

Old Dog, New Tricks? NATO Defence Planning and the Wider Capability Development Process

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ABSTRACT

Amidst huge uncertainty in the Defence and Security landscape, NATO is currently awash with change imperatives - the “new tricks” of the title. Many flow from the NATO 2030 reflection process and the development of a new Strategic Concept, as well as the capstone concepts for Deterrence and Defence of the Euro-Atlantic Area (DDA) and Warfare Development (the NATO Warfighting Capstone Concept (NWCC)). This uncertainty has led to pressure to adapt the NATO Defence Planning Process (NDPP) - the “old dog” in the title - which remains the Alliance’s primary means to facilitate the identification, development and delivery of NATO’s present and future capability requirements.

Using an analytical framing developed by US Assistant Secretary for Defense, Kathleen Hicks, called the ‘the Iron Triangle of painful trade-offs,’ the authors conclude there is an urgent need for clearer understanding of how the NDPP should be situated within a broader, well understood NATO Capability Development process. This process should reflect the specific NATO context, and be supported by analysis and tools to facilitate some of the “painful trade-offs.” Without such adaptation, the new change imperatives will unlikely achieve their ambitious goals.

1.0 OUTLINE

The conference theme of “New Ideas and Old Realities” could not be more apt in the context of NATO Capability Development (Cap Dev).¹ Debate over the best way to ensure NATO has the capabilities it needs, in the widest sense, to meet its core tasks, both now and in the future, has persisted for almost as long as the Alliance has been in existence. Much of the debate is also over familiar concerns - that NATO is ill-prepared for new challenges, new technologies or adversaries exploiting these emerging technologies. Whilst this paper does not include any novel analytical techniques or ground-breaking research, it does reinforce the crucial role of analysis in highlighting key issues for the Alliance as it attempts once again to adapt Cap Dev.

Even by NATO standards, a flood of new change imperatives – the “new tricks” of the title – has been evident over recent years, perhaps starting with the NATO 2030 reflection process commissioned by the Secretary General, and the 2019 revised NATO Military Strategy. This led to new capstone concepts for Deterrence and Defence of the Euro-Atlantic Area (DDA), and Warfare Development (the NATO Warfighting Capstone Concept - NWCC) which also urged further NATO Cap Dev adaptation. The dramatic changes in the Euro-Atlantic security landscape in 2022 have only added further urgency, particularly for

¹ By NATO Capability Development we mean the whole process of developing a capability from horizon scanning, policy and concept development to requesting national forces covering all aspects of DOTLMPFI (Doctrine, Organisation, Training, Leadership, Materiel, Personnel, Facilities and Interoperability) determining requirements, choosing a solution etc.

NATO, to maintain its technological edge. The most recent articulation of this urgency can be seen in the June 2022 NATO Summit Declaration and new Strategic Concept.²

This paper looks first at the NATO Defence Planning Process (NDPP) – the ‘old dog’ of the title – which plays a central role in wider NATO Cap Dev efforts.³ Then, making use of the analytical framing offered by Kathleen Hicks “Iron Triangle of painful trade-offs,”⁴ we identify the current incoherence in NATO Cap Dev. In particular, we examine linkages between different parts of the wider Cap Dev process, and between NATO and Allies. It is particularly important to include the nations who remain responsible for development and delivery the majority of NATO’s capabilities.

2.0 OLD DOGS AND NEW TRICKS

2.1 NATO Force Planning and NDPP

NATO’s cyclical Force Planning process traces its roots to the development of Annual Force Goals as early as the 1950s,⁵ and is now embodied in the NATO Defence Planning Process (NDPP). Strictly, NATO Force Planning is just one strand of several planning domains within NDPP, although the focus on force and capability requirements has been central throughout,⁶ meaning NDPP is the “old dog” in the NATO Cap Dev kennel.

NDPP⁷ provides a framework within which national and Alliance defence planning activities can be harmonized to enable Allies to provide the required forces and capabilities in the most effective way. This aims to ensure that sufficient means are available in the right quantity and quality to satisfy the desired ends, as well as trying to forecast future requirements over a specified time horizon and monitor Allies efforts towards satisfying them. Over the past decades the NDPP has continuously evolved, adapting to military, technological and geostrategic changes. The current conceptualisation of the 5 NDPP steps is depicted at Figure 1.

² NATO Strategic Concept 2022 https://www.nato.int/nato_static_fl2014/assets/pdf/2022/6/pdf/290622-strategic-concept.pdf especially para 48: *We will share equitably responsibilities and risks for our defence and security. We will provide all the necessary resources, infrastructure, capabilities and forces to deliver fully on our core tasks and implement our decisions. We will ensure our nations meet the commitments under the Defence Investment Pledge, in its entirety, to provide the full range of required capabilities.*

³ NDPP on NATO Website https://www.nato.int/cps/en/natohq/topics_49202.htm

⁴ Hicks, *Defense Strategy and the Iron Triangle of Painful Trade-offs*, CSIS 2017. <https://www.csis.org/analysis/defense-strategy-and-iron-triangle-painful-trade-offs>

⁵ eg see NATO Archives <https://archives.nato.int/force-goals-for-1953-1954-and-1962>

⁶ The 14 planning domains are: 1. Air and Missile Defence; 2. Aviation Planning; 3. Armaments; 4. Civil Emergency Planning; 5. Consultation, Command and Control; 6. Cyber Defence; 7. Force Planning; 8. Intelligence; 9. Logistics; 10. Medical; 11. Nuclear Deterrence; 12. Resources; 13. Science and Technology; 14. Standardization and Interoperability. NB: Civil Emergency Planning relates to the roles of civil support for Alliance operations under Article 5 and support for non-Article 5 crisis response operations, but not its other roles.

⁷ The NATO Defence Planning Process, PO(2022)0231, Jun 2022.

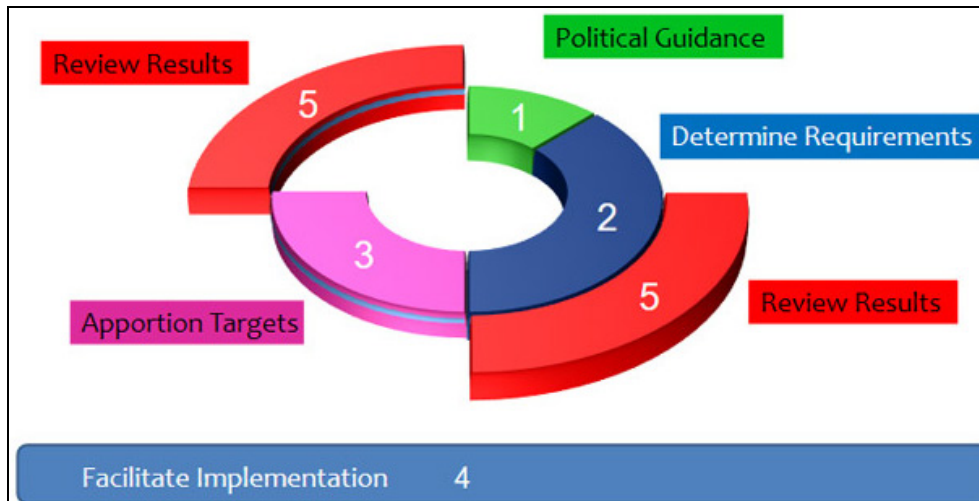


Figure 1: NDPP process (Source: NATO).⁸

Step 1: Establish Political Guidance (*What do we want to do?*):

Political Guidance for Defence Planning is normally issued every 4 years and it includes a definition of NATO’s Level of Ambition, or the amount, type and scale of military contingencies Allies agree should be the basis for scaling the forces and capabilities required in the medium term (up to 19 years ahead), as well as other priorities.

Step 2: Determine Requirements (*What do we need to do this?*):

The step overall is used to develop a set of forces and other capabilities which represents the minimum required (Minimum Capability Requirement)s to fulfil the level of ambition and other constraints set out in political guidance. Requirements derivation is a process of rigorous analysis and applied military judgement centred on a portfolio of scenarios depicting medium-term contingencies. The step also includes a cross-check against an agreed combination of Allied Command Operations (ACO) and Allied Command Transformation (ACT) plans (focused on the short term 0-4 years) to give confidence that NATO’s current needs can be met.

Step 3: Apportion requirements and set targets (*Who should do what?*):

Using the principles of fair burden-sharing and reasonable challenge, the Minimum Capability Requirements are apportioned between Allies and expressed as Capability Target Packages to each Ally. A small proportion of targets are fulfilled by the Alliance collectively while others are met by Allies singly or as part of multinational approaches.

Step 4: Facilitate implementation (*How do we help deliver these capability targets?*)

NATO assists Allies in implementing the targets, by facilitating multinational initiatives and directing NATO efforts to help Allies address the priority capability shortfalls in a coherent and timely manner.

Step 5: Review results (*How are we doing at delivering capability targets?*):

NATO executes this process through a Defence Capability Review. In this Step, Allies are invited to report on progress towards achieving their assigned targets. Overall, this Step also enables the Alliance

⁸ Source, NDPP (NATO website) https://www.nato.int/cps/en/natohq/topics_49202.htm

to identify areas of persistent shortfall in meeting the political guidance, including the NATO Level of Ambition or other areas of risk. Every two years, Allies complete a Defence Planning Capability Survey, which seeks data on Allies' national plans and policies, including efforts (both national and multinational) to address their NATO Capability Targets. The survey is followed by a series of individual allied assessments carried on by NATO Staff (including the Strategic Commands). This effort is materialized through the NATO capability report which incorporates the approved Overviews in respect of each ally.

NDPP does not exist in isolation. For example, Concept Development and Experimentation, as well as development of Policies and Doctrine, need to be in place so that the process of requirements derivation in Step 2 can be conducted. NDPP uses agreed concepts and policies to inform the development of capabilities, and it can also identify gaps in current concepts that can be used to inform the development of other staff and committee work to deliver for use in the next cycle (or out of cycle if deemed by Allies important enough). Other aspects, such as horizon scanning and lessons identified, are also essential inputs. Moreover, the process of acquiring and integrating new capabilities into service, training, managing and maintaining them through-life and ultimately considering their phasing out and disposal, is mainly carried out by nations. This includes choosing the 'solution' that best delivers the effect specified in the NATO Target.

NDPP also needs agreed methods, tools and rules in order to be able to explore different options and to understand what effects each capability (whether currently existing or in the future) could achieve. Most importantly, NDPP needs commitment and buy-in from Allies, who are the principal capability providers. Each Ally has their own national Cap Dev process, to which NDPP provides an input, but other factors will also influence and inform national decisions. Outputs from national Cap Dev in terms of new concepts for instance inform the concept development aspects within NATO.

2.2 NDPP is Not NATO Capability Development

NDPP is often considered to be at the heart of NATO Cap Dev, but it is not the only NATO activity that supports Cap Dev overall. NATO defines Cap Dev as:

...the process from political guidance through requirement identification and the subsequent planning steps, through acquisition, fielding, in-service management and disposal...

Reference: International Board of Auditors for NATO (IBA-AR(2016) 05) and (PO(2012)0030)

This definition suggests that NATO Cap Dev is essentially NDPP (first half of definition) plus acquisition, in-service management and disposal (second half). As mentioned above, the fact that NDPP requires the support of a range of other processes means that perhaps a broader conceptualisation could be more informative. As an example, the UK national Force Development process is set out in Figure 2 below.

In Figure 2, Cap Dev is depicted as just one part of a range of contributory efforts to an overall Force Development process. (It should be noted that this is not meant in the same sense as historical "Force Planning" in NATO.) In the UK model, the overall process of change starts with Political/Strategic and Conceptual Development looking out to 30 years, designed to answer the questions about when, where, why and how military power could be applied. Within the overall construct, Capability Development then addresses questions of what (and how many) capabilities will be required, while Warfare Development is focused on acquisition, delivery, integration and operation of these capabilities to deliver desired effects.

An additional challenge faced in the NATO context is the interaction between the Alliance and individual Allies. NDPP helps fulfil the "what/how many" capability questions, but the substantial majority of "create and prepare" is the responsibility of Allies, except for a small proportion of common-funded and managed capabilities such as the main NATO HQs and Computer Information Systems (CIS). Even NATO strategy and conceptual development ("when, where and why") is conducted in a process of dialogue with Allies.

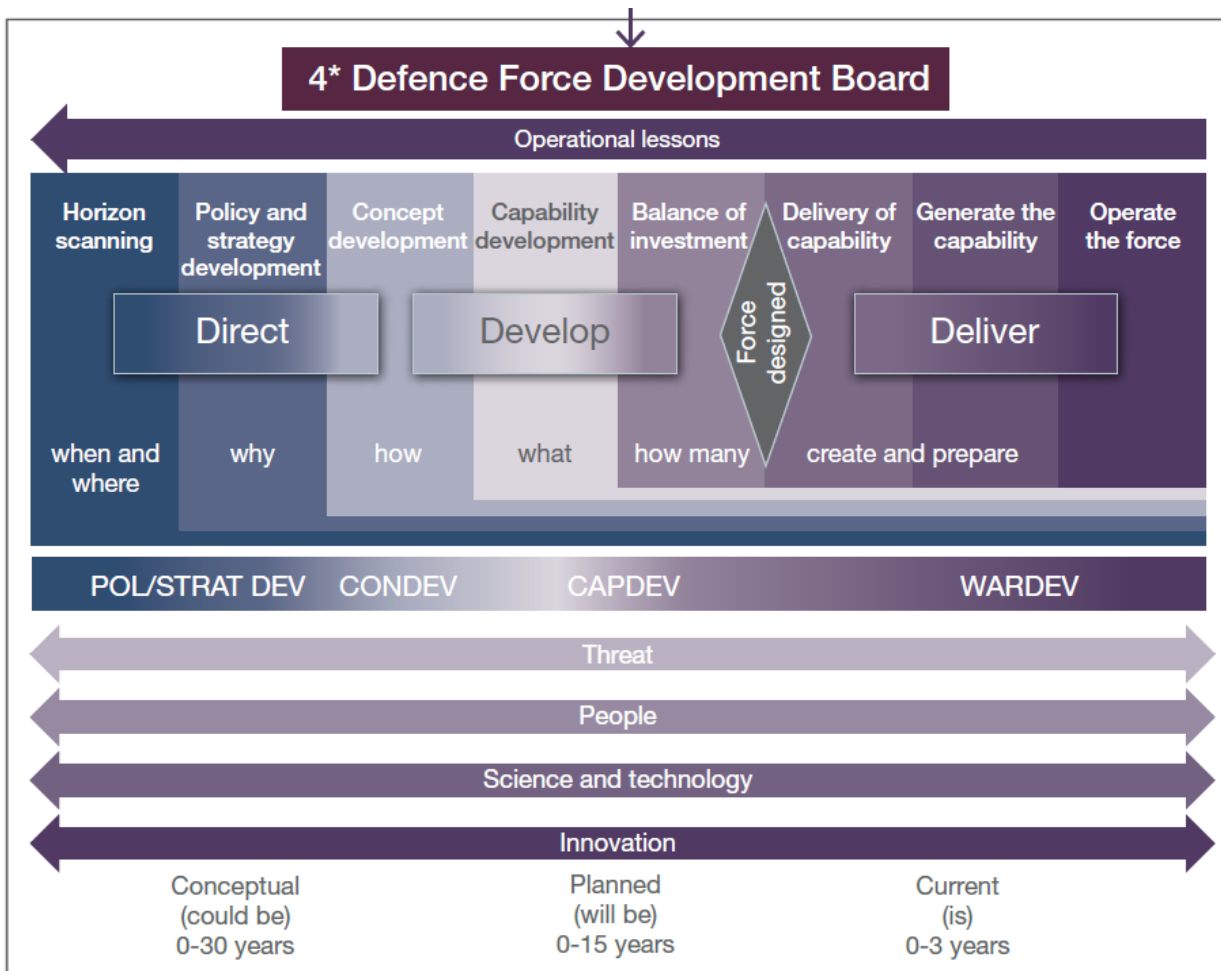


Figure 2 : UK MOD force development process (Source UK MOD).⁹

It would be helpful to be able to present a NATO analogue of Figure 2, showing how NDPP interacts with the other stakeholders within NATO and with Allies in a “Force Development” process (read: NATO Cap Dev). Certainly, in the 2012 NATO “End to End Rationalisation Review of all Structures involved in NATO Capability Development” there is no such process model. There is equally nothing similar to be found in the open-source space on the NATO Allied Command Transformation (ACT) website. Confusingly there is a governance model for the small proportion of capabilities common-funded and delivered through Capability Packages. The 2012 review recommendation to establish a Capability Development Executive Board (CDEB) has had limited impact even in these common-funded areas, which represent less than 1% of the resources expended by Allies in aggregate on acquisition and development of new capabilities. A 2017 assessment report on the common-funded capabilities suggested that there were still “many processes with no specifically identified owners.”¹⁰

⁹ Source UK MOD Force Development Handbook, 2021.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/957195/20210121-DEFD_Handbook_Version_2-0.pdf

¹⁰ NATO Group of Senior Experts Report into Governance and Delivery of Commonly Funded Capabilities, 2017 https://www.nato.int/nato_static_fl2014/assets/pdf/pdf_2017_04/20170518_170418-gse-report.pdf

2.3 New Tricks

2.3.1 Conceptual Change

Since 2019 the volume of new initiatives and change imperatives related to NATO capability and force development has been significant. In large part, this is related to adaptation of NATO's force posture and plans for employment of forces to deter and defend the Euro-Atlantic area, and this has only been sharpened and accelerated by Russia's invasion of Ukraine in 2022. These change imperatives such as outputs from NATO summits, NATO 2030, NATO Military Strategy, forthcoming Political Guidance etc. will lead to or stem from new Policies. All of these aspects need to be considered within Defence Planning and may provide inputs to the development of wider force development aspects such as Concept Development.

2.3.2 NWCC

At the same time however, a number of change imperatives are specifically aimed at enhancing NATO Cap Dev. These include the NATO 2030 reflection report and the NATO Technology Trends report.¹¹ Most prominent among these is the NWCC,¹² for which ACT has the lead. The "warfare development imperatives" identified in NWCC are arguably more accurately characterised as conceptual development (i.e. Cognitive Superiority, Layered Resilience, Influence and Power Projection, Integrated Multi-Domain Defence, and Cross-Domain Command) than "Warfare Development" as set out, say, in Figure 2. Whilst these issues are of critical importance, they are aspirational by design, and only when sufficiently mature can they feed into downstream Capability Development such as the NDPP.

2.3.2 Other NATO Cap Dev Activities

Aside from Conceptual Development, other aspects of NATO Cap Dev include:

Horizon Scanning: Activities such as the work that ACT has previously done developing the Strategic Foresight Analysis (SFA) and the Framework for Future Alliance Operations (FFAO) that are now captured within NWCC. These can provide useful insights and context into Cap Dev in terms of the geo-political context that NATO may expect in the medium to longer term.

Lessons Identified: NATO has a formalised Lessons process and a specific Joint Analysis and Lessons Learned Centre (JALLC).¹³ Lessons identified from current operations and missions, exercises and routine activity should support a robust feedback loop to refine existing Concepts and Doctrine and potentially to become new inputs into NATO Cap Dev.

Experimentation: Experimentation can show the benefits of adapting new ways of doing business and help de-risk the development of new capabilities or concepts.

Experimentation streamlines the capability development process and shortens development cycles. Demonstrations bring military transformation alive and show tangible products of warfare development.¹⁴

Emerging and Disruptive Technologies (EDTs): EDTs impact Cap Dev because they challenge existing ways of doing business and potentially offer decisive competitive advantage. However, due to their rapid evolution, EDTs are considered in many aspects of Cap Dev from defining potential threats that have to be defended against in Step 2, to supporting potential capability solutions to meeting NATO Targets (issued in Step 3) and ensuring that NATO maintains its technological edge. "Technologies such as artificial intelligence

¹¹ NATO Technology Trends Report 2020-2040, https://www.nato.int/nato_static_fl2014/assets/pdf/2020/4/pdf/190422-ST_Tech_Trends_Report_2020-2040.pdf

¹² <https://www.act.nato.int/nwcc>

¹³ <https://www.jallc.nato.int/>

¹⁴ <https://www.act.nato.int/activities/allied-command-transformations-innovation/experimentation-and-demonstration>

*(AI), autonomous weapons systems, big data, biotechnologies and quantum technologies are changing the world, and the way NATO operates. These and other emerging and disruptive technologies (EDT) present both risks and opportunities for NATO and Allies...*¹⁵ While EDTs offer both threats and opportunities the main challenge is integrating often immature and risky initiatives into an overall Cap Dev process.

Doctrinal development: NATO military doctrine is a codification of mature concepts and best practice, and forms an important pillar of NATO Cap Dev. The NATO Standardisation Office (NSO) facilitates and encourages the revision of Allied doctrine and other standardisation agreements (STANAGS) which support functional and conceptual interoperability.¹⁶

3.0 THE IRON TRIANGLE OF PAINFUL TRADEOFFS

Former US Deputy Secretary for Defense, Kathleen Hicks, characterises the challenge of Defence Strategy in a US context as a “painful” trade-off between three aspects: readiness, capability, and structure¹⁷ (see Figure 3). In this formulation readiness comprises manning levels, training, spare parts, and maintenance for equipment, capability includes research, development, and transformation efforts, while structure is reflected in the size of the force and the number of brigades, ships, and flying squadrons of various types. The triangle of painful trade-offs is centred on risk and resources across time; structure and readiness lying mainly in the near term while capability development representing the challenge of tomorrow. In this respect Hicks develops the idea expressed in other “*mutual exclusivity triads*” that favouring any specific part of the triangle compromises the other areas.¹⁸

As Hicks puts it, strategists face a specific prisoner’s dilemma because, particularly when forces are engaged in countering real-world threats, the bulk of effort and resources is directed towards meeting these needs of today, at the expense of tomorrow’s challenges. Perversely, this is the worst choice of all to safeguard longer term military-pre-eminence. Hicks claims that it is possible to “...*nuance the edges of this dilemma ... [but] for the most part, the [triangle] forecloses radical changes in defense strategy.*” This is because even when thinking about tomorrow, it remains rooted and constrained in the thinking of today and is thus inherently conservative.

In the NATO context, Hicks’ Iron Triangle has additional resonance, particularly when considering recent change imperatives. The concerns of today are mainly represented by SACEUR and set out in recent documents such as the DDA and related work strands which have a bearing on the structure, readiness, availability and deployability of forces and resources, and the means to command and control them, to counter current threats. The longer term Capability Development and adaptation needs are articulated by SACT, as in the recent NWCC. These two broad groupings reflect the same dilemma as identified by Hicks - the needs of today always trump the more transformational efforts for tomorrow, yet this in fact undermines efforts to maintain pre-eminence in the longer term which is the bigger goal.

An added dimension at the NATO level is presented by the interplay with individual Allies which have concerns about today, but also tomorrow, and which are to some degree specific to each Ally. Thus NATO Cap Dev is constrained not only by the siren voice of today, but also by the diverse concerns of Allies.

¹⁵ https://www.nato.int/cps/en/natohq/topics_184303.htm

¹⁶ https://www.nato.int/cps/en/natohq/topics_124879.htm

¹⁷ Hicks uses “Capacity” here in the original, but to avoid confusion we use capability.

¹⁸ Other triads of mutual exclusivity include the engineering adage that out of quick delivery, high quality and low price, one is forced to pick any two.

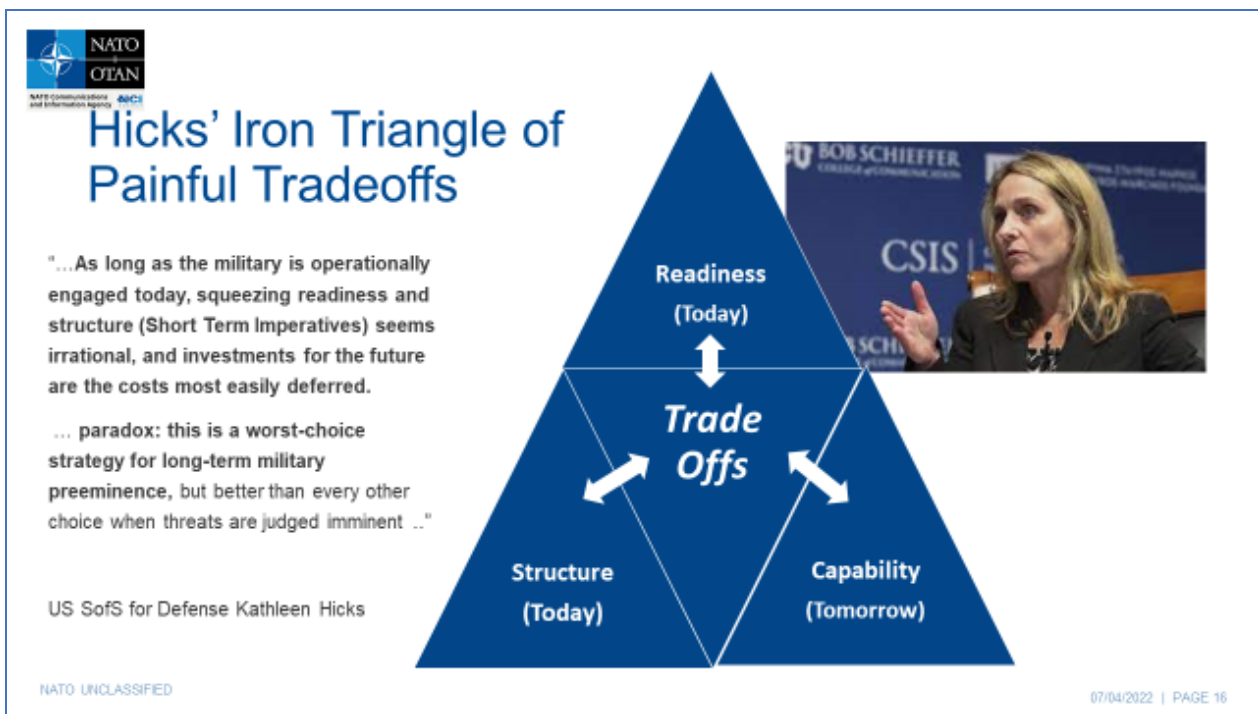


Figure 3: Hicks iron triangle of painful trade-offs.

Hicks does not really offer a solution to countering the Iron Triangle, instead presenting it as an enduring feature. There is also no benchmark for what Hicks believes the “correct” balance between the three factors is in any particular circumstance. Nevertheless, there are parallels with the “time inconsistency” bias (sometimes called dynamic inconsistency or economic myopia) studied by behavioural economists. This phenomenon means decision makers tend to prefer a significantly smaller benefit sooner rather than a larger benefit later, even when appropriate time discounting is applied which should mean a rational decider would choose the alternative. In the Capability Development variant we analogise that attending to short term risks or deficiencies appears to deliver greater benefit than investing in the future, albeit that no simple time-discounting rule can be applied to determine the validity of such a hypothesis.

Interestingly the “time inconsistency” bias does not appear to dampen the appetite and enthusiasm for proposing new concepts or imagining the potential benefits of new technologies.¹⁹ Often these refer to almost limitless potential future benefit, or present potential benefit as entirely self-evident. Given this, it is perhaps less surprising that ultimately these are under-weighted in the Iron Triangle.

Resolving the balance issue in Hick’s Iron Triangle in a NATO context is undoubtedly a huge challenge with no simple solutions. What is needed is a trade-off methodology for time discounting of risk/benefit. This will require significant analytical and political effort to gain the necessary confidence of and buy-in from Allies, but could at least allow, for the first time, an accountable and transparent means of balancing current and future demands.

¹⁹ The same authors noted a similar phenomenon in the perennial enthusiasm for technological innovation in Defence and presented on this as part of 14th NATO ORA Conference in 2020.

4.0 POTENTIAL LINKAGES

Whilst it is not within the authors purview to develop the framework for linking all of NATO's Cap Dev Efforts with NDPP and national Cap Dev processes, initial thoughts primarily focused on the inputs and outputs of the NDPP into these other areas, as presented below in Figure 4. Each of the arrows between the NATO, national and NDPP show potential areas of linkages (non-exhaustive). The fact is that these happen now but in an ad hoc way often dependant on staff and are not written into NATO doctrine.

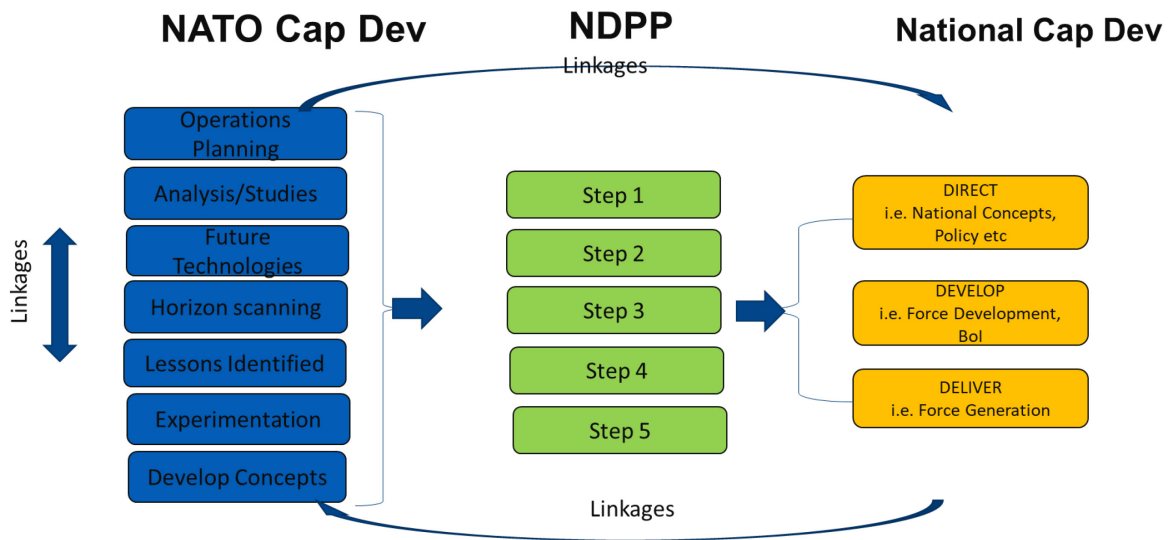


Figure 4: NATO and National Cap Dev, and NDPP (Source: Authors).

Figure 4 shows this is a high level of detail and Figure 5 shows some of the products and potential linkages and handoffs. Within NATO the authors believe that there should be an identified process or at least identified 'hand-offs' of how NDPP interacts with other Cap Dev efforts. These should be made widely known across the NATO enterprise and built-in to prevent the current individual processes of NATO Cap Dev (Concept development, experimentation, horizon scanning and NDPP) becoming stove-piped.

For example, from an operational analysis perspective analysts are employed to support many different aspects of NATO Cap Dev. For instance, concept development, experimentation, horizon scanning and Defence Planning make use of scenarios to help visualize and support the analysis of a range of issues to support decision makers. Often because of the stove-piped nature of analysis, differing scenarios are developed to support different areas when the same scenarios could be used to support many areas. This would be more efficient (avoid developing additional scenarios) and increased coherency (e.g. same assumptions) across different areas.

Other examples of linkages that could be developed and/or strengthened include:

- During the development of requirements, areas where no agreed concepts exist or gaps are identified for certain tasks/capabilities; the NDPP could (as it has in the past) produce recommendations for staff and committee work to develop these.
- Persistent shortfall areas identified in NDPP should be used to inform which areas may require new concepts developed.

- During the development of new concepts or ACT studies, the scenarios and tools used in Defence Planning can be used to baseline requirements using existing Concepts and Doctrine²⁰. The benefits in terms of efficiencies or improved effects of using new concepts can then be shown. This also eases the inclusion of new concepts within NDPP once agreed.
- The role of Step 4 could be reinvigorated and used as showcase for wider Cap Dev efforts demonstrating the benefits of new concepts and EDTs using the results of analysis or experimentation to strengthen arguments.
- Once NDPP targets go to the nations, these are, in many nations, part of a wider Cap Dev process which allows nations to explore the best potential solutions for delivering the effects and also subject these areas to Balance of Investment studies ensuring that the nation achieves ‘the most bang per buck’.
- Longer Term Aspects are also developed in parallel with NDPP which again offer areas where nations can focus Research and Development efforts to help identify new ways to deliver effects more efficiently, taking into account new threats or overcoming shortfalls.
- National Cap Dev activities can also feed into NATO Cap Dev activities and if good ideas are identified they should be shared and if appropriate taken into account to develop NATO’s Concepts etc.
- Increasing the links between operations planning and defence planning from a NATO aspect.

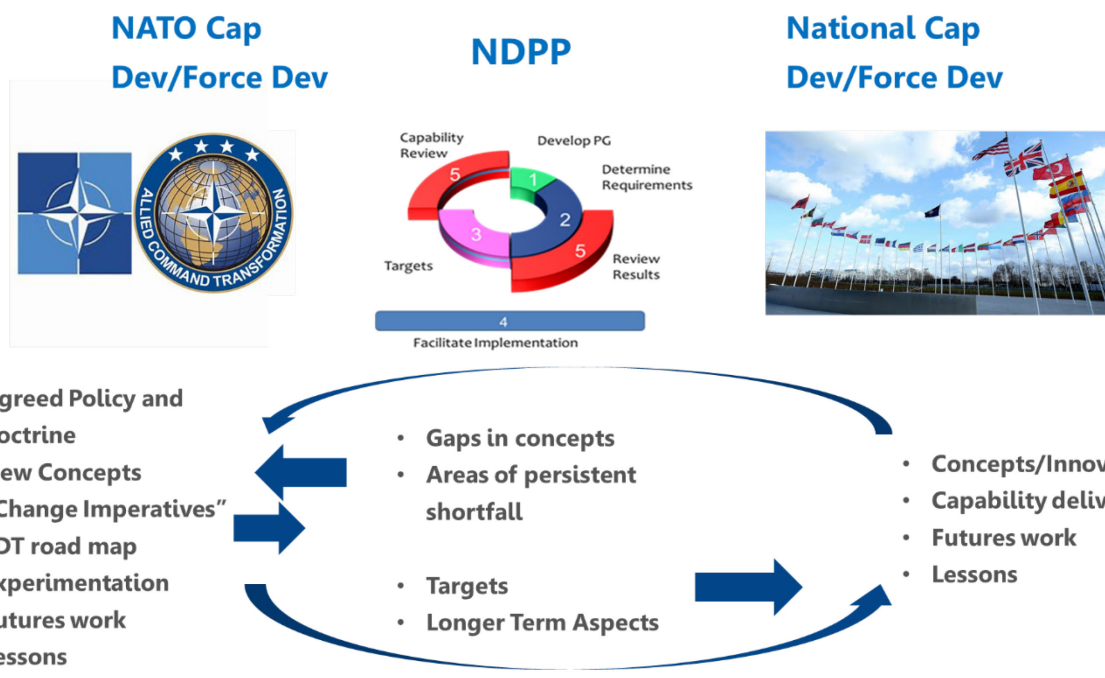


Figure 5: Potential Linkages between NATO and National Cap Dev (Source: Authors).

²⁰ This has been undertaken e.g. NATO Sea-basing and Allied Future Surveillance capability work but is often through personnel contact or happy coincidence.

5.0 CONCLUSIONS

The study draws three high level conclusions.

- 1) **Capability Development in NATO lacks clarity and coherence:** NATO Capability Development processes and language still lacks coherency, despite the “old dog” of NATO Defence Planning tracing back to processes nearly 70 years old, and persistent efforts – most recently evidenced through “new tricks” such as NWCC – helping to set the agenda in NATO warfare development. Even though NATO faces unique challenges in negotiating with Allies the development and delivery of the bulk of its capability needs, this would be greatly assisted by clear definitions and principles, even if it may be impossible to fully harmonise every detail across 30 or more Allies.
- 2) **NDPP is not the whole solution, but more like a “glue” that binds together NATO and National processes:** NATO Cap Dev is more than just NDPP. Other aspects include clear Strategic Guidance and mature Concepts, and a robust process which has sufficient buy-in from Allies so that requirements and development targets are agreed and actually delivered. However, each component process, and the linkages between them, and between NATO and Allies, have equal, if not greater, importance and must be cultivated. The current hand-offs and linkages between the different aspects within NATO Cap Dev internally and with Allies own Cap Dev processes are blurry, not known or widely advertised. As such, the NDPP with an agreed process and interfacing NATO wider Cap Dev and nations – often feels like the ‘only dog’ around to meet the high expectations for transformation from both NATO and the nations.
- 3) **Hicks’ Iron Triangle has a special relevance to NATO Cap Dev:** The overall Cap Dev process could be considered as a capability in itself, requiring concerted effort along all lines of effort and a range of supporting tools and approaches. NATO Cap Dev remains particularly susceptible to Hicks’ Iron Triangle of painful trade-offs, such that perceived near-term threats and challenges exert greater influence over the overall process than medium and longer term needs. The development of more sophisticated tools to explore risk and benefit in these trade-offs could be an essential contribution to improving the situation and gaining the required buy-in from Allies.

6.0 RECOMMENDATIONS

Faced with such a range of change imperatives and pressures, the “painful trade-offs” between NATO’s current and future capability needs are likely only to become more pronounced in the years ahead. Equally, however, there are reasons for optimism. The following three modest proposals could represent a solid and pragmatic start to revitalising the overall process:

- **Revisit end-to-end Capability Development process:** There is an urgent need to revisit the end-to-end Capability Development process, now a decade old. This should focus on both the overall process and the interactions between stakeholders (both within NATO and between NATO and the Allies), across both common-funded and nationally delivered capabilities. A key deliverable of this review should be a comprehensive process overview and agreement of key terms. **This could lead to NATO developing Force Development doctrine, which would outline a process identifying linkages and handoffs to inform a more holistic, comprehensive approach to NDPP.**

- **Focus on the linkages and exploit what already works:** In keeping with a true end-to-end study, this review should take as its start point the current processes and approaches, without completely reinventing the wheel. Contrary to what some critics claim, much of what exists in various aspects of NATO Cap Dev has merit and could be better linked, reused or implemented more broadly. An example could be the area of concept development, another is the use of experimentation.
- **Education, analytical support and buy-in:** To assist in managing the painful trade-offs between short and longer term capability needs, greater effort should be afforded to training and education, and developing supporting analytical tools and approaches. As there is no holistic institutionalised process, current activities tend to be fragmented and stove-piped. This leads to inefficiencies (e.g. developing scenarios that differ across the many different aspects of Cap Dev, not having the same definitions of capability etc.). While a comprehensive NATO Cap Dev process would not eliminate the “*Hicksian-pull*” towards near-term threats and needs, it should facilitate a more systematic evaluation of the risk inherent in doing so, while retaining the confidence and support of Allies. Similarly, the current level of effort invested in new concepts and horizon scanning (into which categories many of the recent change imperatives fall) must be matched by an equivalent investment in less-glamorous, but equally vital processes for capability delivery and integration, including monitoring benefit realisation. This will indeed be challenging, particularly in a NATO context, but a task which cannot be dodged if the “iron triangle” is to be rebalanced.

So what for the OR&A community?

The iron triangle is intrinsic to the Cap Dev ecology or system-of-systems. This presents a complex, multi-dimensional optimization and decision problem which is the *raison d'être* of operational analysis. Operational analysis, drawing upon the full range of decision science tools, can help decision makers find the “right” balance of capabilities for the geostrategic, military and technological environment that the Alliance faces.

Operational Analysis supports both NDPP and broader NATO Cap Dev activities. The tools and techniques and approaches, if formally linked, would lead to a more ‘joined up approach’ to Cap Dev and realise efficiencies. As a minimum, OA practitioners should take the opportunity to share best practice, tools and assumptions between different communities of interest.

7.0 REFERENCES

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