2025–2029

Defence Strategy for Industry and Innovation

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- Choices and actions for **future-proof armed forces** and for an **increased European strategic autonomy** in security and Defence in the Netherlands

- Building **strong**, **smart** and **future-proof** armed forces **together** with partners that will make the required **contribution to NATO** and to **security within Europe** in order to deter, fight and win.

- www.defensie.nl/onderwerp/innovatie

Strong

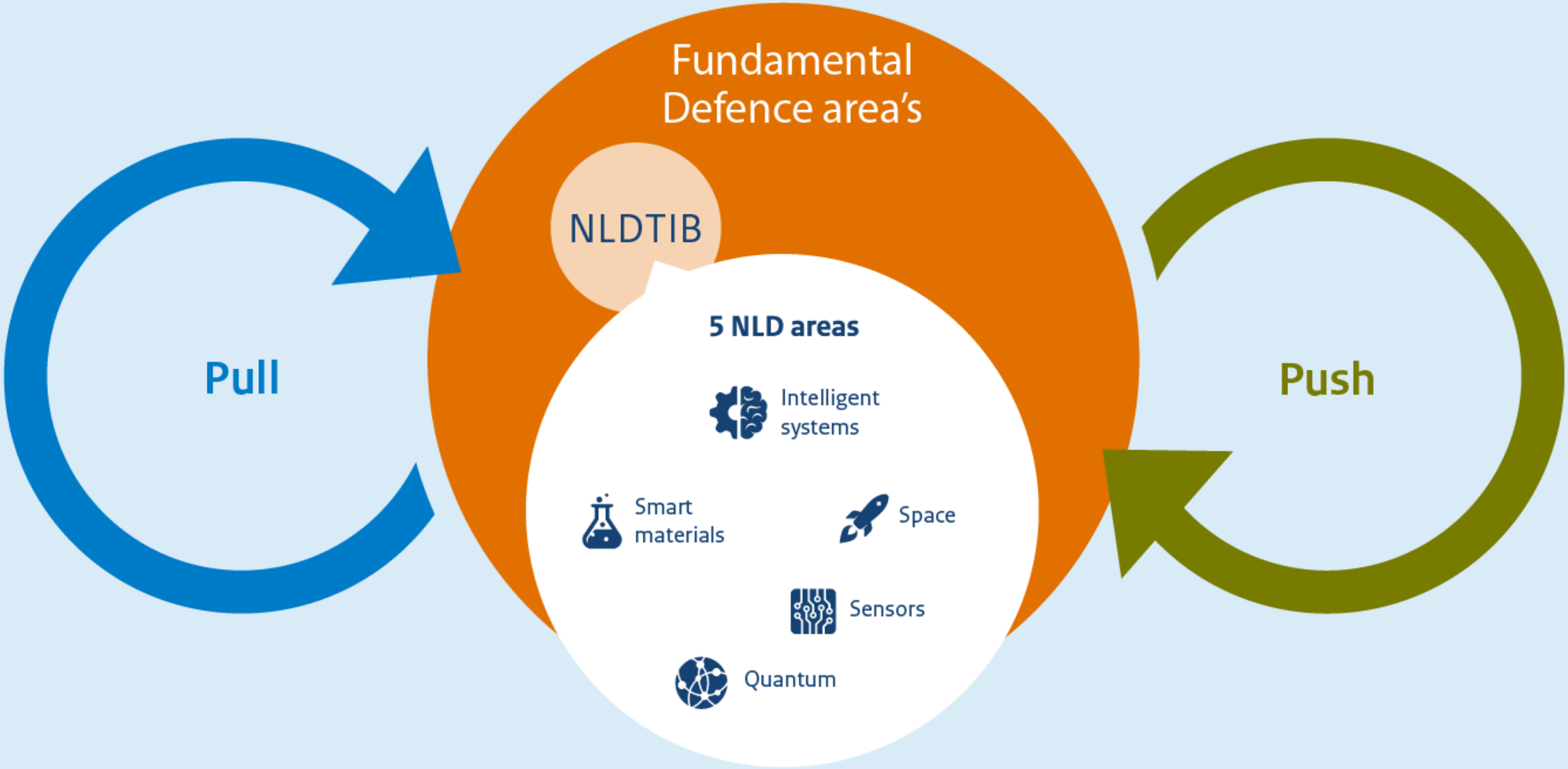
- Strengthening NLDTIB
- Strengthening & broadening the knowledge landscape
- Industry and innovation-enhancing procurement policy
- Protecting strengths
- Defence industry financing action plan

Smart

- Increased focus: additional investments in 5 Dutch focus areas
- Setting up a smart organisation
- Strengthening the connection between knowledge, innovation and upscaling.

Together

- Setting up Defport and NLD_regions programme office
- Strengthening interministerial cooperation
- Increased access to testing facilities and military support
- Increasing the international focus on pooled demand, regional technological cooperation, coproduction and standardisation in EU and NATO contexts
- Intensifying cooperation with the Ukrainian Defence industry



1 Strong armed forces of the future

2 Smarter in tomorrow's fight

3 Putting efforts together

Five Dutch Focus Areas & Maritime

Intelligent systems

The Ministry of Defence wants to be able to act faster, more accurate, safer and smarter in order to stay one step ahead of potential adversaries. Intelligent systems help us to achieve this. From drones that autonomously gather intelligence and AI for cyber operations and cybersecurity, to data-driven systems that support decision-making: technology can enhance human action by deploying it in the right ways.

Sensors

Sensors are the senses of our military operations. They scan the environment, detect risks and opportunities, and ensure soldiers can respond quickly and accurately. Without sensors, our troops would be blind and deaf to potential threats, severely reducing their security and effectiveness. Sensors improve decision-making and provide real-time situational awareness.

Smart materials

Smart materials are those that can respond intelligently to changing conditions in the environment, such as mechanical, thermal or electrical stimuli. The Ministry of Defence invests in composites, additive manufacturing and metamaterials.

Space technology

Space is the fifth military operational domain and is of indispensable strategic, tactical and operational importance for the proper functioning of our armed forces. This in particular concerns the use of satellites, which are essential for navigation, positioning and timing, communications and earth observation, or information-driven operations of our armed forces.

Quantum

Quantum covers a range of emerging technologies, with a wide range of promises and threats: obtaining better intelligence, being able to detect submarines and navigate with millimetre precision in all areas, without GPS. The domain of Quantum is broad and the Ministry of Defence needs to follow a wide spectrum of developments. Quantum technology can lead to new strategies and capabilities in both conflict situations and the processes surrounding them.

& Maritime

The Ministry of Defence aims to enhance its maritime capabilities by leveraging autonomous systems, networked operations, and advanced technologies. The Royal Netherlands Navy will be able to deploy multiple autonomous UXYs in a networked operational capacity, enabling more effective and efficient maritime operations. The combination of manned and unmanned systems will allow for networked and integrated missions.

Subareas within the Dutch focus area

- Onbemenste systemen
- AI & DataScience

- Sensors, including:
  - Radar, optical, acoustic, EM and cyber
  - Sensor networks
  - Sensor fusion

- Composites
- Additive manufacturing (3D printing)
- Metamaterials

- Space technology, including:
  - Space Situational Awareness
  - Earth observations including ISR
  - Satellite communications
  - Position, navigation and timing (PNT)

- Quantum, including:
  - Quantum computing
  - Quantum sensing
  - Quantum networking
  - Quantum resilience

- Maritime, including:
  - Multiple (autonomous) UXY
  - Stand-off ASW & ISR Ops.
  - MDO operations

2026

In 2026 heeft Defensie een **industrie-innovatie programma** waarin kort-cyclische innovatie en productie mogelijk wordt gemaakt.

In 2026 heeft Defensie de **randvoorwaarden en succesfactoren voor een gezond ecosysteem** voor onbemenste systemen geidentificeerd en werkt samen met partners om grootschalige experimentatie, training en inzet mogelijk te maken.

Defensie gebruikt **onbemenste maritieme toolboxen**, bestaande uit een combinatie van UAV's, USV's en/of UUV's.

zee

Defensie heeft de **inzet van kleine UAV's** verder opgeschaald voor ISR- ondersteuning bij eenheden, groepen en bataljons tijdens landoperaties.

land

Defensie zet bestaande **MALE UAV's** breed in, werkt door aan de integratie van **launched effects** en ontwikkelt door op bestaande **MUM-T's** bij aanvalshelikopters.

lucht

2028

Defensie heeft, in samenwerking met de Nederlandse industrie, een **eerste onbemenste USV** ontwikkeld die autonoom en veilig kan navigeren.

zee

Defensie beschikt over (zwermen van) attack drones die bij voorkeur **50% in Nederland ontwikkelde hardware en software** bevat.

lucht - land

Defensie beschikt over **geautomatiseerde detectie** en **respons op cyberaanvallen** (effectieeve cyberbeveliging en arbeidsextensief).

cyber

Defensie gebruikt **AI in cyber operaties**, inclusief AI-enabled technieken en tactieken voor reconnaissance, surveillance, tracking, analysis, discovery, defence evasion & control.

cyber

2030

In 2030 is er een **gezond ecosysteem** voor onbemenste systemen in Nederland, op basis waarvan Defensie wordt voorzien van schaalbare en innovatieve producten en waarmee de organisatie constant interacteert in kort-cyclische innovatie ter verbetering van die producten.

In 2030 hanteert Defensie een **symmetrische en 'fit for purpose' strategie** voor zowel de inzet van drones als de verdediging ertegen.

In 2030 heeft Defensie de **randvoorwaarden** die verantwoord gebruik mogelijk maken ingericht, o.a. een TEVV capability.

In 2030 heeft Defensie een **sterke strategische positive** gecreeerd, door alternatieve supply chains voor ruwe materialen, en produceert de NLDTIB Nederlandse onderdelen van onbemenste en autonome systemen.

Defensie beschikt over **autonoom navigerende platformen**, met bij voorkeur in Nederland ontwikkelde betrouwbare AI, software en geavanceerde sensoren.

land - lucht - zee

Defensie heeft een **tankbataljon** opgericht waarin onbemenste grondvoertuigen met diverse functionaliteiten (counter-UAS, anti-tank, ISR) en UAV's effectief samenwerken met tanks.

land

Defensie beschikt over **onbemenste ISR capaciteit** vanuit de lucht, die in vijandig luchtruim verschillende effecten kan leveren. Dit kan zowel op hoogte als in de lagere luchtlagen (naast de Space capaciteiten). Defensie werkt met autonome UAV's in de brede taakstellingen van fighters en (aanvals)

2034

Defensie beschikt over **large USV's** die oceaanwaardig zijn en geschikt voor operationele taken in verschillende domeinen, waaronder luchtverdediging (AAW), onderzeebootbestrijding (ASW), amfibische ondersteuning en beveiliging van vitale infrastructuur op de bodem van de Noordzee.

zee

2035

Defensie **integreert onbemenste** en **bemenste platformen** (varend, vliegend, rijdend) in een netwerk met geavanceerde sensorfusie en autonome taakuitvoering voor elektronische oorlogsvoering, luchtverdediging, gezamenlijke vuurkracht en grondmanoeuvres.

Defensie beschikt over **Autonomous Collaborative Platforms** (ACP) als onbemenste aanvulling op de vliegende hoofdwapensystemen. ACP's zijn breed in te zetten voor ISR, Electronic Warfare, attack,training of refueling.

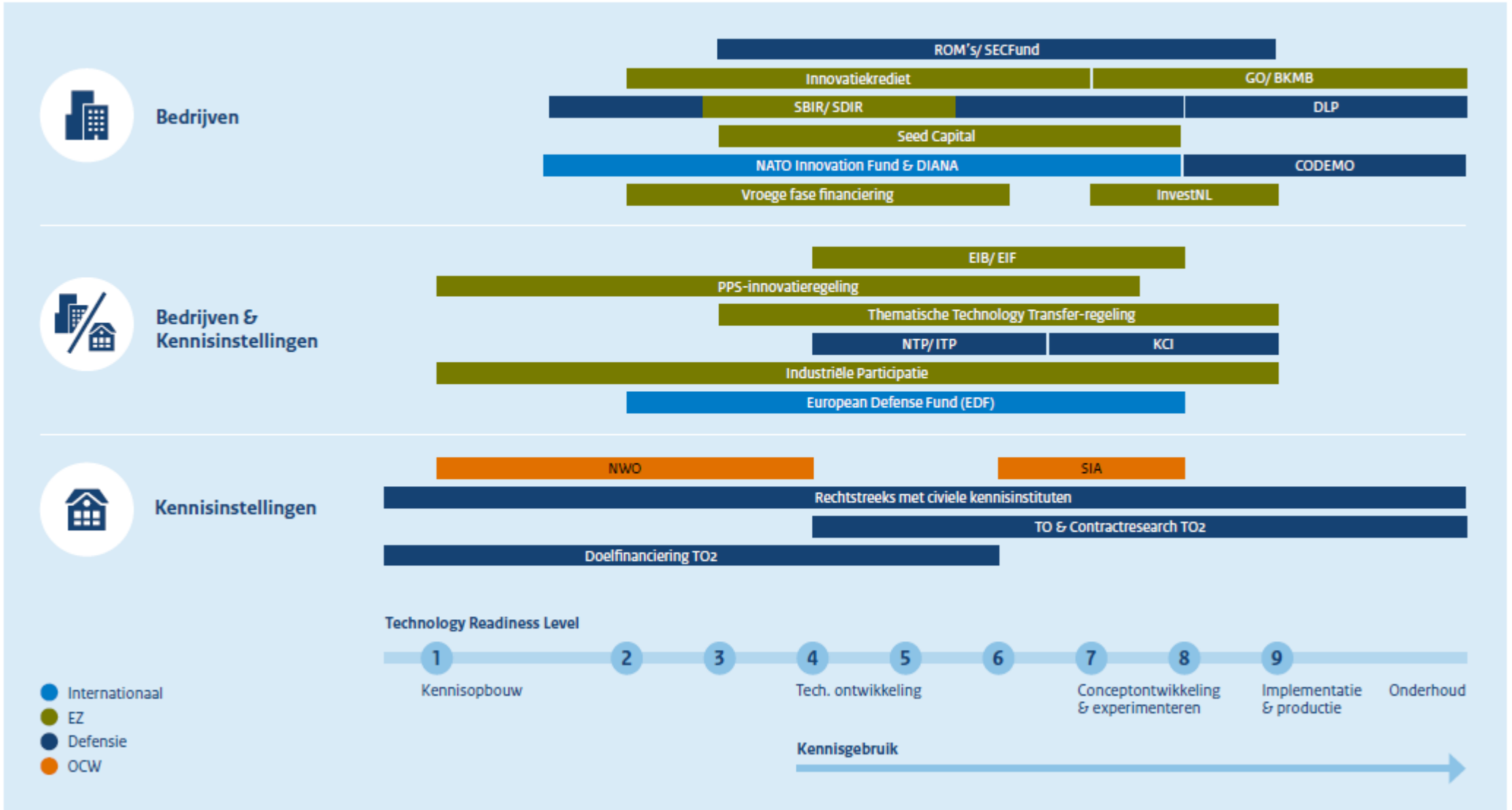
lucht

De landmacht heeft **manned-unmanned teaming** geïmplementeerd binnen alle typen eenheden, gebruikmakend van een netwerk voor het gevecht met verbonden wapens (combined arms), waarbij ook autonome taakuitvoering mogelijk is.

land

Overstijgende ambitie

Figuur 4. **Toolbox instrumenten**



Op pagina 35 bevindt zich een afkortingenlijst.

Budget Toolbox Instruments

- Budget of **€1.15 bln.** for 2024 – 2031 for upscaling innovation and industry, **€ +/- 450 mln.** per year for research and innovation

- **Continuous dialogue** in our ecosystems and within the newly launched public-private platform '**Defport**' where supply and demand are brought together, now also with RVO

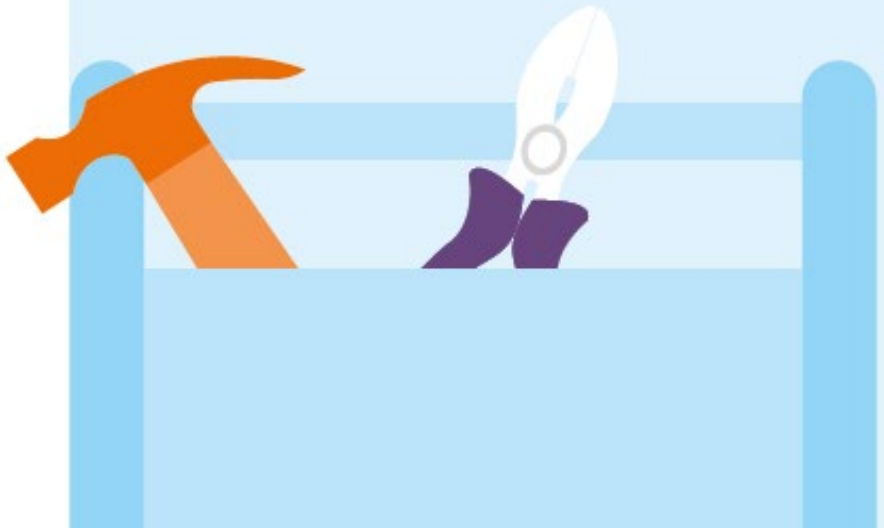
- **'SecFund'** : reducing financing bottlenecks for start-ups and innovative SMEs in the dual-use segment
  - www.secfund.nl : 5mio – Venture development support

- **7 MINDbases** in the Netherlands: main entry point for new cooperations :
  - MINDbase@mindef.nl

- **SDIR:** early stage funding (feasibility, prototypes)

- Masterclasses ; How to work with Ministry of Defence

- Purple Nectar : 5 & 6 November , Nijkerk



Strategic Action Agenda for Industry, Innovation and Knowledge (STRAIIK) 2025

- Launching **Defport → public private platform**
- Cooperation with **national manufacturing industry**: eg. Thales, VDL and Damen
- Launching **Security Fund** for Start-ups and SME's
- **Action Plan Uncrewed Systems**:
  - Ordering drones from the Dutch Drone Ecosystem
  - Developing new drones together with the industry (short cycle innovation)
  - Taking away (regulatory) barriers

Action Plan Uncrewed Systems

Goal

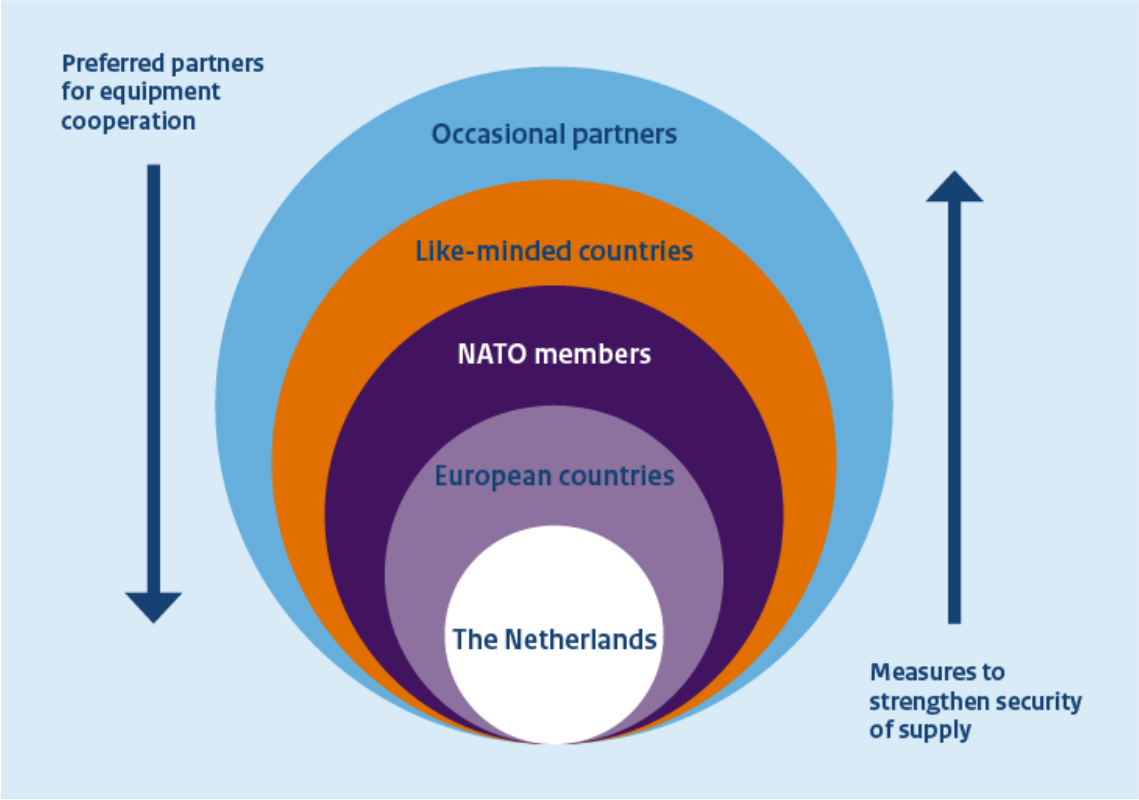
The Netherlands as a front runner in uncrewed systems through an ecosystem approach within the European level-playing field; in development, production and military use.

Lines of effort

1. Direct investments in Dutch development and production capability
2. A short cycle industry-innovation program in which continuous development is ensured.
3. Preconditions, success factors and barriers

International cooperation

- Strengthening the Dutch commitment to innovation and research in the **EU and NATO context.**
- Countering **European fragmentation** in the Defence market, f.e. encouraging **joint procurement**
- **Optimal use of European instruments.** +ctively participate in available EU Defence industry programmes a.o. EDA programmes.
- Continued importance of the role for NATO and EU agencies: **NATO Support and Procurement Agency (NSPA)** and **European Defence Agency (EDA)**.
- Strengthened **cooperation with Ukraine** to learn from Ukrainian lessons, but also to contribute to Ukrainian effectiveness and Defence industry with Dutch knowledge and solutions; a.o. Drone Capability coalition



DRONE CAPABILITY COALITION

DRONE COALITION

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2. LOE SUSTAINMENT : MID TO LONG TERM IMPACT

LoE Sustainment – End State

Realises through international NATO/EU/UKR collaboration an industrial environment for R&D and production of UAS (components), which ensures continuity and innovation, including testing in battlelab conditions to create a leading allied position and strategic independence for critical components in order to support UKR in the conflict with RF.

LoE Sustainment – Key objectives

- Industrial base
- Innovation Ecosystem
- Independent Supply Chain
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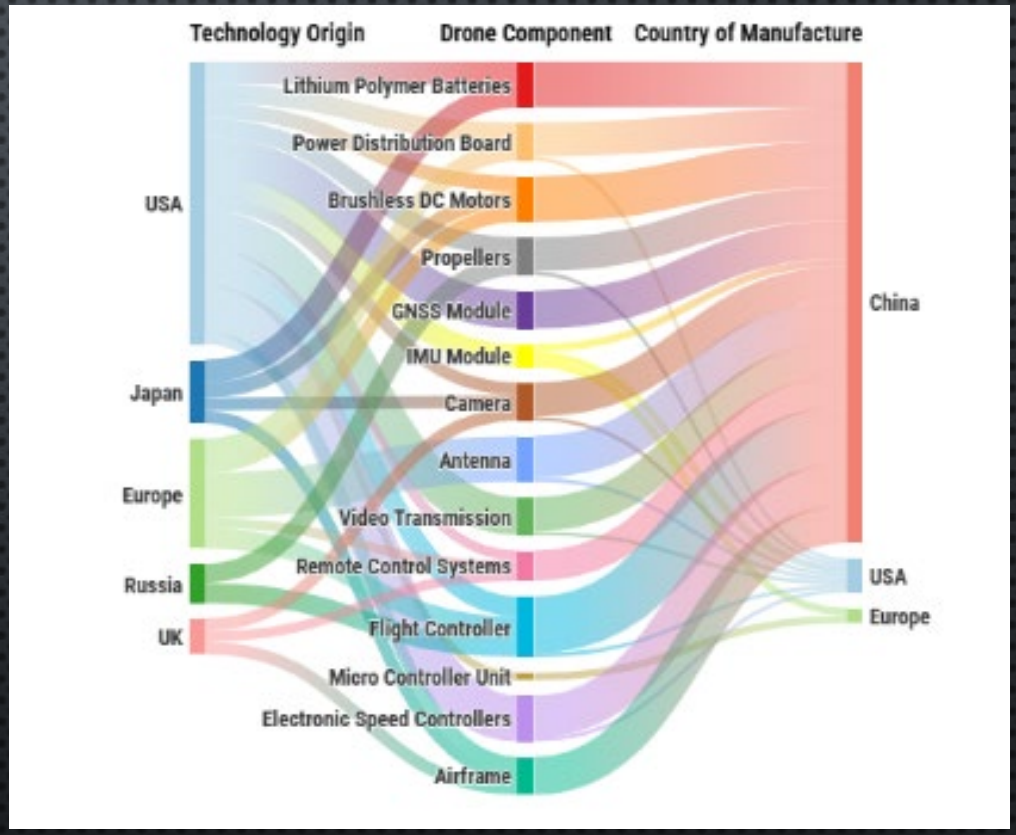
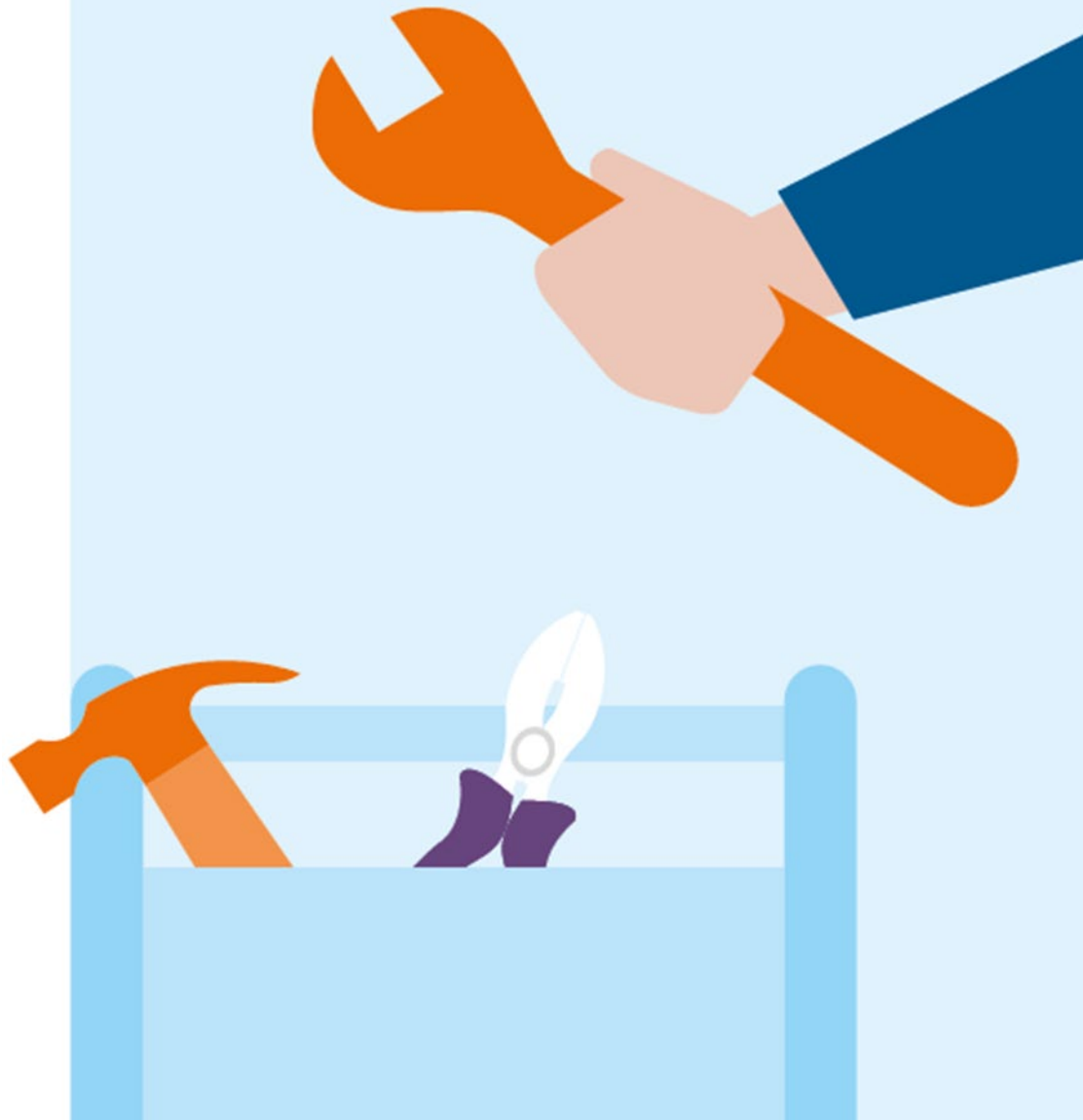


My observations

- Lot’s of goodwill and good people , and 40 years of neglect

- Lot of opportunities – no free lunch
  - Complex DMU
  - Dedication, Perseverance & customer intimacy required

- Hire / stimulate reservists in your companies



Questions?