

Enhancing the adaptability of Defence

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The conflicts we see today are characterised by fundamental uncertainty. The hyperconnected and dynamic world in which we live makes security risks more complex, more diffuse, and, therefore, very difficult to predict. Since it is impossible to foresee every eventuality, and systematically embed every required capability in the required quantity within a Defence force, adaptability is essential to continue to operate effectively. But what is adaptability? And how can adaptability be enhanced? Does this require a flat organisation without formal processes, or standardised guidelines and formalised procedures? Is adaptability enhanced by allowing scope to experiment and make mistakes, or by anticipating and controlling risks? Should we gear towards a warehouse of capabilities, or organic structures with a distinct identity? There is comprehensive and convincing evidence that all of these approaches positively affect adaptability. What choices should the Defence organisation make to increase the adaptability of individual service members and the organisation as a whole? This article provides a conceptual basis that unites paradoxical perspectives as a starting point for increasing the adaptability of Defence.

Why adaptability?

The characteristics of future conflicts and their implications for future military interventions are increasingly difficult to predict. Many authoritative national and international think tanks are unanimous in their view that the near future will be characterised by fundamental or 'deep' uncertainty. The trend towards global mobility and interconnectedness of capital, goods, people, services and ideas is set to continue. Accelerated by revolutions in information technology, the globalisation process is adding new complexity and intensifying the worldwide interconnectedness of individuals, objects, places, actions and organisations. The causes and resulting effects of conflicts are increasingly difficult to determine. This leads to the realisation that sudden developments and incidents may occur that exceed our current imaginative capacities, yet which could have a major impact on our security (so-called 'strategic shocks'). Political compulsions to display decisiveness may accelerate the strategic and tactical tempo.² This only further fuels the lack of certainty and predictability has become the norm.³ Because the 'if', 'when', 'where', 'how' and 'with whom' differ from one conflict to another, they can only be calculated to a limited extent. It is impossible to foresee every eventuality and systematically embed every required capability in the required quantity within a Defence organisation. Military units operate with, and defend against, a diversity of actors, in a joint, combined and interagency setting. They are required to perform in a variety of contexts and often have to be capable of spanning the full spectrum of conflict. Recent experiences in Iraq, Afghanistan, Somalia and Libya have shown how difficult it can be to plan intervention and stabilisation operations. Often, these operations do not go as planned. Hence long-term strategic planning is limited in terms of its usefulness. Innovative opponents, strategic shocks, the degree of

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² Globalisation has led to highly interactive and mutually reinforcing dynamics in the international system that are giving rise to unexpected and increasingly frequent strategic shocks. These shocks ensure that the strategic tempo remains high.

³ Ascalon, Dekkers, Van Daalen and Van de Boor, LWC, 2016.

violence and constantly changing environmental factors require the ability to rapidly adapt as a conflict develops. Hence adaptability will be *the* key competency in managing deep uncertainty in the future.⁴ The Netherlands Chief of Defence (CHOD) shares this view:

“In my view, adaptability is the most crucial feature of a future-proof Defence force. If you, or your organisation, do not adapt to changed circumstances, you will cease to exist.”⁵

The CHOD is not the only one to emphasise the importance of adaptability in the effective deployment of armed forces. The Dutch Minister of Defence makes the same point in her policy document ‘In the interest of the Netherlands’ [In het belang van Nederland] issued in September 2013, in which she identifies adaptability as one of three key aspects of operational sustainability: “The extent to which capabilities can be adapted to rapidly changing circumstances determines the added value of the armed forces. The greater the adaptability, the more extensive the deployment options.” In other words, adaptability is now a prerequisite for the deployment of military forces.

To do more than simply pay lip service to the importance of adaptability, three years ago the Land Warfare Centre (LWC) of the Royal Netherlands Army Command submitted a research proposal to assess adaptability throughout the armed forces. The purpose of the study was to determine the degree of adaptability and identify practical ways of enhancing the adaptability of individual service members and the Defence force as a whole. The study,⁶ conducted by the Netherlands Organisation for Applied Scientific Research (TNO), was launched in January 2015. The initial findings are reported in this article.

This article begins by examining attitudes towards adaptability, both within and outside of the armed forces. It then presents a new model that explains how adaptability works. The model combines two key, yet paradoxical, approaches, which are defined in terms of the McKinsey 7S Framework. The article then discusses factors within these two approaches that enhance the capacity for adaptability and concludes with a summary of the opportunities and challenges involved in embedding these paradoxical approaches in the organisation of the Defence force in order to increase the capacity for adaptability.

Paradoxical perspectives on adaptability

The importance of increasing the adaptability of (political-)military organisations is recognised in both national and international military circles. Thus, throughout the armed forces, adaptability is seen as essential in order to be able to respond effectively to an uncertain, complex and dynamic reality. Yet perceptions and experiences of what defines adaptability differ depending on the situation and the context, which can vary from deployment and operations, to daily management and preparations in the Netherlands. The range of perspectives and definitions is very diverse. Analysis of scientific literature, case studies in the civilian world, and interviews with defence personnel makes it clear that there is no general consensus on what constitutes adaptability, or which factors facilitate or impede adaptability. In fact, many of these perspectives appear to be contradictory and irreconcilable. The lack of consensus complicates research on how to enhance the capacity for adaptability within the armed forces. How can a Defence force arrange its organisation

⁴ ACDC model, Van Dalen, Dekkers and Keij, LWC 2013, elaborated in Ascalon, Dekkers, Van Daalen and Van de Boor, LWC, 2016.

⁵ Keynote speech by the Netherlands Chief of Defence (CHOD) during the Future Force Conference on 27 Nov 2013.

⁶ V1520, Human and Organisational Adaptability.

and select and train its personnel as effectively as possible if the concept of adaptability is open to multiple interpretations and if there is no proven strategy? To gain a better understanding of the issues involved, the opposing perspectives on adaptability are discussed in more detail in the paragraphs that follow.

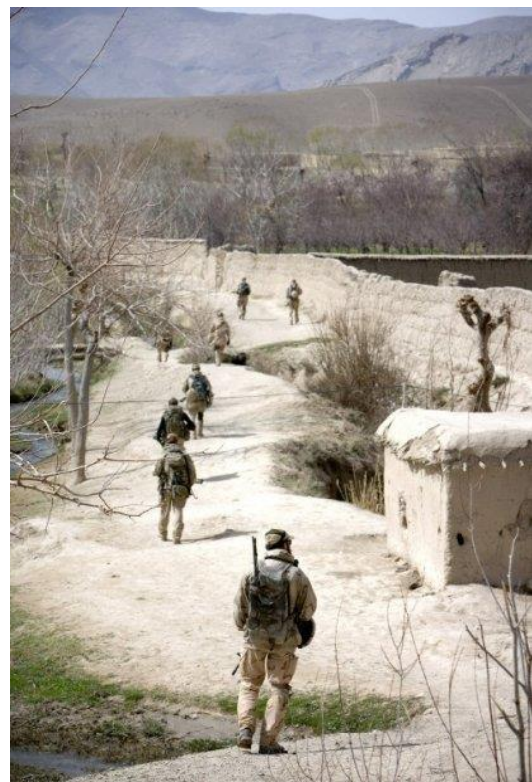


The robust approach: Signing contracts for F-35 combat aircraft in 2002

At first glance there seem to be a wide range of perspectives on adaptability. However, on examining all of the perspectives in relation to each other, TNO research found that, broadly speaking, it is possible to identify two overall approaches. One of these ‘adaptability orientations’ is based on the principle of *robustness*. This approach, which we call the **robust approach**, focuses on stability. The aim is to continue to operate through the strength of the organisation, despite changes in the environment. Hence, rather than making fundamental changes in its structure in response to new factors, the organisation meets the

demands of the changing situation with its existing procedures. This is achieved by predicting changes in the environment as accurately as possible. Effective employment of contingency planning, flowcharts, structures and processes makes it possible to orchestrate a controlled response to change. The characteristic central control and clearly defined tactics, techniques and procedures (TTPs)⁷ applied by a robust approach enable a swift, clear and coordinated response and maintenance of the requisite level of performance in the face of change. As much as possible is known about the situation being dealt with, and everything is anticipated, practiced and coordinated as much as possible.

The second, contrasting, adaptability orientation, which we call the *change* or **flexible approach**, focuses on changing the organisation itself where necessary in order to continue to meet the objectives of the organisation. This approach is characterised by the ability to depart from established structures and processes and accept, even embrace uncertainty. The flexible approach provides considerable scope for task maturity, based on trust and individual autonomy, and seeks to enable effective responses to situations that cannot be predicted or prepared for. The flexible approach relies on maintaining optimal contact with the environment, rapid identification of changes in the environment, quick conversions between operational



The flexible approach: Patrolling the Green Zone in the Baluchi Valley region of Afghanistan

⁷ Grote, Weichbrodt, Günter, Zala-Mezö and Künzle, 2009; Moynihan, 2009.

procedures, and the development of new capabilities where necessary. By allowing for continual evolution and adaptation, this approach enables organisations to implement an optimal response to unpredictable changes.

A bivalent approach: robust *and* flexible

Both approaches enable an adaptive response, depending on the circumstances in which the organisation finds itself and the objectives it wishes to achieve. If the circumstances are relatively predictable, and if it is in the interest of the organisation to ensure that its operations are influenced as little as possible by changes in the environment, the *robust* approach may be the most appropriate way of orchestrating an adaptive response. If, on the other hand, the circumstances are highly uncertain and unpredictable, and the achievement of certain objectives is more important to the organisation than the manner in which this is accomplished, the *flexible* approach will be the most appropriate way of orchestrating an adaptive response.

However, these two orientations - *robust* and *flexible* - place very different demands on both the organisation and the individual. The fact that they appear to be at odds with each other explains why service members and defence personnel are sometimes frustrated by the contrast between the experience of 'freedom' and focus on a mission during deployment and the situation back at the barracks on their return, where it would seem that 'nothing is possible'. So, what is the right choice? Strong command or greater leeway and freedom? Experiment and learn, or focus on results and accountability? Cohesion and a shared identity, or autonomy and independence? It seems that one approach is always chosen at the expense of the other. However, on closer examination, this turns out not to be so. These seemingly paradoxical approaches do not necessitate an 'either-or' choice, because, at a deeper level, they are actually related to each other. Rather than investing in one at the expense of the other, the challenge is to achieve a dynamic balance between the two. Which approach is most effective depends on the circumstances in which the organisation finds itself and the objectives that need to be achieved. A balanced mix of both will often be needed. It is unlikely that one approach will be perfectly suited to any given situation. This requires the ability to consciously identify and determine which approach will be most effective in a particular situation and how to create an effective balance between the two.

A Defence force needs to be able to adopt both orientations in order to be optimally adaptive. All elements of a Defence force encounter both predictable and unpredictable changes. Sometimes the primary interest is to uphold existing procedures. In other instances it is necessary to adjust and adapt. A carefully balanced combination of the two is almost always required. In other words, a Defence force needs to develop a bivalent orientation and embed both ways of working within its organisation, so it is possible to switch between the two. At this moment, this occurs mostly implicitly rather than explicitly: the organisation and individual military personnel are often unaware of the competences required to switching between the two approaches. Senior Defence staff often know instinctively which service members are best equipped to act as 'pioneers' during an initial tour, and which are better at safeguarding and maintaining, and can therefore preserve what has been achieved. But these decisions are rarely explicit. The gains that can be made in this area will serve to increase adaptability.

It should be noted that the concept of a bivalent approach is not new. The literature on innovation management describes a similar bivalent approach in relation to the pursuit of ‘ambidexterity’.⁸ For a Defence force to achieve real adaptability, it must be able to explicitly determine which type of response is needed in a particular situation, and deliberately and fluidly manage both the robust and flexible approaches. The first step in accomplishing this is to clarify the concept of adaptability.

A new model of adaptability

Both in the scientific literature and in civil and military practice we find paradoxical views on what constitutes adaptability and the characteristics of an adaptable organisation. However, as we have explained above, research findings show that real adaptability is not served by a choice of one approach at the expense of the other. What is required is to achieve a dynamic balance between the two. This applies both to the organisation as a whole and to all units or ‘systems’ (individuals, teams, departments and divisions) within the organisation. Each system has its own adaptable capabilities and environmental requirements, yet it is also related to all of the other systems. This is known as a ‘systems approach’. Therefore, the definition of adaptability formulated for the purposes of this study is relevant at all levels of an organisation.

“Adaptability is the ability of a system to effectively anticipate, identify and interpret (un)foreseeable changes, and to respond to these changes swiftly, in a manner that maintains optimal performance.”

This definition includes the concepts of anticipation, identification, interpretation and response, all of which are key. This makes it clear that adaptability is a proactive capability. In other words, besides being interested in the adaptive response, we are also interested in factors that enable effective preparation for changes and the ability to monitor and interpret the environment.

While this definition clarifies the concept of adaptability and establishes a framework, it is the individual components and the interrelationships between them that, if strengthened, influence the degree of adaptability. Therefore, the research was directed towards the development of a new Defence-specific model of adaptability (Figure 1) that integrates the different views in the fields examined in the study (academic, civilian and military culture) and incorporates bivalent thinking. The model illustrates the functioning and sphere of influence of adaptability in the Defence context. The next paragraph explains the thinking behind the model and expands on the individual components of the model.

The green boxes in the model describe, in generic terms, how a system can be adaptive to its environment. The system can be an individual, a group of individuals in a team, a department, a division or an organisation as a whole. Together, the green and grey and boxes illustrate the ability of the system to continually create an optimal fit between itself and the environment. The blue boxes in the model describe the organisational determinants that influence the overall adaptability process. The determinants listed in the model are elaborated in Table 1 further on in this article. Since this article is primarily concerned with the organisational level, the terms in the blue boxes in Figure 1 relate specifically to the (Defence force as an) organisation. The terms in these boxes would differ for units such as teams and individuals.

⁸ Similar to the concept of *organisational ambidexterity* (March, 1991)

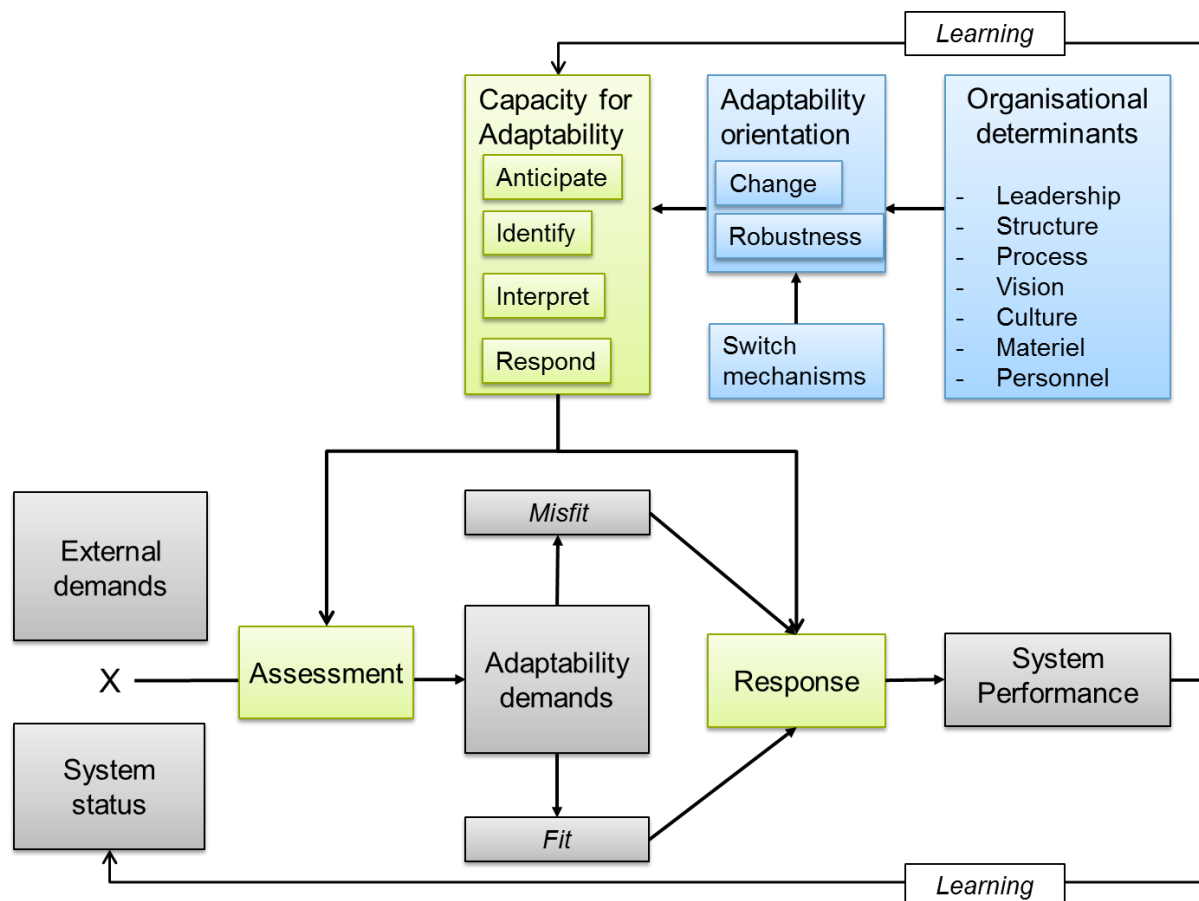


Figure 1: A systems-approach model of the adaptability of a military organisation

Fit or misfit - the green boxes

We start, at the left of the model, with the fact that the organisation (which could also be a division or a unit) operates in the outside world where it is confronted with specific environmental requirements (external demands).⁹ For example, the environment might be extremely changeable or highly ambiguous. At this point, the organisation is configured in a particular way (system status). This configuration is characterised by factors such as the type of leadership, the type of operational approach and the way in which everything is organised.¹⁰

There may be a *fit* or a *misfit* between the status of the organisation and the demands placed upon it by the environment.¹¹ For instance, the organisation might be very rigid, while the environment is very changeable. An example of this would be a scenario in which the official, bureaucratic elements of the organisation, with their tightly defined procedures, are confronted with a new situation for which there are no rules and where a rapid response is required low down in the organisation. This causes problems. Virtually every service member will immediately be able to think of examples. As a government department, the Ministry of Defence works with well-defined rules and structures in order to be clear, transparent and predictable. But if and when situations require flexibility, this way of working can be a hindrance that reduces effectiveness and causes frustration. This also occurs in other contexts: bureaucratic procedures and hierarchical decision-making processes made it difficult

⁹ James, 2011; Meyer, Brooks and Goes, 1990; Meyer, 1982

¹⁰ Dynes and Aguirre, 1979; James, 2011; Raisch, Birkinshaw, Probst and Tushman, 2009

¹¹ Jones, 2007; Pennings, 1975

for NASA engineers to solve the problems with the Challenger and Columbia space shuttles quickly and flexibly, with all of the attendant consequences.¹²

The reverse situation, where an organisation is very flexible while the environment is stable, also causes problems. In the wake of Hurricane Katrina in 2005 a great deal of valuable time was lost when the organisations involved ignored existing protocols.¹³ Within a Defence force, lack of procedures and frameworks can lead to uncertainty among the personnel regarding issues such as career prospects or compensation for injuries caused by random incidents. Lack of clarity and predictability can also cause hesitancy in partner organisations, when it comes to assuming financial responsibility for example.

In both of the situations described above there is a misfit between the organisation and the environment, which can impair performance. An adaptable system (the organisation) is able to create an optimal fit between itself and the environment. This may mean that the system needs to be more flexible, or, conversely, that it needs to be more steadfast in its action. If there is a misfit and this then leads to an inaccurate assessment of the most appropriate course of action, there can be serious consequences. In some instances it is necessary to abide by the rules (such as wearing seat belts, as required by law, when driving around the barracks). In other situations it may be appropriate to deliberately refrain from following the rules (such as not wearing seat belts when driving on patrol in areas where there is a high risk of IEDs).

Before an organisation can take steps to ensure an optimal fit, first it must be able to accurately assess whether there is a fit or misfit with the environment. In the model this assessment process is a continuous process that forms an evaluation by making use of the existing capacity for adaptability within the system, which is the ability of the system to be adaptive by means of anticipation, identification, interpretation and response.

This continuous assessment process results in the identification of adaptability demands. These are the demands placed on the organisation in the delivery of an effective response to the environmental requirements. For example, the speed, extent and coordination of a response all need to be tailored to the situation (such as a swift and tightly focused response by a single unit).

Once the requirements have been identified, there are two possibilities. The adaptability demands may correspond to the way in which the organisation operates, in which case there is a fit and optimal system performance can be achieved with the existing method of response (the sequence shown at the bottom of the model). The second possibility is that the adaptability demands do not correspond to the way in which the organisation operates, in which case there is a misfit, and the organisation needs to adapt to maintain optimal performance (the sequence shown at the top of the model). The ability of the system to respond in this way is also influenced by its capacity for adaptability, which is ultimately determined by the system determinants of adaptability. Both forms of response qualify as adaptability, because both forms of response ensure an optimal fit between the organisation and the environment. Both in the case of optimal performance, and in the case of less than optimal performance, there is learning, which can enhance the capacity for adaptability and the status of the system as a whole.

¹² Boin and Van Eeten, 2013; Levina and Vaast, 2005

¹³ Donahue and Tuohy, 2006

The activities and processes described above occur in a continuous cycle. The different parts of the process present individual subsystems with different challenges. The circumstances encountered by one unit differ from those encountered by another. For example, only certain units within the organisation have to be able to make split-second decisions. But each (sub)system needs to be able to assess whether its current method of operation meets the demands of the environment, and to adapt if this is not the case. This applies as much to an official at the Consular Service Centre, who must waive the application deadline if called for in an emergency, as it does to an infantryman who must observe the application deadline if he wishes to use helicopters in an exercise.

Organisational determinants - the blue boxes

The organisational determinants also serve as a set of criteria that can be used to assess the capacity for adaptability by determining the existing degree of adaptability in relation to each determinant and whether this will ensure a fit with the current circumstances. In the model we included both the robustness and change adaptability orientations as organisational determinants (the blue boxes), and added the switch mechanisms needed to switch between the two. We then listed the characteristics that emerged from both literature and experiences in practice under one of the two orientations. The two orientations are categorized into seven factors that describe an organisation or that can be used as starting points to change an organisation. These seven factors: Leadership, Structure, Processes, Vision, Culture, Materiel and Personnel (based on the McKinsey 7S Framework¹⁴) are listed in Table 1. In the paragraphs that follow we describe the characteristics of the two approaches in relation to each of these factors. This is not an exhaustive list, but it serves to exemplify the characteristics of the two approaches.

Leadership

In the flexible approach the most effective leaders are change-oriented.¹⁵ These leaders focus primarily on change and growth and encourage exploration of new and better ways of working. Individuals are encouraged to think outside the box and initiate change that supports the organisation.¹⁶ Experimentation and learning are fostered and facilitated.¹⁷ A transformational leadership style appears to be an important factor in achieving this. Person-oriented leaders seek to motivate, encourage, coach and inspire their people in order to get the best out of them. In contrast to this, the robust approach



Leadership style in the robust approach

requires strong decisive leaders with a clear vision, who establish guidelines for their subordinates and coordinate activities.¹⁸ Here the emphasis is on prompt and correct execution of the task.¹⁹ Task-oriented leaders set clear objectives, monitor performance and intervene if necessary. They are

¹⁴ Waterman, Peters and Philips, 1980

¹⁵ Lee, Weiner, Harrison and Belden, 2013

¹⁶ Bienefeld and Grote, 2013; Manz and Sims, 1987; Millikin, Hom and Manz, 2010

¹⁷ Edmondson, 1999; Ekvall and Arvonen, 1991, Mathieu, Marks and Zaccaro, 2001

¹⁸ Bigley and Roberts, 2001; James, 2011; Moynihan, 2009

¹⁹ Bigley and Roberts, 2001; James, 2011

strongly directive and apply the principle of performance-related rewards and penalties. Control, management and avoidance of risk is a core aim.

Structure

The flexible approach requires a flat organisation with little distance between management and subordinates and decision-making powers devolved to lower levels of the organisation.²⁰ Teams operate independently in a horizontal cooperative structure.²¹ The focus on internal and external alliances ensures optimal contact with the outside world and enables fast response times. Boundary spanners broker and coordinate connections between the organisation and important elements in the external environment.²² The robust approach requires a centralised structure with clear central coordination and a simple integrated organisational structure.²³ The top management has a relatively wide span of control and there are a relatively large number of levels in the organisation.²⁴

Processes

In the flexible approach an organic way of working with minimal standardisation and formalisation is most effective.²⁵ Coordination and cooperation are organised horizontally rather than vertically.²⁶ Conversely, the robust approach is based on the principle of formalisation and standardisation.²⁷ Established procedures, rules and instructions, known to everyone, explain how to act in defined situations.²⁸ There are uniform ways of working.

Vision²⁹

In the flexible approach vision is developed in short cycles and continuously adjusted in response to (bottom-up) internal and external developments.³⁰ The robust approach focuses on developing future scenarios, analysing threats, planning strategies and deploying people and resources in line with these scenarios. The existence of a top-down vision, known throughout the organisation, ensures that the constraints and conditions within which action can be taken are clear.

Culture

The flexible approach requires an organisational culture centred on learning and innovation³¹ where people are continually challenged to experiment and learn. New and better ways of working are developed and adopted. The enabling condition is psychological safety: people trust that they will not be penalised for making mistakes, and that others will not think less of them if they ask for help, information or feedback.³² Producibility and plannability are not regarded as essential; uncertainty is embraced. The prevailing culture in the robust approach is characterised by the endeavour to reduce the degree of uncertainty as much as possible. Accountability and risk management are priorities.³³ People are encouraged to identify, manage and mitigate risks. There is a competitive atmosphere in which individuals seek to be rewarded for outperforming their peers.

²⁰ Burns and Stalker, 1961; Jones, 2007

²¹ Galbraith, 1994

²² Ancona and Caldwell, 1992; Joshi, Pandey, and Han, 2009; Marrone, 2010

²³ Tsai, 2002

²⁴ Jones, 2007

²⁵ Burns and Stalker, 1961; Jones, 2007

²⁶ Davison, Hollenbeck, Barnes, Slesman, and Ilgen, 2012; De Vries, Hollenbeck, Davison, Walter, and Van der Vegt, 2016

²⁷ Grote et al., 2009; Moynihan, 2009

²⁸ Jones, 2007

²⁹ Here we are concerned vision development processes rather than the content of the vision.

³⁰ Melnyk et al., 2014

³¹ Hurley and Hult, 1998

³² Edmondson 1999

³³ La Porte, 1996

Materiel³⁴

In the flexible approach there is no longer the endeavour to develop and maintain all capabilities in house. It is more expedient to procure commercial products and services and use modular products that can be converted if the requirements of the situation change. Ideally, procurement and maintenance (pooling and sharing) of materiel are undertaken jointly with relevant partners (such as NATO partners for example). Everything is designed to enable rapid intervention and response to changing circumstances without the organisation itself having to procure or develop all capabilities. Conversely, in the robust approach the aim is to maintain a warehouse of capabilities. The priority is to ensure that the organisation itself is prepared for possible incidents, by building in redundancy and having backup systems and capabilities (emergency supplies and resources) ready if primary systems fail.³⁵ For this approach to succeed, the organisation must have a clear understanding and overview of its inventory of resources and capabilities.

Personnel

Differentiation through specialisation of personnel contributes most to a flexible approach. This eliminates the requirement for everyone to be able to do everything. Instead, certain individuals or groups of people with specialist knowledge, skills or experience can be called upon as and when necessary. This allows for the creation of a flexible shell around a fixed core, for example.³⁶ In contrast to this, the robust approach needs a workforce of generalists in positions that encompass a wide range of duties.³⁷ Here the idea is that everyone needs to be trained to a certain level to enable the organisation to deliver a swift, decisive and unequivocal response.

The following table provides an overview of the characteristics described above.

³⁴ In the case of materiel we are not so much concerned with factors that contribute to one or other capability, as with approaches that can be adopted by both capabilities.

³⁵ Melnyk et al., 2014

³⁶ Beersma et al., 2009; Lawrence and Lorsch, 1967

³⁷ De Vries et al., 2016; De Vries, Walter, Van der Vegt and Essens, 2014

	Change orientation	Robustness orientation
Leadership	Transformational leadership Autonomy facilitating Change oriented Collaboration oriented Tolerance for risk	Transactional leadership Risk aversion
Structure	Decentralization - Flat organisation - Decisions/responsibility low in org Horizontal collaboration structure	Centralization - Central coordination - Ownership Simple organizational structure
Processes	Flexible processes / minimal processes Self-synchronization Lateral/ horizontal coordination Agile decision making Social innovation Broad mandate commander Simplicity & Transparency	Formalization Non creative goals and plans Command & Control TTP's
Vision	Adaptive, short-cycle development Feed forward orientation Scanning and feedback Shared, bottom-up vision	Scenario-based development Planning & Control Clear, top-down vision
Culture	Psychological safety Uncertainty embracing Experiment & learn Change-oriented Collective aspiration	Accountability Risk aversion Preoccupation with failure Competitiveness
Materiel	Pooling & sharing Off the shelf Modularity	Redundancy, back-up systems
Personnel	Flexible shell Differentiation/ specialization	Generalisation Scenario based training

Table 1 – The characteristics of the *Change* and *Robustness* orientations

Uniting the best of the two approaches in the Defence force

Most readers will be able to think of situations that require a flexible approach rather than a robust approach, and vice versa. Both approaches have their merits and usefulness. This can range from responsible use of government funding and creation of clear expectations- with clearly defined duties, powers and responsibilities, so service members know where they stand - to the need to allow ample leeway for individual initiative, social innovation and emerging strategies, *e.g.* because a new task or assignment requires this type of operation. In seeking to enhance the adaptability of the Defence force, the challenge is to avoid focusing on a particular one-sided approach, and cultivate the ability to switch fluidly, and find the appropriate balance, between two paradoxical adaptive capabilities: robustness and flexibility. The process of switching does not mean that the organisation as a whole suddenly shifts from one approach to the other. It is a continuous flux between two approaches that always involves different (sub)units of the organisation: a dynamic process in which it is necessary to continually assess the context and the situation and make the appropriate adjustments. Depending on the situation, the characteristics of the robust and flexible approaches described above can be combined in different constellations at every system level (individual, team, department or division). One set of circumstances may require a de-formalised way of working with a formal, hierarchical leader exercising operational command and control, while another may call for a centralised organisation with independent, self-organising teams that are authorised to act independently of the central structure and capable of doing so.

The challenge is to create coordination mechanisms that make it possible to continuously integrate and deploy the optimal mix of robust and flexible capabilities. For this to be possible, it is also necessary to be able to form an assessment of a situation that is as accurate as possible. For, the more accurate the assessment of what is actually going on, the more effective the organisation can

be in determining which capabilities are required to deal with the situation. This applies as much to an individual soldier (who has to determine whether an approaching vehicle in a combat area poses a threat), as it does to an organisation (that has to assess the implications of a terrorist attack). Yet this, too, presents challenges, because the perception of a situation is coloured by personal, group, organisational and social paradigms, which are shaped and influenced by factors such as past experiences, interests, culture, organisational objectives, standards and values. These filters through which reality is viewed and interpreted can hinder the ability to form an objective assessment of a situation and, in doing so, undermine the capacity for adaptability. While it would be naïve to suggest that people can extricate themselves from these paradigms entirely, it is possible for individuals and the organisation to be aware of these paradigms and how they influence the assessment of a situation. Among other things this requires a commitment to continuous reflection. The progressive refinement of clear perception is an important first step in increasing the capacity for adaptability.

Therefore, real adaptability requires the integration of two paradoxical capabilities: robust stability and flexible adaptability. As explained above, this does not necessitate a compromise between two irreconcilable extremes. The solution is to recognise and acknowledge robustness and flexibility as two adaptive systems that are part of a whole. While it is conceivable that the flexible orientation might be perceived as lacking in some parts of the armed forces, it would be a mistake to assume that the overall adaptability of the Defence force would be enhanced by introducing flexible capabilities at the expense of the robust capability. Real adaptability does not mean that everything always has to be flexible, organic and modular. To be effectively adaptive, an organisation needs to continuously achieve a fluid balance between robust stability and flexible adaptability depending on the requirements of the situation. How is this accomplished in practice? Depending on the demands imposed by the environment, parts of the organisation are structured and operate differently while still being connected to each other. This requires effective alignment and coordination at all levels, from the individual to the organisation. In addition to this, coordination mechanisms can be supported by identifying recognisable patterns that prescribe the movement between the two approaches.

To be equipped to manage deep uncertainty, the adaptable Defence force that the Netherlands Chief of Defence and the Dutch Minister of Defence have in mind needs to have full capability in both approaches and must be able to employ both. It must be capable of being both robust and flexible depending on the requirements of the situation. It must be able to form an accurate assessment of the situation in order to determine which approach will be most effective. And then it must also be able to switch between the two approaches.

So how to move forward?

The Dutch Defence force already possesses both capabilities. There are countless examples of situations in which the Dutch armed forces have demonstrated the ability to be both robust and flexible in action. Take for example the philosophical understanding (a flexible approach) of the task-oriented command which is firmly embedded in its doctrines (a robust approach). Having said this, there are still many challenges and opportunities for growth. The integration of robust and flexible characteristics and the ability to switch between the two can create tension, such as that experienced by a military leader who has to account to parliament, yet who also wishes to give his subordinates freedom and scope. At this point the organisation is unaware of its competence, and

there are certainly gains to be made in terms of increasing the capacity to achieve clear perception and deliberately create switch mechanisms within the armed forces. How do service members know when they are allowed to depart from established procedures, also at low levels within the organisation? And when they are required to revert to established procedures? To which units and in which situations does this apply? And to which does it definitely not apply? When are formal processes required? And when is it appropriate to adopt a more informal approach? And what are the implications both in terms of operation and for individual employees within the Defence force? The research conducted over the last year has resulted in the development of concepts designed to enhance adaptability. The Dutch Defence force and TNO will now implement the CD&E process³⁸ to test these theoretical concepts in practice within the armed forces. This will identify areas in which gains can be made in terms of increasing adaptive capabilities and the requirements and conditions that need to be met. On 11 March 2016 a kick-off event at the Kromhout Barracks in Utrecht launched a series of projects throughout the armed forces to achieve a fuller understanding of the practical implications of a bivalent orientation. Over the next two years a range of related projects implemented in different arms of the Defence force will examine whether and how the capacity for adaptability can be enhanced. All of these projects fall within the Human and Organisational Adaptability research programme led by TNO.³⁹

³⁸ Concept Development and Experimentation. The purpose of CD&E is to develop new concepts that lead to new or improved capabilities. These concepts are developed by experiencing challenges in a simulated setting before making (major) investments.

³⁹ For more information about the research on adaptability, subscribe to Energizer by sending an email to willeke.roodenburg@tno.nl.

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