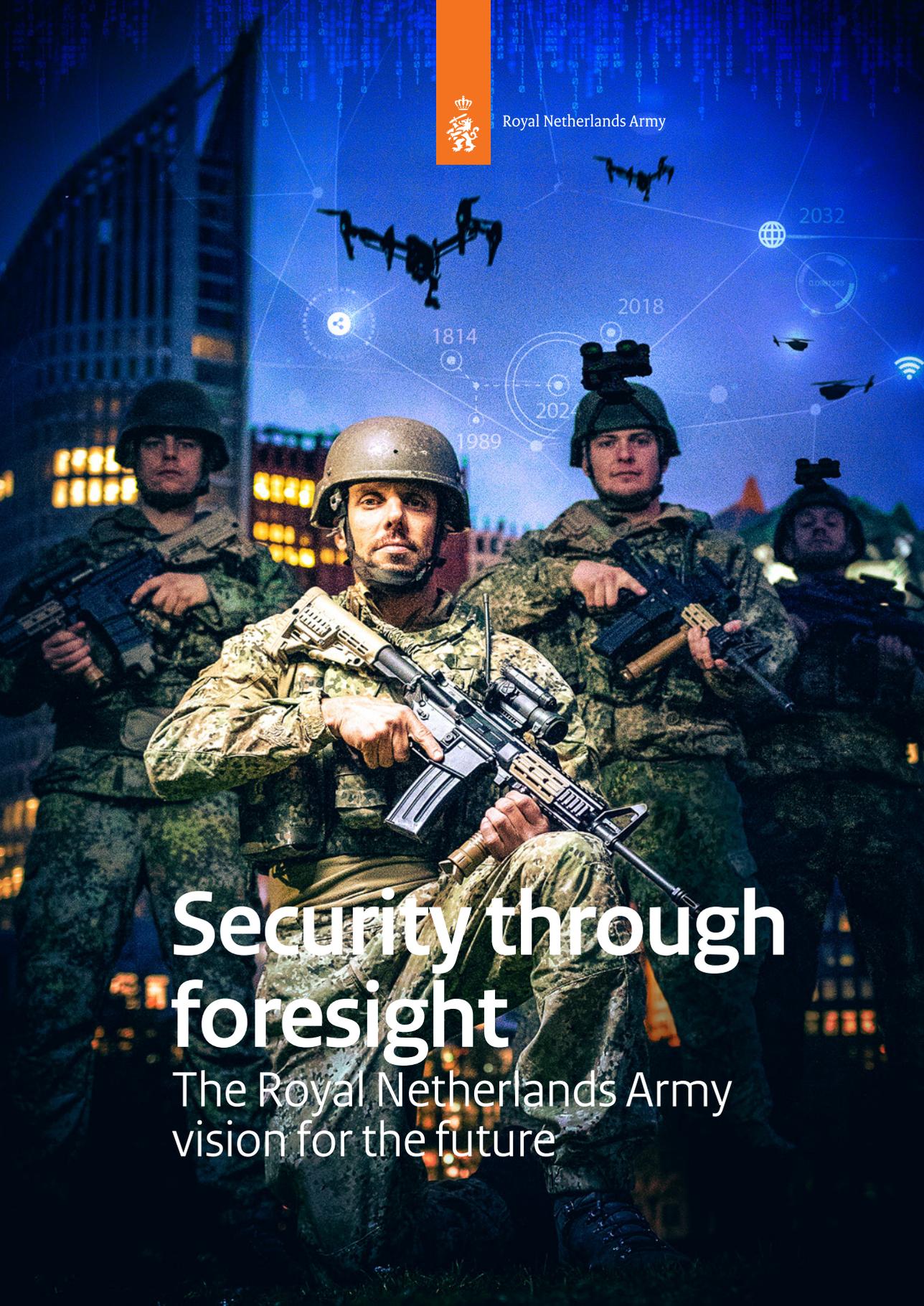




Royal Netherlands Army



Security through foresight

The Royal Netherlands Army vision for the future



Foreword

Before you lies the 'Vision of the Army', with which the Royal Netherlands Army (RNLA) steps into the future. It has been written for everyone concerned with our security and is intended to promote dialogue about the future of our security apparatus.

The world around us is changing at a rapid pace and that has consequences for the RNLA too. Take technological developments, for example, as a result of which land operations will fundamentally change, or the increasing interconnection between national and international security. Meanwhile, new threats are emerging and old threats are resurfacing. The protection of our territory and that of our NATO allies, for example, has faded into the background over the years. In recent years, however, the importance of this task has once again increased. Unlike our recent missions, our participation in this task is not optional. The RNLA must be there if needed.

If it is to continue to play a decisive role in the future, the RNLA must be able to keep pace with the speed and unpredictability of change. It is not only the security situation that is volatile. Climate change, energy scarcity, demographic trends and economic stability all contribute to the unpredictability of the future. All of this has far-reaching consequences for our organisation and the manner in which we work. If the RNLA is to continue protecting what is dear to us all, we will have to make some fundamental changes.

In the 2018 Defence White Paper, the impetus was given for the broad lines of development of the Netherlands armed forces. What does that mean for the RNLA? What other changes are necessary? And how can we implement them? As a follow-up to the Defence White Paper, this vision describes how we envisage our future role in the security domain and the path we will take to get there.

Leo Beulen
Lieutenant General
Commander of the Royal Netherlands Army

Where we want to be

Well-trained people, sophisticated technology and effective concepts of operations

Our vision is of an army that is capable of delivering what is asked of us, under any circumstances. The Netherlands must be able to rely on its army. A credible contribution to the protection of the territory of the Netherlands and of NATO requires an army which, if necessary, can fight in the highest end of the spectrum of force. Together with its allies, the RNLA must also be able to contribute to conflict prevention, stability and national security. **The RNLA will do so with well-trained people, sophisticated technology and effective concepts of operations.**

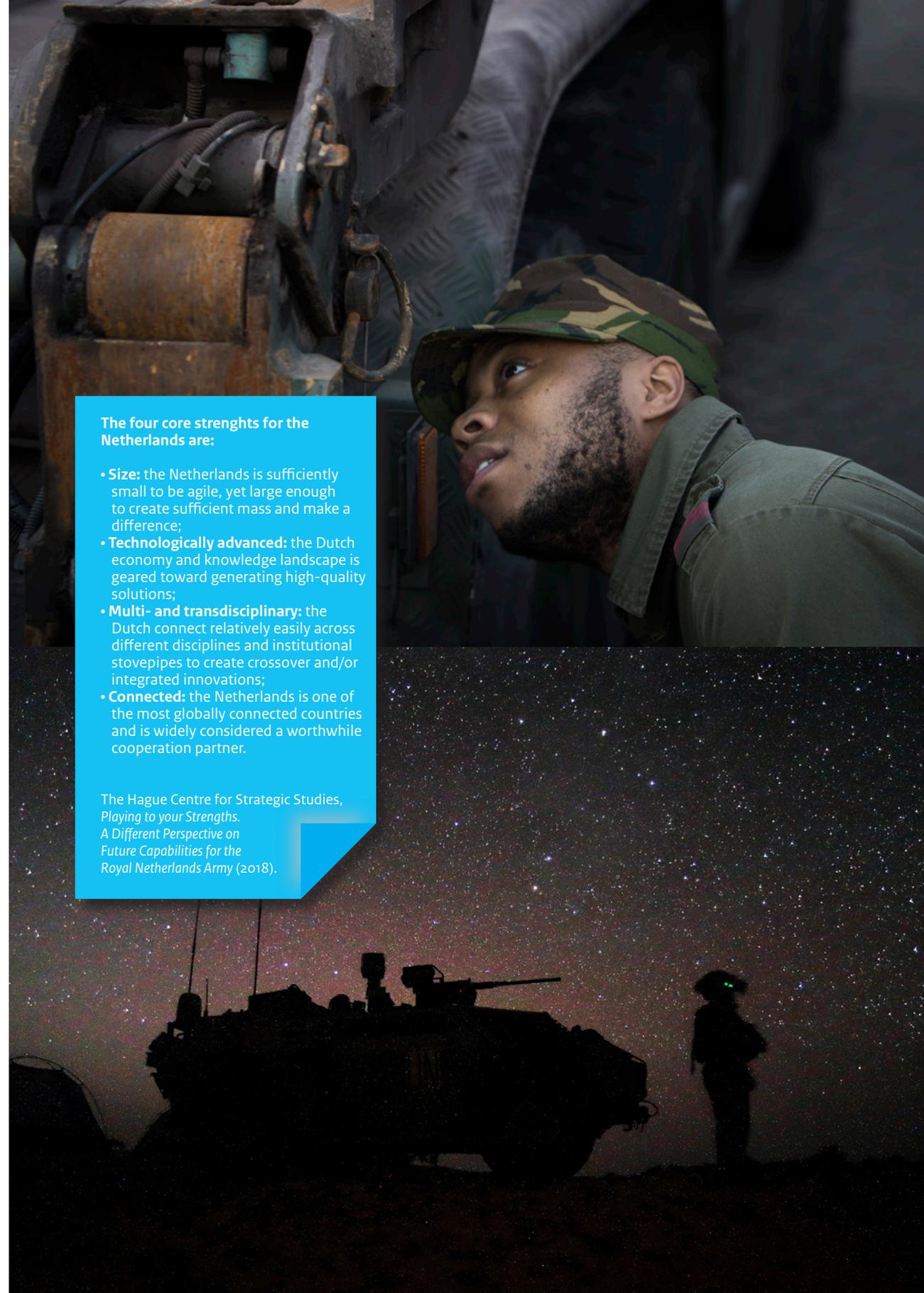
The connection between humans and technology is central

The strength of the RNLA lies in its personnel and the fact that we always operate amongst people. As a result, we are able to understand what is really going on, to have a lasting influence on people's behaviour and to make people feel safe. Not only are its personnel indispensable to the RNLA of the future, so too is sophisticated technology. Technology is advancing extremely quickly and has a great impact on the battlefield. Furthermore, technological advances are a necessity, for example if unmanned systems are needed to take over the work of people due to a shortage on the labour market. **The connection between humans and technology is central to the further development of the RNLA.** This means increasing integration of humans and technology, greater investments in technologically advanced systems and quicker integration of technological applications in concepts of operations.

The four core strengths for the Netherlands are:

- **Size:** the Netherlands is sufficiently small to be agile, yet large enough to create sufficient mass and make a difference;
- **Technologically advanced:** the Dutch economy and knowledge landscape is geared toward generating high-quality solutions;
- **Multi- and transdisciplinary:** the Dutch connect relatively easily across different disciplines and institutional stovepipes to create crossover and/or integrated innovations;
- **Connected:** the Netherlands is one of the most globally connected countries and is widely considered a worthwhile cooperation partner.

The Hague Centre for Strategic Studies,
Playing to your Strengths.
A Different Perspective on
Future Capabilities for the
Royal Netherlands Army (2018).





The essence of our vision

Humans conduct the combat, technology multiplies the fighting power and concepts of operations are used to orchestrate the combat. To be able to continue to guarantee this in the future, the RNLA will increase its **adaptability**, intensify **cooperation with national and international partners**, strengthen the **connection between humans and technology** and invest in both **combat over long distances** and **operations in urban areas**.

United in trust; our identity

We, the RNLA, have a special task, which can demand our utmost. Therefore, we will continue to nurture our identity, our traditions and our culture of comradeship and trust. Leadership is the unifying factor and we act according to our core values: courage, dedication and resilience. We honour our dead, care for our wounded and support our veterans. Wherever we operate, we remain united by our values and by the knowledge that whenever we advance, we never do so alone.



The challenges for future land operations

1

Future conflicts will be complex and unpredictable

While the next conflict cannot be predicted, we do know something about the nature of future conflict and the implications for land operations. In future conflicts, adversaries will deploy different instruments of power simultaneously, varying from economic undermining, cyber-operations, disinformation, terrorism and indirect confrontations (proxy conflicts) to secret operations and large-scale combat. Such future conflicts are expected to take place mainly in urban areas and to be volatile due to rapid technological advances and constantly changing tactics. Not only is a large-scale conflict on the eastern flank of NATO territory a possible direct threat to the Netherlands, so too are the secondary effects of unmanageable flows of people in search of food and security, paralysis of the digital network and terrorist attacks.

'Unmanned vehicles, robotisation, synthetic biology and artificial intelligence present opportunities for society, but in the hands of the wrong actors they can quickly become a security risk.'

Translation of a quote from the Netherlands Ministry of Foreign Affairs, *Geïntegreerde Buitenland- en Veiligheidsstrategie* (2018).

2

Hybrid confrontations: simultaneous efforts on several fronts

One example of hybrid conflict is the Russian operation in Crimea in 2014-2015, which used simultaneous attacks by unmanned aerial systems, artillery, hackers and special forces, the disruption of electronic communication and the mobilisation of sympathisers.

Hybrid conflicts do not have a clear beginning or end, nor do they have a clear front line or a clear distinction between participant and observer.

Military operations revolve around influencing the opponent or other parties by means of information/disinformation, digital activities and force. In hybrid conflicts, opponents work together down to the lowest levels in the domains of land, air, sea, cyber and space to achieve the intended effects. In such conflicts, terrorists and other non-state actors are in a position to influence politics and public opinion by means of manipulation, cyber-attacks and attacks with easy-to-obtain technology, such as drones. The all-encompassing character of hybrid conflict thus makes the warfighting method more complex.

3

Technological superiority is crucial

The rapid advance of technology means the future battlefield will revolve less around the number of military personnel and systems, but rather around superior effectiveness, striking power and the implementation of technology. The timely availability of systems, fuel and energy will play an increasingly important role in this regard. This will not be limited to state actors: easy access to advanced technology also presents small-scale groups with the opportunity to deploy advanced technology on the battlefield and beyond. **The continuing technological arms race will develop further in the future, particularly in the fields of robotics, energy provision, artificial intelligence, biotechnology and big data analytics.**

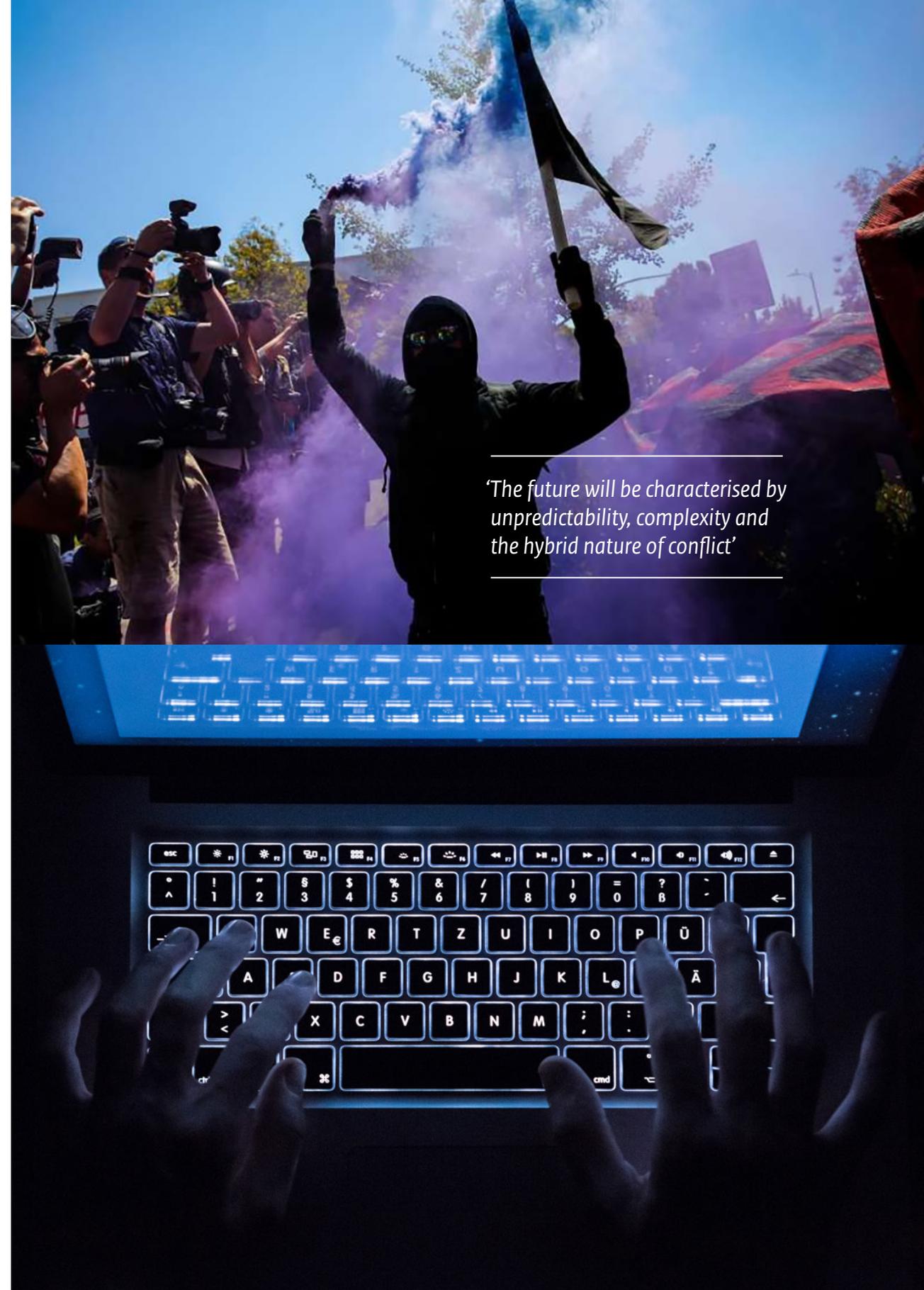
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Sensors and systems: quicker, more precise, deadlier and longer range

The increasing scope of detection equipment and weapon systems means that battles can be fought over increasingly long distances. Future generations of sensors and firing systems will make it increasingly difficult to remain unseen by opponents and to stay out of their sphere of influence. The persistent presence of drones, satellites, electronic sensors and social media means that every unit runs the risk of detection and subsequent attack by precision weapons, air defence, electronic jammers or cyber weapons. The speed of such actions is increasing, because the most modern forms of communication make it possible to reduce the time between detection and attack to practically nothing. **Ensuring that our decision loop (from detection to action) stays shorter than that of the opponent is essential to winning a conflict.** The development and further evolution of detection equipment and weapon systems currently in progress is increasing the possibilities for supporting land operations from the ground, as well as from the air and the sea. At the same time, the rapid and far-reaching progress of air defence equipment in particular poses a serious risk to helicopters and aircraft. As a result, air support for land operations will not always be guaranteed.

The challenges in short

The future will be characterised by unpredictability, complexity and the hybrid nature of conflict, in which opponents generally operate on several fronts simultaneously, while the entire world watches. In addition, the importance of technology is increasing. The development of cyber, robotics and artificial intelligence is increasing the effectiveness of sensors and systems, with greater scope, lethality, speed and precision as a result. What does this mean for future land operations?



“The future will be characterised by unpredictability, complexity and the hybrid nature of conflict”



The Defence White Paper is clear in what we want to achieve together:

- **Remain safe** in the Netherlands, the Kingdom, the EU and NATO territory.
- **Foster security** around Europe (the Middle East, North Africa and parts of sub-Saharan Africa and West Africa).
- **Secure connections** from the Netherlands as a hub and its lines of communication.

To this end, investments and renewal are needed in the land domain.

Netherlands Ministry of Defence,
*Defence White Paper 2018:
Investing in our people,
capabilities and visibility (2018).*

The challenges of future land operations

1

Land operations: continuous learning, innovation and further development

Hybrid threats, unpredictability and complexity demand an army that is agile and can find the balance between robustness and flexibility. This requires personnel, structures and processes that are characterised by continuous learning and quick innovation at all levels, and concepts of operations and organisations that are never finished, but rather constantly adjusted. This requires a fundamental change to the set-up of the RNLA organisation and processes. It calls for a transformation to become an open organisation that can adapt quickly, that is focused on cooperation with external parties, and in which development and innovation take place at all levels, especially at grass roots.

Mission command is vital in this regard: RNLA leaders set goals and priorities, whereby powers and mandates with respect to personnel, equipment, organisation and finances are visibly delegated downwards. This requires trust, fewer rigid regulations, and a quicker and smarter approach to the retention, procurement and availability of equipment and talented personnel.

2

Land operations always occur in collaboration

Future conflicts will demand an integrated approach of all means of influence and power: political, military, economic and information-related. Land units form part of this and always operate in collaboration with national and international security partners. In addition, land units always work closely with sea, land and air units, even at the lowest levels. This integrated approach has led to the concept of multi-domain operations, which the army has adopted as the environment within which it operates. Development of this concept is currently in full swing, and it demands a high degree of interoperability, cross-domain training and joint development of concepts of operations.

The intensification of international military cooperation has a far-reaching impact on the existing organisational structures. After all, our deployment occurs predominantly in multi-national coalitions. In addition, we have deliberately opted for even more intensive cooperation between Dutch units and the German armed forces and Services. The profile of the RNLA will shift to a set of independent building blocks and modules that can be set up and deployed in combination with modules from partners as required.

3

Land operations are high-tech wherever possible

In future combat, superior technology will be of crucial importance and will change the face of military operations. It will be possible, for example, for a threat to be identified by a mini-drone and instantaneously targeted by precision-guided firing from a weapon system a few hundred kilometres away. Logistic maintenance will be supported by unmanned aerial systems, 3D printers and innovative and sustainable energy generation. Technological applications regarding human performance will take shape through human-machine teaming and human performance enhancement, such as technological or biotechnological improvements to the alertness or sight of our military personnel.

In a major hybrid conflict, however, the RNLA must also be prepared for situations in which it does not have technological superiority. Such situations could lead, for example, to disrupted supply lines, no possibilities for medical evacuation,

inadequate situational awareness and no communication with headquarters.

When cut off from their own troops and surrounded by constant chaos, friction and violence, military personnel must be able to carry out their mission using their own plan with little support or control from above. Leaders must be well trained so that they can also take independent decisions. Excellent training and instruction, personal development, team formation and leadership development will therefore continue to be of crucial importance.

4

Land operations at high tempo, over great distances and often in urban areas

Success in combat against a hybrid opponent requires capabilities that make it possible to exert influence at high tempo and over a great distance by means of information, cyber activities and force. This means investing in detection equipment (such as drones, satellites and electronic sensors), active protection means (such as air defence, counterfire and digital protection), long-range means of communication (such as satellite communication) and striking power that excels in scope, speed and precision (such as smart long-range artillery and drones). In this way, proportionate effect can be achieved in urban areas, while collateral damage and civilian casualties can be kept to a minimum. In addition, investment in special forces is important, as is the integration of cyber activities and non-lethal influence activities. All these capabilities are effective in large-scale hybrid conflicts and for deterrence, as well as for smaller conflicts and terrorist threats.

Operations in urban areas and protection against the opponent's long-distance means require a change in the current ideas about operations in large formations and from static camps. In the future, scattered, dynamic, decentralised and small-scale (dispersed) operations will be the norm. As a result of technological developments and the combined application of robotics and artificial intelligence, the trend of combat over longer distances will continue to evolve. Networked systems make scattered and integrated operations possible, and instead of organic units and structures, semi-autonomous units will be assembled on the basis of a specific mission. Interoperable supporting modules such as logistics, fire support and medical capability can then be added, right down to the lowest levels. To shape this effectively, there will probably be fewer hierarchical layers in the future. Even so, there will always be a joint and multinational orchestrating level that determines the goals and plans the campaigns, an organisational level that makes plans and divides up means, and a combat level which is specifically assembled to suit the mission and which conducts the fighting.



'New technologically advanced, largely hybrid threats require modernisation.'

Translation of a quote from the Netherlands Ministry of Foreign Affairs, *Geïntegreerde Buitenland- en Veiligheidsstrategie* (2018).

The consequences in short

Future land operations will be characterised by joint action with strategic partners, will be high tech where possible and low tech when necessary. In addition, future land operations will take place in urban areas more often, will be at high tempo and will be conducted over long distances. This requires an organisation that is continuously learning and innovating. To be able to continue to play a decisive role in the future, the RNLA will increase its **adaptability**, intensify **cooperation with national and international partners**, strengthen the **connection between people and technology** and invest in both **combat over long distances** and **operations in urban areas**.

How are we going to achieve this?

If it is to have a decisive role in future combat, the RNLA must respond to the challenges and their consequences for land operations. The Netherlands must be able to rely on the RNLA's readiness for action at all times with well-trained personnel, sophisticated technology and effective concepts of operations. This means that the RNLA must be able to keep pace with the speed and unpredictability of change.

A number of fundamental changes are needed in order to achieve this. We have formulated answers to the above-mentioned challenges and consequences, which serve as a guideline for the future. We do not, of course, have all the answers,

so we would gladly discuss with you the way in which we should shape our future. We, the RNLA, trust that together we will arrive at the right solutions.

We are shaping our future together with our colleagues from the Royal Netherlands Air Force, the Royal Netherlands Navy and the Royal Netherlands Marechaussee. They have described their development in the studies *5e Generatie Luchtmacht*, *Sailplan* and *KMar Ontwikkelagenda*, respectively. Our intention is to shape the future RNLA on the basis of the following four lines of development:

- 1 | **Increase** adaptability;
- 2 | **Intensify** cooperation with national and international partners;
- 3 | **Strengthen** the connection between humans and technology;
- 4 | **Improve** combat capability over long distances and in urban areas.





1 | Increase adaptability

Increase agility: switch between flexibility and robustness

In order to restore striking power, a better balance will be sought between fighting power and supporting capabilities. Fighting power and supporting means such as engineering, intelligence, logistics and operational cyber capability will be placed under unified leadership at unit level as far as possible. In addition, responsibility for personnel, equipment and finance will be decentralised. Data and decision-making should be automated as far as is permissible. Flexibility will mean that the culture, structures and processes of the RNLA have a greater focus on speed, agility and scalability and that rules are greatly reduced.

Faster and more flexible recruitment of personnel and procurement of means

The RNLA endorses the idea of adaptive armed forces and is developing smart and realistic ways to recruit personnel and to procure and provide means. Examples include the deployment of reserves, a range of flexible contracts that better meet the needs of personnel, cooperation with industry, and on-call contracts for drones, operators and a plethora of services and equipment. When recruiting new personnel, education level, diversity, functionality and customisation are more important than the enforcement of strict general requirements. The procurement and availability of equipment and spare parts will be simplified and accelerated.

Short-cycle procurement will become the norm. Where possible, new equipment will be procured in small batches every year, rather than a large amount all at once, so that new technology can be implemented quickly. Focusing on retention and on accelerated, more flexible recruitment and acquisition will increase agility and scalability, while the availability of personnel and equipment will also be improved.

More room for CD&E right down to the lowest levels

There will be more time and space for concept development and experimentation (CD&E). Innovation primarily takes place at the lowest levels, where operational problems and young creative thinkers come together. It is up to the commanders to stimulate and facilitate the innovation and problem-solving abilities at the lowest levels, for example by delegating financial matters and encouraging contact with national and international security partners, knowledge institutes and industry. By combining this with simple and smart procurement processes, we will make it possible to acquire new technology and integrate it into our organisation and working methods.

Innovation in a safe environment

The delegation of responsibilities for personnel, organisation, equipment and finance will not affect legitimacy, effectiveness or safety. The operational can-do mentality will be in balance with the thorough understanding and analysis of threats and risks. A safety network will anchor a safe approach to work throughout the organisation.

2 | Intensify cooperation with national and international partners

A reliable ally

The RNLA of the future must be able to contribute credibly to the constitutional tasks of the Netherlands armed forces. This means in particular that the degree of readiness for the first main task will be increased. Agreements made with NATO and the EU provide frameworks and direction for the acquisition of new capabilities. Using the additional budget provided and the findings of the 2018 Defence White Paper, the first steps will be taken towards bringing the RNLA more into balance. In the longer term, deployment stocks will be brought up to standard and operational readiness will be put in order. In this way, the RNLA can respond to the NATO and EU requirement for military contributions with sufficient escalation dominance and short response times. At the same time, the RNLA contributing to a credible deterrence to opponents who threaten the interests of the Netherlands and its allies.

Connected with the security network and outwardly focused

The RNLA is part of the multinational security system and will thus continue to actively seek connection with national and international parties in the security domain, such as government partners, universities and industry. For the development of new concepts of operations and technology, the RNLA will involve people, knowledge and ideas from outside the organisation. Consequently, the RNLA will be more outwardly focused, which will lead to a more open character. In the context of both the increasing importance of the task of

transit country and the required host nation support, far-reaching cooperation is key. Fixed structures, on-call and scalable capabilities, and better cooperation are needed for the Netherlands to fulfil the task of transit port for allied troops. The RNLA remains a reliable partner for government authorities in the security domain and provides a major contribution in the task of increasing national security and national resilience.

Optimal interoperability with partners

The RNLA will intensify joint training and coordination of procedures with strategic partners to increase interoperability with regard to equipment, procedures and culture, such as is the case with the German armed forces. When replacing equipment, interoperability with partners is of key importance, particularly with regard to command & control (C2) and communications. As there are multiple partners in various domains, the principles of simplicity, security and versatility apply to make cooperation with these partners possible in all areas.

Optimal cooperation with other Defence elements

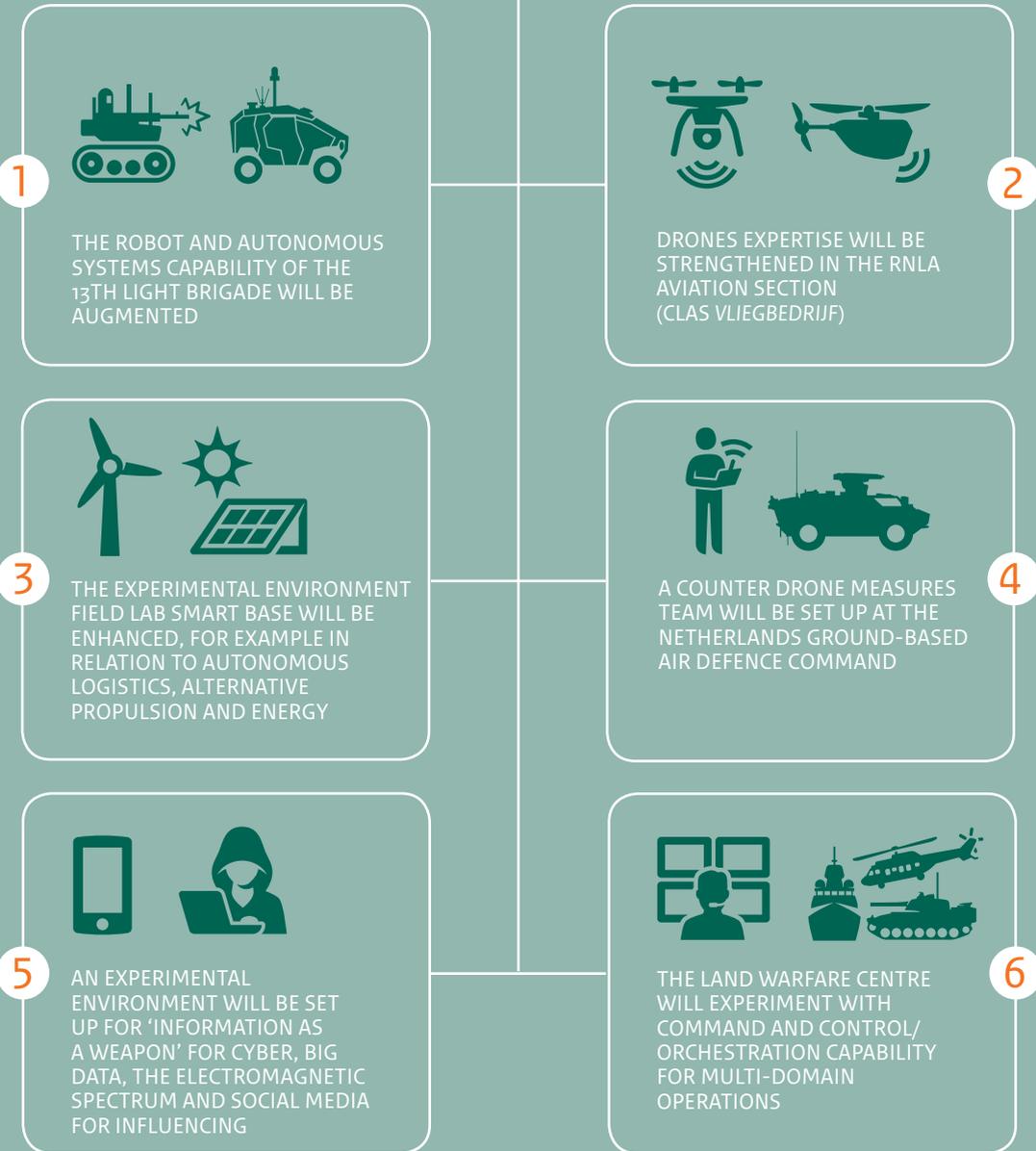
The RNLA of the future will endorse the ideas of multi-domain operations and the inextricable connection of land operations with, for example, aerial combat and reconnaissance systems, GPS satellites in space, fire support from the sea, and protection against hacker attacks. The RNLA therefore strives for optimal cooperation right down to the lowest levels between sea, land, air and cyber units.



For the Netherlands, the military cooperation within NATO forms the cornerstone of European security. Deterrence and collective defence are the guiding principles of this cooperation. We continue to adhere to the agreements made for our further development, our readiness and our operations. NATO's current priority goals in this regard are clear: a heavy infantry brigade, joint ISR and a focus on joint enabling capability for strategic mobility.

Netherlands Ministry of Defence, parliamentary letter 'NATO Defence Planning Capability Review' (5 July 2018).

The RNLA is already working on renewing its mindset, capabilities and concepts of operations. We are taking the following concrete measures:



3 | Strengthening the connection between people and technology

RNLA invests in reinforcement through technology

Over the next few years, the RNLA will be investing in sophisticated technology for detection (drones and electronic sensors), active protection (air defence, counterfire and digital protection), means of communication and striking power over longer distances. Additionally, investments will be made in special forces and the integration of cyber activities and non-lethal influencing activities. For the longer term, the RNLA will focus on researching, testing and implementing autonomous systems and robots, artificial intelligence, big data, cyber and digitalisation, nanotechnology, biotechnology, sustainable forms of energy and human-machine teaming. The norm for these developments will be far-reaching cooperation with knowledge institutes, educational institutions and the business community.

Schooling and training for younger-generation leaders, people and teams

The RNLA will invest in schooling and training techniques that are more suited to young generations. This means further development in virtual training and simulation, serious gaming, distance learning and investing in new technological applications. At the same time, training in the field must remain realistic, challenging and focused on building close-knit teams. In addition, the RNLA will intensify the development of its personnel. The RNLA applies the principle of lifelong

learning and therefore invests in strategic thinking, academic training, analytical and problem-solving skills and reflection. As a result, our leaders are more effective both administratively and operationally. In future combat, leaders with a decisive role will be those who are determined and independent, as well as creative and innovative, and who are able to ensure that their personnel operate in a close-knit team with a strong problem-solving capability. Basic training remains a high priority in the RNLA's readiness plans.

Giving our personnel perspective, respect and trust

In the most extreme cases, the RNLA requires its personnel to fight in harsh conditions, endangering their own lives, to protect the interests of the Netherlands. It is therefore essential that the RNLA offers its personnel perspective, shows them respect and puts its trust in them. There are many ways of doing this and this discussion must be extended much further. It covers aspects such as employment conditions, but also meaningful work, fully staffed units, proper equipment and sufficient training. The RNLA expects professionalism of its personnel. In return, personnel should be able to expect good personnel policy, suitable equipment and training opportunities. The RNLA sets great store by tradition, esprit de corps and the value of its special unique identity, and will continue to do so in the future.

4 | **Improve** capabilities in combat over long distances and in urban areas

Training in combat over long distances and in urban areas

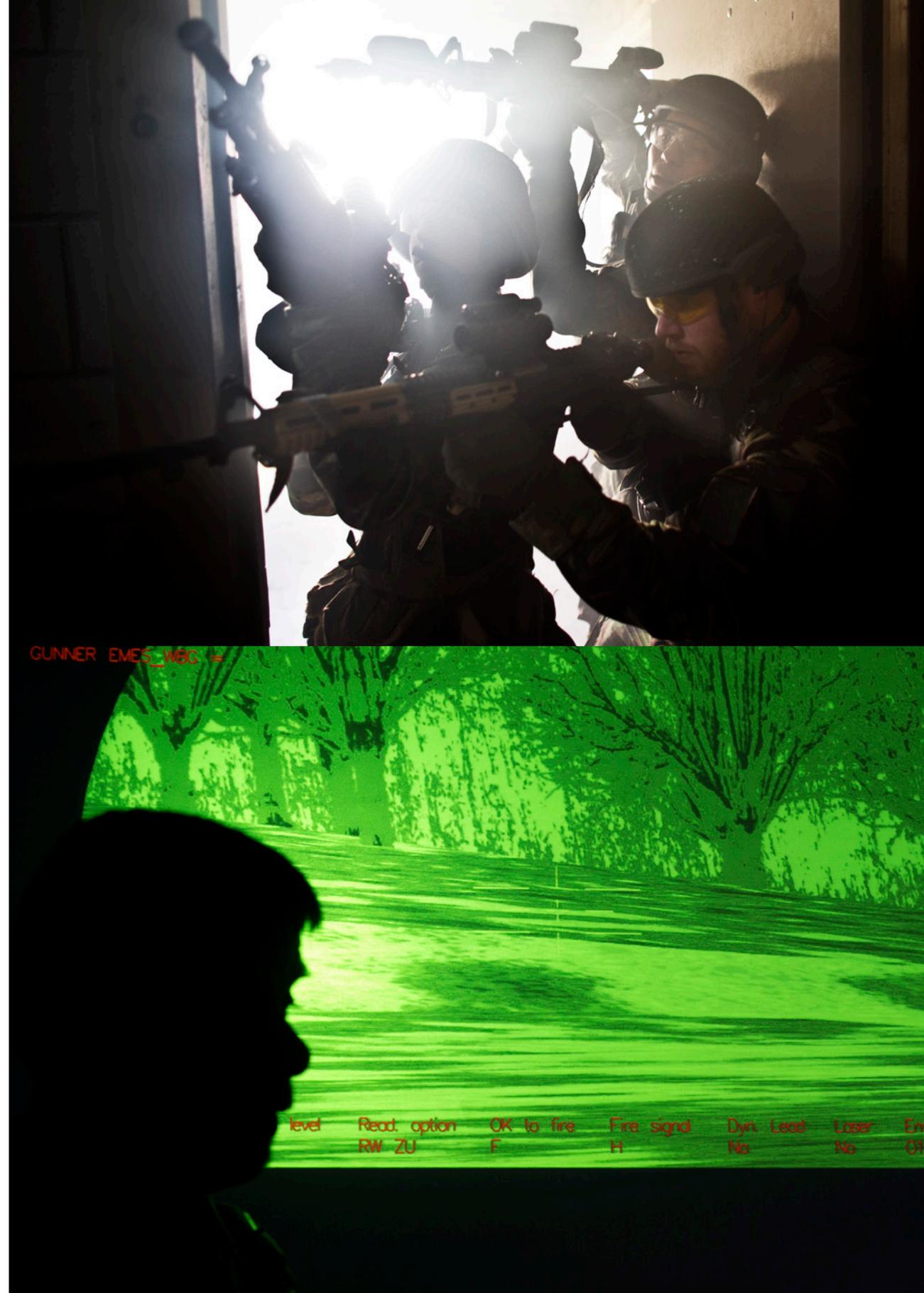
The RNLA will intensify training for conducting combat at a high tempo over longer distances in a hybrid context. This means that right down to the lowest levels, training in integrated intelligence, fire support and protection must be carried out with other elements of the armed forces. When training in an urban environment, it must be possible to switch quickly between fighting, de-escalating and winning trust. Alongside combat, interaction is an effective way to achieve the desired goals. Operations in an urban area and protection against enemy long-range means require investment in training for networked, scattered, decentralised and small-scale (dispersed) operations. The further development of techniques for active and passive protection against enemy detection means is also important, such as (digital or electromagnetic) camouflage, deception or the use of information or disinformation.

Cyber effects are available to the commander

The RNLA is investing in capabilities and concept development for influencing behaviour and protecting against cyberattacks, manipulation and disinformation. In the operational domain, commanders at various levels will be able to realise defensive and offensive cyber effects as well as those for intelligence purposes. In this domain too, far-reaching cooperation is needed with other Services, ministries and international partners.

The RNLA adapts constantly

The operations and functioning of the RNLA are under constant development. The organisation is actually a 'permanent beta version' of itself, whereby innovation is just as important as readiness and deployment. We must be able to constantly incorporate the latest technology, tactics and techniques into our daily operations and business management. Our concepts of operations are continuously evaluated and amended on the basis of new insights into opponents' operations.





'I would gladly discuss with you how we approach the future.'



In conclusion

This vision of the RNLA will help us to take joint decisions to keep the Netherlands secure. I would gladly discuss with you how we approach the future. To arrive at an effective security policy, we need all of society and we need to work together to find solutions.

At the RNLA, we work on our innovation every day. Concrete goals are formulated and concepts and activities are developed. This document provides a strategic guideline. Commanders will be given the authority, frameworks and means to get on with the job. These initiatives and results will be communicated extensively, both within the organisation and beyond. We cannot change overnight, though. This means that we will now invest in the current capabilities of the RNLA, so that we can continue performing our tasks responsibly. At the same time, we will work to build our future capabilities, including renewed concepts and a strong combination of advanced technology and the indispensable human factor. These investments and further developments are intrinsically connected; focusing on only one of the two is not sufficient.

I am convinced that with this vision we will take a course that means we continue to play a decisive role in the future. We are deployable in all types of modern conflict: close to home, within the borders of allied territory, and if necessary anywhere in the world. The future will be characterised by unpredictability and complexity. **As the RNLA, we will respond with advanced technology, renewed concepts, but above all ourselves, as people. That is what makes the RNLA special and what the Netherlands can expect of us.**

Leo Beulen
Lieutenant General
Commander of the Royal Netherlands Army



Contact

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Royal Netherlands Army
Ministry of Defence
Kromhout Barracks | Herculeslaan 1
3584 AB | Utrecht | K09/10
P.O. Box 90004 | 3509 AA | Utrecht | The Netherlands | MPC 55A

clas.algost@mindef.nl
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-  instagram.com/koninklijkelandmacht