoot and scoot'[27] with any adversary unlikely to want to engage in a force-on-force confrontation unless surprised/cornered.

d. Threat – Extreme. Immediately prior to open conflict, an adversary would likely be mounting coordinated complex attacks from multiple firing points. The time between attacks would be reducing and NATO activity would be being severely disrupted. Airborne assaults to seize key NATO assets for future adversary use could not be discounted. Rapid deployment of Air Defence units should be considered. The focus of NATO FP forces may be to facilitate the conditions for an ordered but rapid redeployment of equipment and personnel.

5.8 Missing Threats. There are clearly threat vectors (e.g. ballistic missiles, use of CBRN weapons etc.) that are missing from the above. However, the possibility exists that a future adversary will maintain their actions at a level that is just below the threshold where all Allies will be willing to support the declaration of Article V – Collective Defence. This does not mean that NATO facilities will not be regularly targeted just that both nationally and collectively the freedom of manoeuvre of FP forces will be restricted both physically and legally. Understanding how to function effectively in this operationally constrained environment is fundamental to future success; preparing for such a scenario is essential going forward.

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25. This will be a particular challenge if accommodation on-base is not available because it either does not exist or, it is occupied by other military personnel in transit (e.g. land force reinforcement).
26. A Public Order (Riot) situation that, if not contained and subsequently dispersed, could lead to fatalities.
27. Deploy, fire 4–6 rounds, move, hide, wait, repeat etc.

Natural hazards or man-made disasters cannot be ignored.

5.9 Borders. Current adversaries, be they peer or near-peer, terrorists or organized crime do not recognize international borders. In the future, history would appear to indicate, peer or near-peer adversaries will attempt to operate (certainly in the earlier stages of a developing crisis), in a manner that is non-attributable and / or replicates the activity of terrorists or organized criminals. NATO describes threats as being 360° in nature. An alternative or supporting descriptor is that threats are 'contiguous'. There are no borders that the adversary recognizes and as such there are no rear areas or safe-havens. The Homebase is as at-risk or even more so now than it has ever been.

5.10 Timing. It is suggested that any peer or near-peer adversary will likely 'play the long game'. If world events conspire to create a situation where any adversary perceives that NATO (or a number of larger nations) is / are occupied elsewhere, then they may act. It is offered that it is unlikely that this would happen if any potential adversary were themselves already involved militarily elsewhere. In those nations perceived as peer or near-peer competitors, a lack of military interventions anywhere else could be viewed as a prerequisite for an escalation of activity against NATO. Contemporary threats mean that, even in peacetime,

Allied forces are now vulnerable during routine daily activity at the home-base.

5.11 Indications & Warnings. Following from above, a lack of potential adversary involvement elsewhere can be seen as a possible indicator of future adversary action against the Alliance. When considering the threat scenario described above, a 'roadmap' to crisis can also be hypothesized and can be summarized as follows: Increasing covert multi-domain activity supported with overt propaganda and / or so-called fake news. This would be designed to create political instability leading to public disquiet. This, in turn, would be exploited in order to generate public unrest. A 'fifth column' could fuel 'nationalist' sentiment or disquiet about a range of subjects; subjects may vary between nations. The purpose would be to distance the population from government and in turn, this would make gaining consensus for any response more problematic. Gradual escalation of the situation would lead to public protest eventually leading to violence and apparent acts of terrorism. The overarching objective would be to create widespread instability that the adversary could then further exploit. It is no secret that areas on the geographic edge of NATO are likely to be more susceptible to this type of activity.

No one Nation will be able to take care of FP; a whole of Alliance approach will be required.

Ultimately, any adversary would wish to destabilize an area to such a degree that external (adversary) intervention could be portrayed as the only viable means of recovering the situation. An adversary would be able to engage, citing its actions as a force for peace/stability whilst concurrently accusing NATO/Europe of a failure to act. An alternative scenario would see much more rapid intervention if any adversary believed it could act, secure territory rapidly and in so doing present NATO with the unpalatable challenge of having to restore sovereignty. This later scenario provides robust support for the argument that a more resilient posture is required now (see Paragraph 2.15). The possibility is currently remote but, it is not inconceivable in the future that the first indication or warning of crisis, is an adversary action that NATO subsequently finds it difficult to reverse due to an inability to gain consensus for the necessary military action leaving the adversary as 'the victor'.

5.12 Hazards. The nature of the Alliance is such that it may be called upon to respond to natural disasters (e.g. earthquake, tsunami, drought, fire, hurricane etc.) or disease epidemics/pandemics. In addition, natural disasters may occur in a region where NATO is conducting military operations. In both cases, natural disasters may lead to man-made disasters; a recent example of such (11 March 2011) would be the Fukushima Daiichi Nuclear Power Plant in Okuma, Japan. In this example, an earthquake caused a tsunami, which in turn, flooded the pumps providing cooling to the reactors and caused nuclear meltdowns, hydrogen-air explosions and the release of radioactive

material. On a smaller scale, weather, climate, terrain, vegetation, wildlife, disease and interaction with the local population (e.g. sexually transmitted diseases) all present hazards to personnel (military and civilian) whilst engaged in NATO activity. It is also worthy of note that hostile activity may either as an intended or unintended consequence, create a hazard if adversary activity causes an event such as a release of a Toxic Industrial Material (TIM).

5.13 So What? If it were conceivable that the Alliance could have both perfect intelligence (to forewarn of any and all impending threats and hazards) and then also have the ability and will to act in all cases pre-emptively, then there would be no requirement for FP. All threats and hazards would be neutralized before they could manifest themselves to degrade capability and/or remove or limit freedom of manoeuvre. Given that this is an unrealistic proposition, the Alliance MUST have an effective and resource-efficient FP capability in order to protect capability and maintain its freedom of manoeuvre in order to bring any or all capabilities to bear at a time and place of the Alliance's own choosing. It is offered that without the ability to protect and use capability, the ability to deter is undermined and hence, the principle of Deterrence both conventional and nuclear is also undermined. Therefore, it is difficult to argue that achieving effective and resource-efficient FP should not be a fundamental consideration in every NATO activity. Furthermore, at the classified level, the Alliance has databases of assets that would need to be protected in the event of a rise in tensions with a peer or near-peer adversary. If the threat outlined here where to be ranged against only a relatively small percentage of these facilities, the resources required for FP would be considerable. Do we currently have any appreciation of this task? Many will baulk at this, however, given the threat described and the number of designated NATO assets likely to be required to execute an operation at MLE, it is difficult to ignore the size of the NATO FP challenge. Furthermore, if an adversary could achieve its objectives while NATO struggles or fails to agree on a way ahead, under Article V or otherwise, we risk a situation where a failure to adequately protect assets now, leads to Alliance failure in the future.

6. Challenges

6.1 An Introduction to the Challenges. In terms of creating an actionable list of challenges that affect FP in NATO, two linked approaches are offered. One using the NATO Capability Development, Lines of Development[28]; the other, using the traditional Staff Divisions found in headquarters. It is conceived that the Lines of Development approach and the issues identified here are predominantly issues for the Nations to address and attempt to resolve. The issues described using the Staff Divisions approach are more, as the approach would suggest, for headquarters to resolve (note no distinction is made between National and NATO headquarters). Perhaps a simpler, more obvious way, to think about this is about development of capability and then the subsequent employment of that capability (in a NATO context). The NATO Lines of Development and traditional Staff Divisions are listed and briefly described below:

a. NATO Lines of Development.

   i. Doctrine – how the operation or activity should be conducted;
  ii. Organization – how the force is organized to operate (units, sub-units etc.);
 iii. Training – how to prepare to operate / fight;
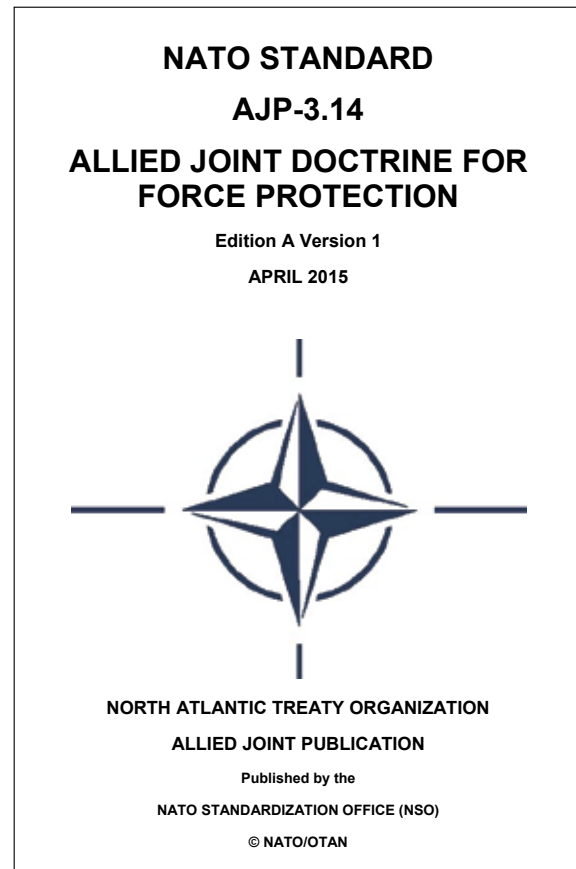 iv. Materiel – everything required to equip the force to operate;

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28. Doctrine, Organization, Training, Materiel, Leadership, Personnel, Facilities, Interoperability (DOTMLPFI).

v. Leadership (and Education) – how to prepare leaders at all levels to operate (professional development);

vi. Personnel – the availability of trained, current and competent personnel to fulfil the defined task;

vii. Facilities – operating infrastructure for the force, both technical and domestic. Expanded to include technical means of delivering FP;

viii. Interoperability – the ability to be interoperable with forces throughout the Alliance (to include Partners).

b. Staff Divisions.

i. J1 – Personnel & Administration;
ii. J2 – Intelligence;
iii. J3 – Operations;
iv. J4 – Logistics;
v. J5 – Plans;
vi. J6 – Communications and Information;
vii. J7 – Training & Exercises;
viii. J8 – Finance;
ix. J9 – Civil / Military Cooperation (CIMIC).

As described in section 3, FP can be thought of as a jigsaw puzzle with many pieces all coming together to form a whole. The analogy continues as the pieces (the so-called elements of FP) have relationships with the pieces around them and without these relationships, the picture will not come together and make sense; equally all of the pieces have to be present. In a general paper like this, without specific scenarios, it is difficult to give proper weight to each piece of the puzzle, each element of FP, each Line of Development or the role of each Staff Division. It stands to reason that the importance of each aspect will vary depending on the activity being undertaken and the stage or phase of that activity that is being considered? However, going forward, it is offered that the reader should initially consider all aspects equally and understand that there are symbiotic relationships between all aspects; again, this concept of the 'spider's web of FP'.

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6a. Challenges by Lines of Development

6.2 Doctrine. NATO FP Doctrine it is offered is a real success story. The Alliance has a hierarchy of publications that cover all aspects of the subject. This success can be attributed to the work of the NATO Force Protection Working Group (FPWG), Doctrine Organization and Interoperability (DOI) Panel. This body has regularly come together in Working Groups consisting of National and NATO Subject Matter Experts (SMEs)[29] to either directly write, or to provide advice and guidance to others (usually the components or NATO Command Structure (NCS) entities), on the writing of NATO FP publications. This has resulted in a suite of FP publications (shown below) that is both up-to-date and fit-for-purpose. Furthermore, having a single Joint and Comprehensive entity, the DOI

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29. FP SMEs in NATO appointments meet in a group referred to as the NATO Force Protection Advisory Group (FPAG). The NATO FP Working Group (FPWG) is the forum where National FP SMEs come together.

Panel, 'overseeing' the development of doctrine, ensures that documents are consistent with one another and are reviewed both as mandated by the normal NATO Doctrine review cycle and / or if required by major change(s) in the approach to activity, new structures or the operating environment.

a. Political. Military Committee Policy for Force Protection, MC-0656, dated 24 January 2018.
b. Strategic. Allied Joint Doctrine for Force Protection, AJP-3.14, dated 2 April 2015. Currently in the process of review with Study Draft 1 of Edition B, Version 1 offered to the Nations on 3 June 2020.
c. Operational. Allied Command Operations (ACO) Force Protection Directive, AD 80-25, dated 22 January 2018.
d. Tactical.
    (i). Allied Maritime Force Protection, ATP-74, dated 13 July 2015;
    (ii). Allied Maritime Harbour Protection, ATP-94, dated 7 April 2017;
    (iii). NATO Force Protection Doctrine for Land Forces, ATP-3.2.?, currently in development.
    (iv). NATO Force Protection Doctrine for Air Operations, ATP-3.3.6, dated 8 April 2016. This document will be reviewed following completion of the review of AJP-3.14.

6.3 Organization. In terms of current FP capability, only 11 x NATO Nations have stated that they either have, or have the intent to develop, a specialized FP capability.[30] The re-shaping of forces, primarily driven by a lack of resources for defence within many nations[31], has overtaken this declaration. The reality, therefore, is that today, very few nations have a truly dedicated, appropriately robust FP capability able to:

a. Undertake (FP) Mission Analysis[32];
b. Develop and maintain a FP plan;
c. Deploy a full-spectrum FP capability in accordance with current Alliance FP Doctrine;
d. Deploy at scale;

e. Meet and overmatch a peer or near-peer adversary;
f. Counter multiple threats concurrently;
g. Be sustained over a protracted period of high-tempo activity.

While the above is far from a complete list of the lack of capability, it serves to highlight that few nations are able to deliver and more importantly Command and Control FP activity in a complex, high threat, high tempo environment (i.e. in the Complex All Domain Environment (CADE)) as described in more detail elsewhere. The reader may ask: How have we gotten into this situation? The answer, while not detailed or even complete, has the following facets:

a. The post-Cold War desire for a 'Peace Dividend;
b. The further recession-driven desire for savings;
c. Focus on front-end capability and a lack of focus on enablers;
d. Assets within Alliance territory have not routinely been targeted;
e. Involvement in low-risk activity and / or we have grown complacent due to the general overmatch over adversaries and the relatively low risk to friendly forces that we have previously enjoyed for a good number of years.
f. Others have met the necessary FP resource bill.

6.4 Training. As can be seen from the description of what FP is, it will always be a complex subject to train, exercise, execute and evaluate. However, this should not be used as a valid reason not to train, just because it is difficult does not mean it should be ignored; quite the opposite. A lack of FP training now could well be the Alliance's 'Achilles Heel', in the future. It is likely that the entire Joint Force, to include any attached civilians, will require some form of FP training. This training will span training for those who are employed in dedicated FP appointments (individuals, formed units and composite units constructed from multiple force elements etc.) through to very basic training in how to

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30. All either in or, to be developed within, the Air Component.
31. Much if not all stemming from the last global financial crisis circa 2008–10.
32. What some may describe as 'conduct the FP Estimate'.

react within the office environment to an incident at a facility's main gate. A key challenge to be overcome from the outset is that the raison d'être of FP is to minimize vulnerabilities in order to preserve freedom of action and operational effectiveness (see Definition of Force Protection). So, by definition, training needs to be conducted that replicates the 'real' threats and hazards that could occur in the contemporary operating environment. Doing this in isolation in a dedicated training environment (e.g. a dedicated week of FP training for new recruits) could be considered relatively simple. Doing it in either a broader training environment with a multitude of other equally complex subjects being trained or, in a real-world environment where day-to-day activity must continue, is challenging to say the least. The problem is that training for FP requires training serials that are designed to simulate events that will have a negative impact on our activity (e.g. an asset affected by flooding or subject to adversary attack). Therefore, personnel in responding to an incident are diverted in some way from their primary task and business has to adapt to take account of the threat or hazard. It is offered that commanders need to be comfortable with the continuous need to reprioritize as situations develop and personnel need to understand that they could have to deliver their output in a degraded environment. All too often, FP training serials are dealt with by dedicated FP specialists and FP events are not played-through the whole force in order to demonstrate that all personnel need to be ready to play their part in FP. Unfortunately, the old adage of 'train hard, fight easy' remains valid.

A lack of FP training now, could well be the Alliances 'Achilles Heel', in the future.

Vignette: A great example of a lack of training and its impact in the real-world has come out of the COVID-19 Pandemic. Medics have been unable to function while wearing Personal Protective Equipment (PPE) because they have never trained to wear it and when they have donned it for the first time, they were not used to the way it impaired their manual dexterity or impacted their ability to communicate within a team. When was the last time you wore a respirator for more than a few minutes?

6.5 Materiel. As offered earlier in this paper, as an Alliance, we have so far either failed to acknowledge or to recognize in the first instance the scale of the FP challenge that we face. If the scale of the challenge were to be recognized, then it would be immediately become clear that the amount of materiel required in support of the FP effort would likely be huge (dependent on the nature and scale of any threat or hazards likely to be encountered). This, in turn, would create a significant additional burden on Logistics. There is a further complication to the 'Materiel' discussion. Any modern Force is a massive consumer of resources (e.g. fuel, ammunition, food, water, etc.) and all these resources need to be protected, which in turn requires a substantial FP footprint. This FP requirement then becomes a further consumer of materiel! This particular discussion is a great example of the complexities of the FP challenge. Reducing the resource requirements of a Force could greatly contribute to the overall FP effort, through reducing the amount of Logistics activity that requires FP.[33]

6.6 Leadership (and Education). There are some critical weaknesses in this area. Firstly, when headquarters were confronting regular FP challenges in the ISAF era, the student cohort on the NATO FP course of the time was far more senior and came predominantly from two sources, either the headquarters staff environment or deployed / deploying forces. They wanted to know about FP because it was something they worked on, on a daily basis. More starkly, body bags were coming off the back of planes, being reported by the media, populations were engaged, governments were focussed, senior military leadership was under scrutiny, and FP had some priority. Now the student cohort is younger and less senior

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33. A lesson identified during ISAF was that at one point 70% of all ISAF activity was focussed on self-sustainment. The FP effort required to protect logistics convoys was substantial, particularly given the Improvised Explosive Device (IED) threat that existed.

(and as a result, may have no actual experience of the threats and hazards to be protected against) and come predominantly from national units. Furthermore, NATO Command Structure Adaptation has taken place and a combination of competing priorities as well as gaps in the filling of the revised Peacetime Establishment (PE), has reduced the attention being given to FP. While this lack of attention can be explained, can it be justified given the operational environment? Furthermore, when any capability is neglected, it cannot subsequently be immediately regenerated and expected to 'perform' when the need re-emerges, often without warning. Our lack of attention to the FP challenges that we face and have highlighted elsewhere in this paper could present a major problem, or worse, lead to significant failure (losses of personnel, materiel, territory, reputation etc.). This includes impacting on our Centre of Gravity – Alliance Cohesion. Or, in this case, a shattering of Alliance Cohesion.

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6.7 Education of Leadership. The good news is that notwithstanding the comments above, NATO now has a relatively robust FP education programme run at the NATO School, Oberammergau. This consists of 2 courses that provide an introduction to FP – the P5-40, Introduction to FP in NATO Course, and the more advanced 'how to do it' N3-155, NATO Advanced FP
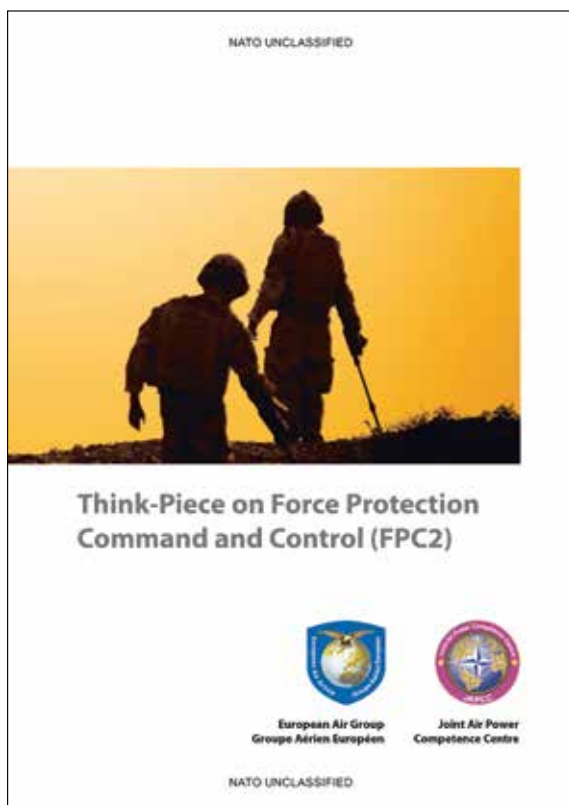
(Practitioners) Course. This latter course was developed with the NCS as the primary customer and has been recently NATO Accredited. It was developed as a result of the NCS identifying that there was a lack of FP SMEs available in the NCS. The Nations within the FPWG sanctioned development as they too wanted to take advantage of an opportunity to develop specialist FP knowledge. This paper attempts to highlight the size and complexity of the current FP challenge that NATO faces. As such, the organization needs leaders that are properly trained and educated so that they recognize that FP cannot be ignored, even in so-called 'peacetime'.

6.8 Personnel. Historically, only 11 x NATO Nations have stated that they either have or, have the intent to develop, a specialized FP capability.[34] The subsequent re-shaping of forces, primarily driven by a lack of resources for defence within many nations[35], has overtaken this declaration. The result is that very few nations have a truly dedicated, appropriately robust FP capability able to undertake the types of activity listed at Paragraph 6.3 a–g. It is offered that because we have so far failed to collectively acknowledge the sheer scale of the FP challenge, we have failed to identify the numbers of trained, current and competent personnel needed to deliver effective FP in the contemporary operating environment? Furthermore, Nations seized the 'Peace Dividend' and started to reduce what was then considered non or less-essential capabilities. This has resulted in even those nations with a dedicated, specialist FP capability having far fewer personnel available. In many cases, FP is now reduced to the provision of Security in relatively benign environments. Personnel are not trained or equipped to operate in a more hostile environments and numbers are such that any capable adversary operating in teams of greater than 2–3 personnel would easily be able to overwhelm the defenders. The apparently ever-decreasing numbers of personnel engaged in FP has also led to a lack of personnel capable of functioning in the FP Command and Control (FPC2) role. In

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34. All either in or, to be developed within, the Air Component.
35. Much if not all stemming from the last global financial crisis circa 2008–10.

many of the nations that have dedicated FP specialists, dedicated FP units are now so small that the officer and non-commissioned officer cohort is now not able to gain experience much above platoon level. This means that when these nominal FP specialists come into more senior appointments, through no

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Think-Piece on Force Protection Command and Control (FPC2)

European Air Group
Groupe Aérien Européen

Joint Air Power
Competence Centre

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This issue is discussed in further detail in another EAG/JAPCC publication.

fault of their own, they have little or no experience of protecting major assets (see Paragraph 4.13) in complex high-risk environments.[36]

6.9 Facilities. The reader is reminded that this is a discussion about the Capability Development, Lines of Development as they apply to FP. Specific to the linkage of FP and Facilities, two issues need to be addressed:

a. Facilities for FP. In simple terms, because the scale of the FP task is not truly appreciated, the requirement for facilities both technical and domestic to support the FP effort is also currently unquantified.

b. FP of Facilities. We are ignoring the lessons of the past and are failing to consider FP as an important factor when designing facilities. A fundamental question should be: In times of crisis, how would any asset operate? In other words, we might have superb headquarters, logistics facilities, airfields and ports but, if attacked, how would we 'fight' these platforms?

6.10 Interoperability. The scale of the FP task can be quantified with some effort. If then the resource burden is even partially recognized, the numbers required (somewhat dependent on the threat) are likely to be 'eye-watering' for some. It is unlikely that all FP will be provided by dedicated specialist units nor will this be necessary so long as delivery of FP Effect is planned, controlled and coordinated by FP SMEs (see Personnel and Leadership). Therefore, true Interoperability is not required just 'Operational Compatibility'. This means that the FP construct for any asset can be Multinational, Joint and Comprehensive. A specialist FPC2 element with a FP Group comprising both military and civilian specialists delivering all of the required Elements of FP (in accordance with NATO FP Doctrine), is deemed necessary by the analysis of the FP requirement noting that this requirement will be dynamic.

6.11 Summary of Issues. It is offered that the following points are a synthesis of the key Capability Development issues with respect to FP:

a. Many nations lack a dedicated, robust FP organization;
b. There needs to be a balance between effectors and enablers;
c. All nations need to be able to contribute;
d. NATO FP training focuses on a few specialists and rarely involves the whole force;
e. The scale of FP task to protect Logistics is considerable, and the materiel required to support the FP effort is either not recognized or, is being ignored.

36. It was the identification of this challenge that gave rise to the NATO Advanced Force Protection (Practitioners) Course.

f. The size and complexity of the FP challenge is such that it has to be addressed and given appropriate priority by leadership now.

g. There are insufficient trained, current and competent personnel dedicated to the FP task to include FPC2.

h. Facilities need to be designed with the need for FP in-mind, and FP resources will need technical and domestic facilities in order to function, particularly for protracted periods.

i. The scale of the FP task will be such that non-specialist units and individuals will need to be employed in dedicated FP roles. This is not an issue so long as there is a dedicated, specialist FPC2 element.

j. There needs to be a whole-of-Alliance approach to FP.

6b. Challenges by Staff Division

6.12 Sub-Section Overview. A question posed regularly is where should FP be found in a headquarters? The simple answer to this is wherever it is necessary and in turn, the answer to this later question will be driven by a combination of workload and 'battle rhythm'. It should be acknowledged that both workload and 'battle rhythm' will change over time. By way of introduction to this section, the key perceived challenges are as follows:

a. No two Nations regard FP in the same way, so the organization of the function remains confused within NATO. Different commanders will have different ideas, based on their own experiences, of where FP should reside and what utility it delivers.

b. No two headquarters or units are organized and staffed the same.

c. The need for FP seems only to be recognized when the threat has materialized. FP is something that is only necessary in 'real' operations, therefore, it can be ignored during routine activity (see also exercise planning).

d. FP is not prioritized. When there is no immediate perceived threat, FP becomes an encumbrance.

e. FP 'Cells' are routinely understaffed as a result of FP being 'robbed' in order to resource other areas that are the priority of the moment.

f. Many FP billets are filled by non-specialists who are unaware of the NATO approach or context of the issue(s).

g. There are no senior FP appointments, therefore, FP can be 'excluded' when convenient.

h. Each headquarters has developed its own (unique?) battle rhythm.

i. FP not given sufficient weight in exercise planning.

6.13 J1 – Personnel & Administration. The staff in this division should understand what Human Resources are required in support of the FP task. In the case of a NATO Headquarters, with this understanding their primary function, in respect of FP, should be to ensure that the necessary Force Generation occurs and that those assets generated are fit-for-role.

6.14 J2 – Intelligence. FP needs dedicated Intelligence support. This paper argues that FP in the NATO context is to do with the protection of assets that are of strategic interest to the Alliance. It is likely that such an asset will be of considerable scale and many nations (to include Partners) will be operating in or from that asset. The nature of the asset will be such that, no one nation or identifiable group of nations could reasonably be made responsible for FP, therefore, a whole-of-Alliance approach to FP will be required. The effective and resource-efficient FP of any asset requires the FPC2 element to truly understand the challenge. In the military setting, the need for 'Situational Awareness' is often quoted. To effectively protect an asset awareness is insufficient; understanding is required.

Situational Awareness + Analysis = **Comprehension** (and the commander must truly comprehend the nature of the task).

Comprehension + Judgement = **Understanding**.

With understanding comes foresight and this allows the commander to 'Protect' proactively not just defend reactively.

6.15 J3 – Operations. In the conduct of most if not all activity, FP needs to be considered. This consideration

has two distinct yet inextricably linked elements. The first is the need to 'protect' activity. Second, is the need to react when a threat materializes. The challenge in terms of conduct of operations is that, as this paper argues, a substantial element of NATO 'operations' is the effective and safe running of key enabling assets (see Paragraph 4.13 a–e). It is offered as a 'truism' that tactical activity, irrespective of domain, with NATO assets will be conducted in a manner that has FP considerations built-in and it is not something that is considered separately. However, the FP of NATO assets is something that does need specific consideration within J3 because of the likely scale and complexity of the task. Therefore, robust FP representation is required within J3.

6.16 J4 – Logistics. It is suggested that specialist FP input is required in at least the following J4 areas:

a. What FP activity and hence resources are required in order to ensure logistics?
b. What logistics support and at what priority does FP require?
c. FP input into infrastructure development.

Vignette: A patrol is in contact some miles from their operating base; they require ammunition resupply. The operating base is then attacked and the FP element requires ammunition. Where does the priority for resupply lie? It is these kinds of challenges that need to be at least war-gamed if not exercised so that when the situation arises, the commander can react with an understanding of the consequences.

It is offered that the importance of effective Logistics has been recognized for some time.

'To be effective, an army relies on good and plentiful food.'

Napoleon Bonaparte

However, do we truly understand (as non-Logistics specialists) what it will really take in terms of Logistics to support NATO activity at scale? Clearly, a sub-

stantial part of the Logistics effort will be conducted by the Nations themselves. However, there will still be a considerable need for NATO-owned, NATO-delivered Logistics because without Logistics, the 'resource-hungry' NATO machine will quickly become degraded and our adversaries are well aware of this. Therefore, there is a requirement for NATO to consider the need for FP of NATO Logistics, and as a result, there is a need for a robust FP input into the J4 area. In a similar vein, there is a requirement for FP input into NATO infrastructure development to ensure assets can be protected as well as denying any adversary an easy 'win' because facilities, particularly those that have a role in crisis, have been developed with a peacetime mindset (e.g. unprotected NATO bulk fuel facilities).

6.17 J5 – Plans. FP capability requirements compatible with NATO's Level of Ambition will be identified through the NATO Defence Planning Process (NDPP). NATO and NATO-led Forces will be vulnerable throughout all phases of any activity (especially when infrastructure is not yet in place and information on the situation is incomplete) and the initial FP capability requirement for any activity should be identified by the Operations Planning Process (OPP). Is this happening? It is suggested that the current system of planning, while having the term FP within the construct, only pays scant attention to the subject? Why? Because FP is difficult to do, is often resource-intensive

and Nations want to be 'on mission', not guarding assets (see also Paragraph 6.13). FP only becomes a serious consideration once a particular Course of Action has been selected[37] and / or when threats and / or hazards materialize. A means to respond then needs to be developed rapidly, and as a result, it is often suboptimal because it is difficult to reverse-engineer a plan to incorporate something that should have been seamlessly integrated from the start. Furthermore, what will then be seen as a 'change' to the plan, has to be resourced by the Nations and so the cycle of hastily planned, under-resourced NATO FP begins. At the heart of the problem is that NATO planners are usually too remote from the subjects and areas for which they plan.[38] As problematic, is that the 'staff process' rarely allows sufficient time to research and / or reconnoitre an area of interest. When reconnaissance does take place, teams are constrained in both numbers and time, and it is invariably the 'senior' generalists, not the specialists, who travel. This results in details being missed or discounted, and plans being developed that are flawed (certainly in FP terms) when implemented. This challenge is compounded over time within the headquarters, particularly if not implemented immediately, as 'the plan' overtakes reality as fact. An important element to consider is where a HN

is asked about its FP posture. Sometimes through either a failure to understand the question or, more likely, a desire not to be seen wanting, deficiencies are overlooked and false or incomplete information is provided to the planning team. Finally, while the requirements to protect the force need to be incorporated into planning from the outset, so does the assumption that an adversary will, from time-to-time, be successful and hence, resilience measures to include response to incidents needs to be built-in to any plan from the outset.

Vignette: NATO strategic assets are badly damaged during an exercise by an adversary missile attack. The commander asks how this was allowed to happen; why was this asset not on the defended asset list? The answer provided was that in apportioning resources, the decision was made not to provide resources for the protection of the location in question, as it was a fully hardened facility. Plans stated the asset was hardened; in reality it was not. How much other information in plans is incorrect because plans were written in a hurry by staff officers with no knowledge of the theatre for which they were planning?

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37. This is an issue because basing options have already been selected, and FP has no opportunity to influence the decision.
38. Planning conducted in headquarters many hundreds of miles or more from the area where the activity being planned is to be conducted.

6.18 J6 – Communications and Information. Like Logistics, there are two broad aspects of this area. Firstly, the correct provision of Communications and Information Systems (CIS) support to the FP area. If the FP element of any plan is correct, then it would be hoped that there would be appropriate provision of CIS resources. The second element is the vulnerability of systems to adversary attack. Clearly, this is a J6 responsibility, and Cyber Defence is now hopefully recognized as essential? However, there is what could be described as the 'physical' element to securing NATO CIS. One only need look at a NATO facility from a distance and count the number of antennas of various sizes and types to start to understand that the loss of these antennas or the power to the systems that they are connected to would be a major issue. For example, securing access to Space and Space-based systems starts with the protection of facilities on the ground. Therefore, there is a FP element to CIS support and a requirement for CIS specialists to be conscious of FP challenges.

6.19 J7 – Training & Exercises. A key area. Like any endeavour that is successful, FP does not just happen, it has to be continuously trained and practiced (see also Paragraph 6.4). The main challenges that it is suggested can be influenced by J7 are as follows:

a. Identify the FP Training Requirement. What is it the headquarters is responsible for, and what are the FP challenges associated with those responsibilities? An understanding of the answer to this question would allow a list of prioritized Training Requirements to be developed. Once agreed, these would form the basis for FP training during the next training cycle. Any FP Staffs present in the headquarters, caveated by the comments at Paragraph 6.8, should be able to articulate the Training Requirement.

b. Realistic Training. When plans are exercised, it is all too easy to either not run realistic and challenging FP serials and / or, because commanders do not wish to be seen to fail, overlook or 'adjudicate away' events that have not gone as we would have wished. Again, the issue can be condensed into a single problem; there is no experienced, specialist FP input being

made early enough to affect the development of plans / training plans such that FP is given substantive consideration. It might further be argued that FP should be a primary consideration given the likely effect of major incidents on the support that Nations are able to provide to NATO activity.

c. Response to Incidents. What might an adversary be able to achieve in terms of a Most Likely and Most Dangerous Course of Action? Training needs to be geared to responding to these expected as well as most demanding scenarios. While every potential scenario cannot be exercised, exercising major incidents with mass casualties and major impact on every aspect of activity will help develop a force that can adapt and respond to any adversary action whether it is anticipated or not.

d. Training Disciplines. It is offered that there are significant shortfalls in the delivery of NATO'S Education, Training, Exercises and Evaluation (ETEE) Concept, certainly with regard to FP. While a sound concept, it was stated by those responsible for ETEE within Allied Command Transformation (ACT) some years ago that, having created the ETEE framework, they were coming to understand the true magnitude of the task and as an unintended consequence, the realization that it is unlikely that sufficient resources will be provided to ever properly implement it. The result from an FP perspective is that while sub-components of FP such as C-IED and EOD are recognized as Training Disciplines, FP itself as the overarching subject (see also Paragraph 6.24) is not recognized. This means that when education and training activity is being considered, those subjects recognized as a Training Discipline that as a result have a Requirement Authority (RA), a Department Head (DH) and often a senior officer as a subject 'Champion' are given due consideration. Often, FP is neglected because it is not a Training Discipline and therefore, cannot possibly be a priority! While a 'bureaucratic' argument, it is all too often allowed to prevail. What is frustrating is that HQ SACT regularly briefs that they want to reduce the number of Disciplines; a way to do this would be to recognize FP as the overarching discipline that incorporates sub-disciplines such as those shown in Figures 1 and 2. However,

irrespective of logic, there is resistance to change because those that represent the current disciplines fear being marginalized if they cease to be disciplines in their own right. They became disciplines in the first place as a result of being the 'topics of the moment' (see Paragraph 6.25) at a point in the past when the ETEE Concept was emerging, and ACT was still receptive to subjects coming forward as disciplines.

e. NATO Exercise Programme. A subject that in-part led to the 2018 JAPCC Annual Conference being titled:

'The Fog of Day Zero. Joint Air & Space in the Vanguard'

was the observation that exercise scenarios routinely started at Day 180+. At this point, forces are positioned, ready and resourced for combat operations. A simple question is: Would any future adversary actually allow NATO to posture itself this way without interference? Equally, the 'easy bit' of any activity is the conduct itself; the planning, deployment, sustainment and redeployment are the problematic areas, particularly if they are to be conducted in a non-permissive and complex high-threat environment. It is offered that this situation remains to a great extent and needs to be corrected if the Alliance is not to be severely hampered in the future as an adversary works to deny NATO's ability to respond effectively because it has lost its freedom of manoeuvre as a result of its inability to collectively and effectively protect the force.

6.20 J8 – Finance. FP like any other activity needs to be appropriately funded, which means it needs to be programmed for during budget development. The issue here is to ensure that the FP challenge is correctly captured during initial planning and then regularly updated as the situation develops. An often-forgotten factor is that threats increase and decrease as well as change and may do so frequently over time. As a result, there is a need for the NATO financing mechanism to evolve to become more agile so that it can respond to the need to fund FP capability as a capability is identified as being needed. Recent operations have demonstrated that there is a general unwillingness to fund FP requirements because they were either not identified at the outset (noting that the requirement might not have existed at this stage) and / or the requirement is dynamic while the funding process is protracted and linear. As a result, it is
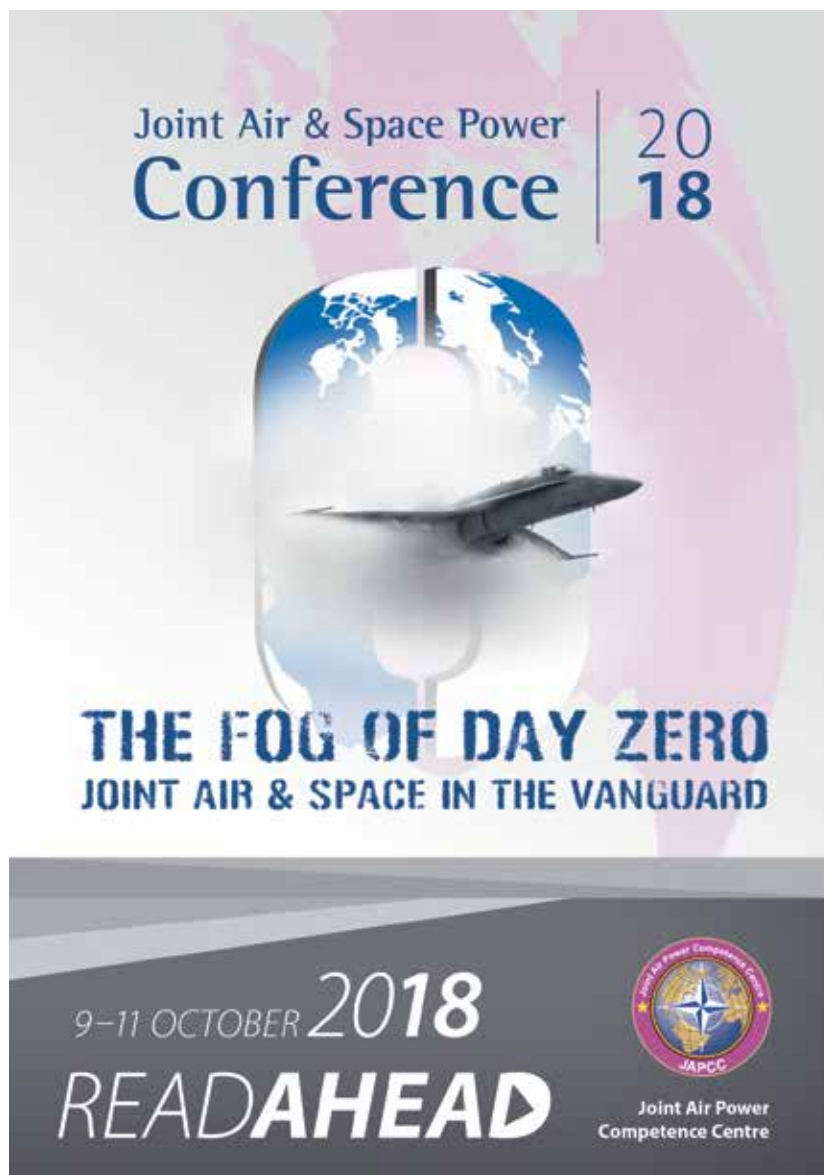
suggested, it is insufficiently flexible to respond to NATO's FP requirement in the contemporary operating environment? As with other areas discussed, a major factor is the lack of specialist involvement. The Bi-Strategic Command Directive 85-1, NATO Capability Pack Directive, states that submissions are to include the FP requirement, which is clearly positive. However, this section of submissions is regularly completed by non-specialists, and despite best intentions, there are numerous examples of omissions[39] that have led to the need for costly remedial work or worse, the requirement to carry additional, unnecessary FP Risk.[40] The final challenge in financing FP is the protracted approvals process that requires any submission to be approved by a Crisis Management Resource Board (CMRB) noting that there may be a CMRB at each level of the chain of command (e.g. Theatre CMRB, Joint Force Command CMRB and Supreme Headquarters Allied Powers Europe (SHAPE) CMRB. Then the submission goes to the NATO Office of Resources (NOR) before being passed to the Investment Committee (IC) for approval. All of this is tracked using a software application called the Project Implementation Tracking Tool (PITT) which is on limited distribution. At all stages of the process, questions or comments can be raised that result in the submission often being returned to the initiator and the process having to start over.

6.21 J9 – Civil / Military Cooperation. Civil-Military Cooperation (CIMIC) is defined by NATO as follows:

'Civil-military cooperation (CIMIC) is a joint function comprising a set of capabilities integral to supporting the achievement of mission objectives and enabling NATO commands to participate effectively in a broad spectrum of civil-military interaction with diverse non-military actors.'[41]

From a FP perspective, what needs to be understood is what is it the CIMIC is trying to achieve, why and how? This is because the commander needs to understand what are the intended consequences but, as importantly with respect to FP, what could be the unintended consequences and / or second / third etc. order effects? CIMIC activity can provide significant support to the FP effort or it can undermine it entirely. This relationship between FP and CIMIC must be understood and CIMIC activity conducted in a manner that, if at all possible, seeks to support, not undermine, FP. See also Paragraph 6.20. J8 – Finance.

6.22 Summary of Issues. As throughout this paper, no single issue can be considered in isolation. All must be considered concurrently and, just as important, is the consideration of the inter-relationship between issues (staff divisions). The following is the synthesis of the points discussed above:

a. J1 needs to understand the FP Force Generation requirement.
b. Effective FP is based on understanding not just awareness. Dedicated Intelligence Support to the FP effort is required.
c. It could be argued that the presence of FP might not contribute to the success of an activity; however, its absence could certainly contribute to failure. FP needs to be considered proactively not retrospectively.
d. Specialist FP input is required to Logistics planning and execution, particularly with regard to the resourcing of NATO Strategic assets.
e. Specialist FP input is required when considering infrastructure development.
f. FP needs to be incorporated into plans from the outset, and FP requirements need to be based on confirmed facts not opinion, hearsay or second-hand + information.
g. Any FP capability requires CIS connectivity. Likewise, the physical aspects of any CIS architecture (e.g. antennas and power supplies) need effective protection.

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39. E.g. Facilities without blast protection or fuel facilities without fire suppression systems.
40. FP Risk is defined as 'those threats or hazard-based events that may occur that could result in loss of life, life-changing injury / illness or loss of capability and thus, have an effect on Mission Accomplishment'. MC-0656, Military Committee Policy for the Force Protection of Alliance Forces.
41. AJP-3.19, Allied Joint Doctrine for Civil-Military Cooperation.

h. Training is a key area requiring significant remedial action – FP is being neglected as it is difficult, detracts from other training and is not considered 'exciting' or 'sexy'! However, it is a 'necessary evil' if the Alliance is to prevail in the contemporary operating environment against so-called 360° threats.

i. Correct funding is required, and the process of incorporating FP requirements into projects needs to be streamlined. NATO Urgent Operational Requirements should not take years to deliver.

j. Where ever possible NATO CIMIC activity should proactively support the FP effort. When / where this is not possible, effective synchronization is required to ensure that the CIMIC effort does not undermine the FP posture. This includes an understanding of possible second-order effects and unintended consequences.

k. Above all, a sufficiently robust FP element is required in all headquarters to ensure the correct representation of the subject across all staff divisions. Using the senior FP specialist as a specialist advisor to the commander should be considered during the conduct of most if not all activity.

6c. Miscellaneous Challenges

6.23 Section Overview. The concept of a 'web' or inter-linked series of issues is a theme that this paper has followed. While many of the major problems affecting FP can be captured within the structures listed above, there are inevitably issues that cannot easily be classified and that need to be addressed, irrespective of how the challenges confronting FP are addressed. This sub-section attempts to highlight some of the more unusual but, nevertheless, prevalent challenges. Again, the reader may recognize that some, most or all of the issues raised do not necessarily just affect FP.

6.24 Language and Vocabulary. Associated with the author's responsibilities as an Author / Custodian for NATO FP Policy (MC-0656), Doctrine (AJP-3.14 and ATP-3.3.6) and Directives (AD 80-25), as well as being Chair of the NATO FP Working Groups' Doctrine, Organization and Interoperability (DOI) Panel, is the problem of 'hijacked' language and vocabulary. The point here is that discreet, often single-subject or narrowly-focussed NATO communities of interest have appropriated vocabulary for a use that is specific to their area of interest. The result is that some words now have particular, NATO-specific meanings such that these words / phrases cannot be used in any other context. It is appreciated that for some this might be a difficult concept to grasp, certainly if not experienced at first hand, however, its impact is now substantial and increasingly detrimental as it is difficult to describe a broad subject such as FP when certain words such as 'capability' or 'discipline' cannot be used.

6.25 Single-Interest Groups and Thought Leaders. Modern military activity is hugely complex as a whole but equally, the component parts are complex within their own right. While it is accepted because of this complexity, that dedicated specialists are required in a plethora of fields, the problem occurs when one specific field and group of experts, 'rises to prominence' to the detriment of other equally dangerous, threats. The latest examples to 'hit' FP are the threat from unmanned systems and hypersonic threats. It is absolutely clear that these emerging threats need to be considered. However, existing threats continue, and threats from the past will re-emerge. It is unfortunately true that the spectrum of threats is ever-increasing. What appears to happen is that an incident[42] or series of incidents becomes the almost sole focus of attention both in terms of intellectual effort and the allocation of (scarce) resources.[43]

6.26 Lessons Identified. As time moves forward, the lessons of the Cold War are increasingly being forgotten. Equally, more recent lessons from the likes of Afghanistan, Iraq and Mali etc. are also being rapidly forgotten as we focus on the present. As unpleasant or as unwelcome as the comment may be, it is

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42. E.g. The 'drone' incident at Gatwick Airport, London between 19 and 21 Dec. 2018.
43. See JAPCC White Paper: The Implications for Force Protection Practitioners of Having to Counter Unmanned Systems – A Think-Piece.

suggested that it is highly likely that in any future operation, many of the (FP) lessons from ISAF will have to be re-learned at high-cost? An earlier piece of work by this author commissioned by NATO Headquarters, Emerging Security Challenges Division (ESCD), in March 2015 looked at 'Institutionalising C-IED Lessons Learned from Afghanistan'. Considering that the ISAF Mission had ended only 3-months previously, perhaps the key finding of this work was that despite identifying some key lessons, it was already too late to capture those lessons in such a way that they would ensure their 'institutionalization'.[44]

6.27 Campaign Continuity. Alliance Nations and many Partners rotate personnel through activity. While this has many benefits, one of the major weaknesses is that continuity is lost. This becomes especially apparent in the operational environment where, in some cases, personnel may only spend a few months in a billet. The problem is compounded if there is little or no hand-over of responsibility between incumbents.

6.28 Information and Knowledge Management. Effective Information and Knowledge Management (IKM) specific to FP is vital for success. It is suggested that it is impossible to understand an adversary and what threat they pose if what they, or similar adversaries elsewhere, have done previously has not been recorded. Furthermore, our own responses need to have been recorded and subsequently be available for retrieval and review. Frustratingly, it is often the case that the ability of our adversaries to learn lessons from previous failure and / or build on previous successes is far better than our own.

6.29 Command and Control Versus Coordination, Synchronization and Deconfliction. The issue of language and vocabulary is always going to be problematic in a multinational organization. However, it is offered that if a word or phrase that has the potential to cause confusion is used, then providing an accompanying definition should alleviate the problem. In developing the NATO approach to the subject of FP, there was significant discussion over what was and what was not FP. The answer it is suggested, is that when any activity is considered, the FP requirements should be analysed, some may refer to this analysis of the FP problem as The FP Estimate. Irrespective of nomenclature, this piece of (operational) staff work, defines the starting requirement for FP. The results of this analysis will determine what capabilities are required and in what quantity in relation to the threats and hazards to be confronted as well as the Risk Appetite.[45] A usual problem is then that the range of capability required is such that it would be impossible to create an architecture where it could reasonably brought 'under command'. It is offered that perhaps the single most important element of effective FP is an element, currently described in doctrine as FP Command and Control (FPC2), that does not so much command but, plans, coordinates, synchronizes and deconflicts the activity of multiple diverse actors in time and space to ensure the seamless delivery of a single effect – FP. Unfortunately, at present, the Nations prefer to use FPC2, a term that they are comfortable with in the staff environment but, that is hugely unhelpful in-the-field where capability providers are unwilling to provide capability that they perceive will be lost to them because 'command' is being relinquished. This is not the situation in many cases as capability will be required for very short periods to assist with the overall FP effort either proactively or reactively.

6.30 Force Protection Truisms. The author is a career FP practitioner and has worked in the NATO environment for two decades. Over this period there has been a growing demand from leadership and an associated belief from the force, that Alliance FP will always be effective. While this will always be the goal, it is unfortunately not going to be the reality:

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44. Establish something (typically a practice or activity) as a convention or norm in an organization or culture. OED.
45. FP Risk Appetite is defined as 'the degree of willingness to accept risk in order to achieve an objective'. However, the level of risk that the Alliance (or an individual nation) is prepared to accept will change, often rapidly, according to the political context and the strategic, operational or tactical imperative. Where necessary, the Chain of Command should seek guidance through the NATO Command Structure (NCS). MC-0656, Military Committee Policy for the Force Protection of Alliance Forces.

a. The Enemy Only Needs to be Lucky Once. It needs to be understood, especially in the context of activity at a larger scale and / or against a determined and intelligent adversary, that, on occasions, that adversary will be successful. This does not imply overall failure of FP, it is simply the reality of military activity.

b. No Written Answer for Everything. There is an apparent desire for Doctrine and other publications to cover every eventuality; this is unrealistic and significantly delays their development. Doctrine can only provide a hand-rail, and it does not excuse the need for commanders to think when faced with challenges. It is offered that the nature of the current Operating Environment (the CADE – see Paragraph 4.11) and the complex nature of threats that exist within it, it will most likely be the 'Intellectual Component' that proves decisive.

c. You Can't Fix Stupid. An element of FP is to prevent accidents and avoidable incidents. However, human nature is such that not every eventuality can be covered. It is an unfortunate fact of everyday life that people, even trained military personnel, will from time-to-time do stupid things that cannot have been anticipated. FP must deal with the aftermath of these types of incidents and work to ensure that the same or similar incidents do not reoccur. However, stupidity, like ingenuity, knows no bounds and incidents will occur.

Vignette: A Company Commander and his Senior Non-Commissioned Officer collected IED components from a number of different Insurgent devices while on patrol over a number of weeks. They used these components to construct their own viable (and hence lethal) IED which they planted outside their troop's accommodation on a NATO asset. Their idea was to create a realistic training scenario. If this example of absolute stupidity was not real, it would probably be funny at some level!

Insurgent IED components used to make a realistic training aide – perhaps a little bit too realistic!

6.31 Force Protection is Dangerous. This may seem an obvious if not ridiculous statement but, it is another truism that unfortunately affects the delivery of NATO FP capability. For the reasons discussed elsewhere, Nations are reluctant to commit forces to situations that are not broadly supported by the populace. This is further complicated if the risk to those forces is likely to be high. This is currently creating a paradigm where Nations want to be seen to be supporting international peace and security efforts but, want to do it with minimal risk to their forces as the issue of casualties would be politically difficult to manage. This has already led to a situation where NATO needed to explore the option of contracting the FP of deployed NATO military assets to a private military contractor. It is suggested that in terms of FP in NATO, we are at a juncture where while the requirement may be recognized, the political and economic situation in many nations is such that the approach to FP is that it is for deployed activity only and that in such a scenario, another nation will be expected to provide. The problem is that too many nations are thinking like this and capability is no longer available to protect assets in the event of a significant threat manifesting itself within NATO boundaries.

6.32 Measuring Effectiveness. As with many FP challenges, Measures of Effectiveness (MoE) are difficult to both define and subsequently quantify. It is difficult to prove a negative, was FP effective, did the adversary simply choose not to act or, did the attack not materialize because it was deterred by a robust FP posture? Further, an earlier statement was that an adversary attack does not necessarily constitute a failure of FP. There will be occasions where an asset is attacked, but the effect of that attack is negligible. This could be because of a sound FP posture and subsequent response to the attack. Equally, it could be because the adversary attack was inept. While lessons might be identifiable after an event, the simple fact is that if a threat exists, e.g. there are adversaries that have both the capability and the intent to attack NATO assets, then FP will be required. A way to conceptual-

ize what FP is, is to think of it as the insurance policy that should never be cancelled. Alternatively, while the cost of properly resourcing FP might be considered high, in reality, it is small when considered against the potential cost of NOT resourcing. In the scenario offered here, the cost of not having effective FP could be astronomical to include the loss of swathes of capability (e.g. unit cost of a Main Battle Tank $4.3 Million, a F35B $101.3 Million, an aircraft carrier $12.99 Billion etc.), probably before it could be brought to bear, not to mention the human and political costs all of which could ultimately lead to the shattering of Alliance Cohesion and the end of effective Deterrence.

6.33 Minimum Military Requirement. Allied to the issue of financing (see Paragraph 6.20) is the NATO approach to resourcing during Force Generation where only the Minimum Military Requirement (MMR) will be endorsed. The resource management logic behind this concept is undoubtedly sound, however, it is underpinned by the related assumptions that it is both possible to define a MMR and that once defined, the MMR is a constant. From a FP perspective this is the source of significant frustration because the MMR for FP is defined by the FP Estimate. This, in turn, should be considered a 'living document' such that if any change to the prevailing situation occurs and/or an incident takes place, the FP Estimate is reviewed and, if necessary, updated. These potentially frequent updates affect the FP requirement and alter the MMR.

6.34 The Need for Audit Trails. Linked to Lessons Identified, Campaign Continuity, IKM and FP is Dangerous, and it is suggested that there is a requirement for the maintenance of Audit Trails within NATO FP. It is surprising, given that FP deals with the need to prevent loss or damage, that in the event of such, there is little follow-up. In an increasingly litigious world, there is likely to be an instance in the future where a party attempts to take legal action against the Alliance for a failure of FP. For this reason, it is offered that going forward, NATO FP practitioners should consider adopting a mechanism for tracking and recording risk[46] and

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46. See AD 80-25, Allied Command Operation Force Protection Directive.

in parallel what decisions / actions are taken to manage those risks.

6.35 Section Summary. This section has discussed 11 separate issues that affect the effective and resource-efficient delivery of FP in the context of NATO. In the panoply of issues discussed in this paper, those in this section do not fit neatly into any framework, rather they impact across the two earlier frameworks used to discuss the challenges impacting FP. To summarize these issues:

a. In such a complex world, there is a need for absolute specialists who are masters of a single subject. However, the input of these specialists needs to be tempered so that their subject of interest is considered along with, not to the exclusion of others. Subjects, disciplines, capabilities etc. are not in competition but are required to come together in a unity of effort to deliver success in a complex, dynamic environment;

b. FP is a complex subject and the full breadth of language is required to describe it;

c. Individual Nations and the Alliance collectively have accumulated significant FP experience. However, much of this has been lost through an inability to effectively capture lessons, poor (FP) campaign continuity and an inability to effectively manage information and retain knowledge.

d. Some parts of FP might be delivered by force elements that are dedicated solely to the FP effort. However, many capabilities that will be required will not be dedicated to the FP task or under command of the designated NATO asset Commander.

Therefore, there needs to be an understanding that effective FP requires a dedicated lead element that will not necessarily Command and Control but will ensure Coordination, Synchronization and Deconfliction;

e. Our adversaries will inevitably have successes. This is not necessarily a failure of FP merely the nature of conflict. There cannot be a written answer for everything, and on occasions, we will score 'own goals' when personnel act unwisely or even when equipment fails. This will have to be accepted and managed;

f. Force Protection is dangerous but somebody has to do it. In reality all Allies and Partners should be contributing through a Multinational, Joint and Comprehensive approach;

g. Measuring Effectiveness is challenging. It is likely that only history, with the benefit of hindsight, will be able to decide whether a particular FP posture was appropriate. However, the cost of NOT investing in FP could well be Mission failure. Considering the comparatively low resource cost of even a robust FP posture against the huge multifaceted value of our assets, it is offered that we should be re-investing in FP capability now;

h. The concept of 'Minimum Military Requirement' is transitory, what is true today will not be so tomorrow. Systems need to change to take account of this; conflict is not a zero-sum game and the books will not always balance. This said, the cost of FP is always likely to be lower than the impact of losses involving a NATO strategic asset. Effective and resource-efficient FP will always be true value for money.

i. Appropriate audit trails need to be maintained.

7. Options for Resolving the Challenges Facing Force Protection

7.1 Section Overview. It is offered that there are three primary approaches that can be taken going forward:

a. Disregard this paper and do nothing. The risk is that an adversary could do significant damage to NATO or a peer or near-peer adversary could ultimately prevail as a result of a shattering of Alliance Cohesion. This would be due to the lack of ability to protect assets for sufficient time to allow consensus to be developed while simultaneously maintaining Alliance Freedom of Action to position assets to deter and / or respond.

b. Acknowledge the principle that the Alliance is vulnerable due to a lack of investment in FP, and as a result, an adversary could act in a manner that would make it difficult to respond both politically or militarily. However, instead of re-investing in FP capability, move to a Cold War-like posture with standing defence plans and a larger deployed footprint maintaining a higher state of readiness. While this would perhaps be most effective, it could be seen as provocative and would be hugely resource-intensive.

7.2 Going Forward. This paper has identified a total of 32 'challenges' that have a detrimental impact on the ability of NATO to deliver effective and resource-efficient FP for the types of NATO strategic assets described in Paragraph 4.13. Of the three options above, it is offered that the third, i.e. to acknowledge the problem and do something about it is by far the best strategy and is obviously the one that this paper advocates. It is acknowledged that it is highly unlikely that a 'perfect' solution is possible. However, while the perceived problem that this paper has majored on trying to explain is significant and with many component parts, resolving it in a practical sense will not be difficult. What realistically will be problematic is reaching first the stage where there is consensus on the need to act. Second, agreeing on what needs to be done and third, resourcing any action plan. In an ideal world, resourcing re-investment in FP would be done using 'new' resources. Again, it is acknowledged that it is unlikely that re-investment will occur without the need for compensating resource cuts in other areas. However, the key point is that surely it would be better to 'sacrifice' a handful of high-value effectors in favour of significantly increased enablers such as FP. This would ensure that the majority of effectors that remain would be available when required. Equally, ensuring that an adversary cannot neutralize a 'battle-winning' capability before it can be brought to bear, significantly increases that capabilities deterrent effect.

7.3 Proposed Way Ahead. What is suggested here is seen as an 'Action Plan' designed to overcome the challenges described previously and develop a NATO FP capability that is fit-for-purpose. An idea that has been mentioned on several occasions is the inter-relationship between FP and other capabilities (or the other seven elements of combat power[47]). Also, the inter-relationship between the 32-challenges highlighted. The inference here is that in moving forward in a step-by-step manner, a positive action focussed on a single challenge will likely have some degree of positive effect in other areas. There should therefore be a point at which positive change

c. Maintain the current approach to Deterrence but acknowledge that assets are increasingly vulnerable to adversary pre-emptive action. This adversary action or series of actions could well be below the threshold of Article V but, could be decisive making it difficult for the Alliance to respond. To prevent this, conduct an audit of NATO FP capability with the intention of reinvigorated NATO's FP posture and ultimately leading to a collective (whole-of-Alliance) approach to FP that sees NATO's deterrent capabilities properly protected in the future.

47. Eight elements of Combat Power: Leadership, Information, Movement & Manoeuvre, Intelligence, Fires, Sustainment, Mission Command (and Protection).

becomes self-perpetuating and this will probably coincide with a point where, like STO in the Cold War-era, FP as a capability reaches a critical mass where it can self-sustain.

7.4 First Step. Is this paper fact or fiction? This paper has been developed based on observations, personal research and a huge amount of discussion over a long period; that does not mean that everything discussed herein is correct. Therefore, the first formal step should be to establish 'ground-truth'. This should be done by means of a formal NATO FP Capability Audit. This should be designed to determine as a minimum:

a. Confirm why NATO FP is required?
b. What is required?
c. Where is it required*?
d. When it is required?
e. Under what conditions?
f. For what duration?
g. At what scale?

* This element is predominantly why this undertaking, if carried out correctly, will be such a major task. To properly determine what is required, a FP Estimate will need to be conducted for all assets identified as being NATO strategic assets and, where a 'whole-of-Alliance' approach to FP will be required.

The size of the audit task should not be underestimated as, to be of value, it needs to be military fact-based, not developed based on NATO or national perspectives and / or constrained by any fear that answers might be unpalatable to leadership. To achieve this will require the commitment of a dedicated team that will need to conduct significant on-the-ground reconnaissance rather than rely on a questionnaire-based approach. The impact of real-world constraints will automatically impose themselves at a point where solutions are being discussed. The audit should attempt to identify the ideal solution so that, whatever solution is eventually achieved, can subsequently be assessed against what it was determined was required and hence, what level of risk is being carried as a result of any delta.

7.5 Second Step. Having answered the 7-questions above, the totality of the NATO FP requirement should have been captured. The next step is to determine how the identified requirement can best be met. This can be simplified into 2-stages:

a. How is effective and resource-efficient FP going to be achieved?
b. Who is going to provide the resources?

The 'how' element in its simplest form is to decide how any identified effect required could best be delivered for each specified asset? This will be a balance between personnel, the equipment (e.g. vehicles and weapons etc.) that they require and what mix between technology (e.g. Intruder Detection Systems and Electronic Counter Measures etc.) and manpower would provide the optimum solution? This is likely to be a different mix for each asset. Having identified how the effect is going to be achieved, the next element is to look to identify which Nations are able and willing to provide capability and subsequently, what delta NATO will need to resource? The reader is reminded at this stage that it is the protection of NATO strategic assets, as identified in Paragraph 4.13, that is being considered. Therefore, this is not a task that is going to be undertaken by a single Nation, rather a group of Nations and NATO as a body, all of which will collectively provide personnel and / or equipment and / or technology to create a single multi-national NATO FP 'Group' for each strategic asset.

7.6 Third Step. Continue to monitor delivery of capability and review as necessary to ensure senior leadership is aware of what FP risk exists.

7.7 Process Versus Action. The 3-steps above are process, the process being suggested as a mechanism to address the challenges identified. In turn, these challenges underpin the assertion expressed in this paper that there is a severe problem with NATO FP. This problem has to be either addressed or, it is suggested, there is a grave danger that, through the inability to protect the force, NATO will be compromised. Notwithstanding the process above, the

following are suggested as the key areas for action and would, over time, address the majority of the 32-challenges discussed:

a. The need for effective and resource-efficient FP is as important now as was the need for and ability to survive and operate in the Cold War era. NATO needs to take the lead in identifying pan-Alliance shortfalls and encouraging Nations to reinvest in FP capability.

b. While it can be perceived that there are limited FP challenges today, FP, if it is ignored today, will not be available when it is required in the future. FP requires robust senior leadership attention now, and the concept of appointing a senior leader as the FP Champion should be considered.

c. Effective FP requires a proper understanding of the operational environment, the role and mission of the asset to be protected and the threats and hazards that exist, acknowledging that these will change over time.

d. There can be no set Minimum Military Requirement for FP. The requirement for FP will be determined by the FP Estimate, which should be a 'living' document that is reviewed regularly, and always after an incident.

e. All Nations need to contribute. The size and complexity of the task requires a whole-of-Alliance approach. All Nations could be threatened, all need to respond. Specifically:
   i. There are insufficient trained, current and competent personnel in NATO and the Nations dedicated to the FP task;
   ii. Effective delivery of FP for NATO assets will require FP to be coordinated by dedicated, specialist FPC2 elements.
   iii. The scale of the FP task will be such that non-specialist units and individuals will need to be employed in FP roles.
   iv. Effective Force Generation of FP resources is essential.

f. Provision of appropriate FP support to NATO Logistics is essential.

g. NATO assets (facilities / infrastructure) need to be designed taking into account the requirement for FP.

h. FP needs to be considered proactively, not retrospectively. FP needs to be incorporated into plans from the outset, and FP requirements must be based on confirmed facts, not opinion, hearsay or second-hand + information. Reconnaissance is vital.

i. A myriad of threats and hazards exist. New threats will emerge, existing threats will adapt, and old threats will re-emerge or be reinvigorated with new (adversary) thinking. A solid focus on getting broad counter-threat basics right will be effective in the majority of cases. The intellectual component, i.e. the ability of more senior NATO FP Practitioners to out-think the adversary, will ensure success. In addition:
   i. Single Interest Groups and Thought Leaders have their place but, their input should not detract from considering FP holistically.
   ii. The contemporary operating environment is dynamic and hugely complex; there is no place for those who wish for simplicity.

j. Realistic and demanding FP training is being neglected. Irrespective of the difficulties that this may cause, it is vital if the Alliance is to prevail in the contemporary operating environment against multiple, complex threats. The current approach of creating isolated NATO FP training events focussed on a few specialists needs to change to incorporate the whole force. Concentrate on getting the basics right!

k. Ensuring the protection of physical aspects of CIS architecture (e.g. antennas and power supplies etc.) is essential to ensure communications, to include securing access to space.

l. Sufficiently robust FP element are required in all headquarters to ensure the correct representation of the FP across all staff divisions. Using the senior FP specialist as a specialist advisor to the commander should be considered during the conduct of most if not all activity.

m. Finally, the presence of FP might not contribute to the success of an activity; however, its absence will certainly contribute to its failure.

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8. Summary and Proposed Way Ahead

8.1 The Conscience of the Alliance. When considering the NATO approach to FP, it is easy to be overwhelmed by the span of the subject. Perhaps the easiest way to capture what FP is, is to think of it as something, call it what you will, it doesn't matter (subject, capability, discipline, effect etc.), that is 'the conscience of the Alliance'? It might touch many or all aspects of activity but, the complexity of the environment in which we exist is such that threats and hazards can manifest themselves anywhere at any time. In a worst-case scenario, this could be extended to everywhere concurrently. So, by design, FP needs to be found everywhere, all of the time.

8.2 Back to Sun Tzu. The hypothesis that has run throughout this paper, is that in an era of 360° threats, the peer or near-peer threat has the potential to 'defeat' the Alliance without a shot being fired. Equally, a lone actor could carry out an act of terrorism that would cause significant damage, both physically and

reputationally. NATO unquestionably has the capability to defeat any adversary in a declared confrontation, but our adversaries know this. Also, adversaries recognize that a weakness of any democratic process is that the need to seek consensus is time-consuming. Therefore, if any adversary can defeat Alliance capability before a decision to act can be reached or indeed, following a decision to act, before capability can be deployed and brought to bear, then that is what they are highly likely going to attempt to do. Furthermore, their action will be designed to remain (just) below the threshold where agreement could be reached on the enactment of Article V. To deter adversary action as described above, the Alliances' battle-winning advantage typified by strategically important, high-value yet low-density assets such as 5th Generation platforms must be protected. As important but, less tangible is the asset that is Alliance Cohesion and little is more likely to bring about a 'shattering' of cohesion than a major incident caused by an adversary but, which cannot be unequivocally attributed to an identifiable actor.

8.3 Urgent Reinvestment Required. This paper has attempted to take the reader through a series of 'steps' that are designed to lead the reader to the conclusion that greater consideration of, and investment in, what is described here as NATO Force Protection, or 'FP', capability is now urgently needed. The paper starts with a description of how what we now call FP came into existence. This 'scene-setter' is followed by an overview of what constitutes the Alliance-agreed approach to FP. The next step was to explore the Operational Environment; the conclusion of this section was that FP needs to exist and function both effectively as well as efficiently in something that it is offered can be described as the Complex All Domain Environment or 'CADE'. Within the CADE are the threats and hazards that FP must confront. These are discussed in a manner that is designed to almost create a 'model' of what FP should be expected to confront in the so-called CADE.

8.4 Action Not Words. Hopefully, by this point, the reader will appreciate the challenge and be asking themselves: 'Given the clear nature of the problem, why is there apparently such a problem with FP in NATO?' The 'Challenges' section attempts to describe what the impediments are to delivering effective and resource-efficient FP capability. This section could be considered 'the meat' of the paper, and it is accepted that some will find its contents contentious. However, every challenge presented can be supported with real-world examples; often regularly occurring. Some generic examples are presented in 'Vignettes' based on actual examples, but many examples cannot be presented either due to security classification and / or because of the risk of causing offence. Causing offence is absolutely not the intention of this paper. It is written from the perspective of a FP Practitioner with many years of NATO experience with the sole intention of correcting a systemic oversight that has developed over several decades but, in the view of the author, must be corrected if the Alliance is to continue to succeed going forward.

8.5 A Road Map to Success. The last section above, is what could be described as a 'light' section that attempts to describe what could be done to

'You must learn these lessons fast and learn them well.'

Chris Rea – Road to Hell

overcome the Challenges discussed at length and the broad context in which they exist. The reason this section is 'light' is because it is offered that the solutions to the problems discussed are actually relatively straight forward. These can be summarized succinctly as follows:

a. Acknowledge that there is a problem;
b. Carry out detailed analysis to understand the scale of the problem;
c. Agree that the problem requires a shared, whole-of-Alliance approach to resolve;
d. Invest in the creation and subsequent further development of a robust FP capability;
e. Recognize that the above while resource-intensive is by far the most economic approach as a failure to act could lead to strategic failure in the future.

8.6 An Essential Enabler. In its most basic form, an effective and resource-efficient FP capability should be viewed as an essential enabler of Deterrence and should be treated as such. Irrespective of Nation or scenario, an inescapable fact is that going forward, the only way that the Alliance is going to be able to meet its FP needs is through the Nations working together. No one Nation (to include the United States) has the entire spectrum of FP capability in sufficient quantity to meet the scale of the task, particularly if the task needs to be sustained for anything more than a short period. It is offered that there is only one realistic option and that is a recognition that the thing that we refer to as Force Protection or FP is currently broken or very nearly so. This situation as this paper has attempted to describe could lead to Mission failure. If nothing else, a NATO audit of FP capability is urgently required to prove or disprove the assertion here.

9. Final Thought …

9.1 A NATO Force Protection Centre of Excellence.

It is suggested that the concept of establishing a NATO FP Centre of Excellence (COE) should be given serious consideration. This might seem like heresy coming from another COE but, the immediate caveat should be that, in establishing a 'new' COE, resources should not be stripped from existing centres. The size and scope of the FP challenge, as described in this paper, is already such that it warrants the establishment of a dedicated specialist entity and this statement will likely only grow in validity as the complexity of the operating environment and the range of threats continues to grow. This paper has argued for the recommitment of resources to FP; perhaps creating a dedicated FP COE with small contributions from many nations may help solve at least some of the challenges highlighted in what would be a highly resource-efficient manner?

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