

## HUNGARY

### INTRODUCTION

The transformation of Hungary's strategic environment that ended the Cold War in the first half of the 1990s was marked by security policy 'pathfinding', but from the middle of the decade onwards, steps were clearly aimed at achieving Euro-Atlantic integration (TÁLAS 2020: 23–29). This process ended in success with NATO accession in 1999 and EU accession in 2004. From that point on we can clearly speak of a new era in foreign, security and defence policy – one that continues to this day. As a result, Hungary, as a member of the Western alliance system, became able to represent and enforce its interests not only in its immediate security environment (in the Carpathian Basin, in the Western Balkans and more broadly in Central Europe), but also in the Transatlantic region and in its neighbourhood.

However, the current alliance framework also means that, in addition to the tasks of territorial defence that dominate the modern understanding of sovereignty, the protection of alliance interests also had an impact on Hungarian security and defence policy considerations for almost two decades that followed NATO and EU accessions. For example, Hungary took on various roles in peacekeeping and crisis management operations in several countries of the European neighbourhood, such as in the Sahel region in Africa (Mali), the Middle East (Iraq) and in Central Asia (Afghanistan). In addition, as a member of the EU and NATO, Hungary also had to pay greater attention to challenges and threats such as terrorism, energy security, or irregular mass migration. In other words, alliance membership also meant that, as a member of the Euro-Atlantic risk community, Hungary became more committed to maintaining our collective security. Regarding the division of tasks and responsibilities, NATO has been the primary stakeholder in tackling hard security (military) threats, also bearing the brunt of Hungary's participation in international missions, while soft security challenges are rather addressed within the EU framework.

This transformation in taking up new responsibilities, ownership and participation was linked to the recognition of Hungarian society and the political elite that Hungary,

with its limited resources and power capabilities, is not capable of guaranteeing its own security against all challenges and all actors of the international system individually. The crises of the 21<sup>st</sup> century confirmed that the protection of national sovereignty can only be ensured if Hungarian security and defence policy has a broader and more distant focus than its own immediate region. This process has also been depicted in the strategic documents which had been adopted since the turn of the millennium (National Security Strategies in 2002, 2004, 2012, 2020 and National Military Strategies in 2009, 2012, 2021).

The economic background – the dynamic and predictable growth of the national defence budget – necessary for comprehensive defence modernisation became available only from 2015, but it has been sustained since then. Based on the transformation of the threat landscape and allied responses, the planning of the comprehensive national defence and an armed forces modernisation program (2016) enjoyed firm governmental commitment. This commitment has been maintained throughout the execution phase despite economic downturns caused by Covid and the economic fallout of the Russian aggression against Ukraine. The program, originally dubbed ‘Zrínyi 2026’, is the largest military modernisation taking place since the end of the Cold War, with the goal of strengthening the active and reservist components of territorial defence as well through expanding the HDF, not only modernising it.

Moreover, the large-scale military modernisation was directly embedded into the development of Hungarian defence industry – either through new investment in international (German, Turkish, French, Israeli) cooperation with the perspective of innovation, or through the foundation of new capacities in national defence industry from research and development, and innovation through production, with the perspective of future arms exports. This means that beyond some off-the-shelf procurement of advanced systems that had no meaningful technological footprint in Hungary (helicopters, aircraft, air defence systems), large-scale co-production and co-development projects have also been initiated (infantry fighting vehicles, mine-resistant ambush-protected vehicles). Some of the basic building blocks of arms production, such as gunpowder, explosives, small arms and small-calibre artillery had to be established from scratch.

The Hungarian armed forces modernisation is in line with intensifying regional development efforts, especially since the 2022 escalation of the Russia–Ukraine war that brought back high-intensity conventional warfare to Europe, triggering the strengthening of defence and deterrence capabilities on NATO’s Eastern Flank, and highlighting the need to extend defence industrial production capabilities across Europe.

This chapter will offer an overview and assessment of the transformation of Hungarian defence policy and the development of the Hungarian Defence Forces considering these challenges and responsibilities with an outlook to the 2020s.

#### THE TRANSFORMATION OF HUNGARY'S SECURITY ENVIRONMENT

The security environment of Hungary – and of Europe – has been deteriorating in the past decade and a half, as part of which first non-military challenges, and then military threats appeared in the security perception of the Hungarian society and political elite. The most important ones exerting stress on European security and stability were the following: the Russo–Georgian war (2008), the global economic crisis (2008–2009), the ‘Arab Spring’ (2010) and the resulting crises and civil wars that are still with us today (Syria, Libya 2011–), the rise of the so-called ‘Islamic State’ terrorist organisation (ISIS 2014) and radical Islamism-motivated terrorist attacks in Europe (2015–2016), uncontrolled mass migration (2015), then the coronavirus epidemic (2019–2021), the Nagorno–Karabakh war (2020), the escalation of the Russia–Ukraine war (2022–) with subsequent energy and economic crises (2022–2023), and the latest Iran–Israel proxy war involving Hamas in Gaza (2023–) and Hezbollah in Lebanon (2024–) (TÁLAS 2023: 23–43).

Hungary was particularly affected by three strategic shocks in 2014–2015: the Russia–Ukraine (first hybrid, then kinetic) war bringing about the illegal annexation of Crimea by Russia and the separatist destabilisation of the Donbas; the emergence and expansion of the Islamic State in the Middle East and subsequent terrorist attacks in Europe; and the refugee and migration crisis targeting Europe primarily across the Eastern Mediterranean and Western Balkan migration routes (BAK et al.: 5–32).

The Russia–Ukraine conflict that started in 2014 and escalated into a full-scale major war in 2022 had more fundamental impacts on the security and defence policy of European and especially Eastern Central European countries than the Arab Spring, the migration crisis and terrorism. The European Union and the United States responded to Russia's breaching of international norms and agreements in 2014 with financial and economic sanctions, while NATO responded by suspending military cooperation with Russia, re-prioritising collective defence (by militarily strengthening the alliance's Eastern Flank countries, increasing Member States' defence spending), and supporting Ukrainian defence forces on a bilateral basis. The defence policy impact of the Russia–Ukraine war is well indicated by the fact that all Central and Eastern European NATO Member States began modernising their

territorial defence capabilities between 2014 and 2018 (TÁLAS – CSIKI VARGA 2024). Hungary also participated in the development and implementation of NATO's and the EU's response, including the strengthening of the alliance's Eastern Flank defence posture, the commitment to achieving the 2% of GDP ratio for the defence budget (CSIKI VARGA 2019: 79), the modernisation of national armed forces, the adoption of the alliance's strategy against hybrid threats (LASCONJARIAS–LARSEN 2015), and the sanctions imposed by the European Union on Russia (CSIKI VARGA 2024).

The 2015 European refugee crisis was perceived as another milestone, as the country has never been exposed to a refugee wave like that, when more than 177 thousand asylum seekers had been registered in the country, and many more passing through towards Western European and Nordic countries. During the year, more asylum seekers arrived in Hungary than in the previous 23 years combined. However, it is important to see that Hungary was not a destination country for migrants arriving from outside Europe but remained a transit country due to its geographical location as a gate to the EU from the Western Balkans. The Hungarian Government responded to the uncontrolled mass movement of people by building a 216-kilometre-long border fence along sections of the Southern border, increasing penalties for illegal border crossing and human trafficking, and introducing a special legal order situation due to the crisis caused by mass immigration. The refugee and migration crisis had a significant impact on Hungarian defence policy in two respects. On the one hand, the government involved the Hungarian Defence Forces in the construction of the border barrier and in managing border protection along the Southern border, and on the other hand, after the Parliament enacted special regulations in the Constitution on an emergency situation due to migration crisis and amended the National Defence Act (Government of Hungary 2015), the military also became involved in the management of migration.<sup>1</sup>

Regarding the third strategic shock, contributing to the military tasks of combating international terrorism became an integral part of the international tasks of the Hungarian Defence Forces (HDF) only after the Madrid attack in March 2004 (not after the 9/11 attacks of 2011) (Government of Hungary 2004, Paragraph 70/c).

<sup>1</sup> This was the first time when the HDF was tasked with supporting the work of domestic agencies and services inland, as implementing law enforcement normally was not comprised in the traditional tasks of the armed forces. Another such occasion was the participation of the HDF in managing the state of emergency in the healthcare crisis caused by the Covid pandemic in 2020–2021.

As an outcome of ISIS-inspired terrorist attacks in Europe in 2015–2016, another emergency situation was codified in 2016, allowing the domestic use of the armed forces in a terrorist threat situation (Government of Hungary 2016a).

Meanwhile, until 2010, the Hungarian Defence Forces had been moving on an almost unbroken trajectory of reducing personnel, the amount of military equipment, and military capabilities since the 1990s, despite joining NATO and the European Union. The last systemic procurements took place in the early 1980s, but since then there had only been episodes of gaining relatively modern equipment (T-72 tanks, MIG-29 fighter aircraft, Mistral air defence systems). In the period since the 1989 change of regime, it was only possible to keep up with the development of military technology on a case-by-case basis, for individual weapon systems (like the multi-purpose Gripen aircraft), while in general the lifecycle extension of the equipment (helicopters, transport aircraft) or the abandonment of capabilities (artillery, tanks) was typical. All of this made the comprehensive modernisation of the HDF inevitable by the 2010s.

#### HUNGARY'S POSITION IN ALLIED FRAMEWORKS AND THE INTERNATIONAL ENGAGEMENT OF THE HDF

The Hungarian political elite considered the assertion of interests in multilateral international organisations, instead of unilateral action, the path designated for the country – and feasible based on its capabilities – in the field of security and defence policy. Since 2010, Central European political – and even defence – cooperation has increasingly been emphasised, as exemplified in the 2020 National Security Strategy. Among Hungary's partners in security and defence, the United States, the Visegrád countries, Poland, Germany and Turkey have been emphasised.

The modernisation of the Hungarian Defence Forces is mainly being carried out by German, French, Turkish and Israeli and not American companies. However, it must be emphasised that the development of the Hungarian military fits into regional trends and the aspirations of NATO led by the United States: although with temporal differences, modernisation is taking place in all Central and Eastern European armed forces, and in several cases, the expansion of the military forces is also taking place – with the strengthening of territorial defence capabilities as a general trend. This means the development of heavy military equipment (armoured vehicles, artillery) and reserve forces (territorial defence), which are also priorities in Hungary.

*Hungarian role expansion within NATO*

Within NATO, Hungarian politics has represented 'soft Atlanticist' stance from the beginning. Collective defence, enshrined in Article 5 of the Washington Treaty, has been considered the cornerstone of Hungarian security. The alliance's efforts that sometimes formulate global ambitions (like in the case of out-of-area operations) are received cautiously, in line with the Hungarian society's security perception, which does not have any specified enemy image, and is rather inward-looking, than concerned about the stability of distant regions. At the same time, as defence was not prioritised before 2015, Hungary tried to fulfil its membership obligations despite its low defence budget (reaching only 0.83% of GDP in 2014) through greater participation in allied stabilisation operations in the Balkans (Kosovo Force – KFOR), in Iraq (Operation Iraqi Freedom) and in Afghanistan (International Security Assistance Force – ISAF) (CSIKI et al. 2012). This unbalanced characteristic only changed after 2015, and during the 2020s, with sustained – even somewhat increased – responsibilities in KFOR and a dynamically increasing defence budget. By this, and the comprehensive development of the Hungarian Defence Forces that are fully in line with NATO's defence planning and is driven by heightened interoperability, Hungary moved from being more of a security consumer into the position of a security provider, clearly strengthening allied efforts. At the same time, Budapest supports NATO's role outside Europe within strong limits.

Hungary's NATO membership also created the opportunity to participate in NATO initiatives, such as contributing to the NATO Response Force (NRF), the airspace policing of Slovenia, the Baltic States, and lately, Slovakia, or the implementation of the Alliance's contingency plans (Readiness Action Plan – RAP) in the 2010s. Furthermore, Hungary hosts NATO organisations such as the NATO Centre of Excellence for Medical Excellence (NATO MILMED CoE) based in Budapest, the Heavy Airlift Wing (HAW) in Pápa, the Communications and Information Squadron (NATO DCIS-M) or the NATO Force Integration Unit (NFIU) deployed in Székesfehérvár, which is now subordinate to the Hungarian-founded and -led HQ Multinational Division – Central (HQMND-C), which has been integrated into NATO's military command structure.

As early as in 1998, so before joining NATO, the Hungarian Defence Forces offered a light rifle brigade capability for the Alliance's defence – but only two battalion-size battlegroups reached full operational capability by 2007, with serious limitations. This experience showed that, despite the ambition present, lacking capability development and modernisation cannot be ignored. Therefore, one of the cornerstones of the armed forces development program's planning was the

‘adjustment’ and thus the fulfilment of NATO obligations, which in light of the changed security environment currently constitutes of one medium brigade by 2023 and one heavy brigade by 2028 (SZLOSZJÁR 2017: 26–27).

The overall experience and contribution of Hungary within NATO after 25 years of membership can be summarised as ‘role expansion’, including two main areas. From an institutional point of view, the Hungarian MoD, the HDF and the political elite have learnt to cooperate and work together in an alliance currently made up of 32 members, while military capabilities developed from compatibility towards interoperability a greater degree of joint planning and operational conduct. From the point of view of military expertise and lessons learnt, the HDF has undertaken and learnt many new roles through participating in the NATO missions mentioned earlier. Such new roles included supporting reconstruction efforts, force protection, training and mentoring local security forces, and operating the Kabul International Airport, among many others.

### *Restraint within EU CSDP*

Compared to the deep and comprehensive, integrated cooperation of the HDF within NATO frameworks, participation in the European Union’s defence efforts has been more limited in scope. Although Hungary’s accession to the European Union in 2004 brought about significant changes in the country’s foreign relations, it had relatively little impact on Hungarian defence policy, apart from the involvement in the work of the EU’s security and defence policy institutions (TÜRKE 2016: 10–11). A meaningful field of EU defence cooperation has been contribution to EU Battlegroups (BGs), being part of the ‘MLF’ Battlegroup (Italy–Hungary–Slovenia, on stand-by in 2007, 2012), the ‘Visegrád 4’ BG (Poland – Hungary – the Czech Republic – Slovakia, on stand-by in 2016, 2019, 2023), soon to be followed by a German-led BG in 2025. Also, EUFOR Althea became the second largest military peacekeeping mission of the HDF after ISAF. However, this did not mean that the importance of the EU’s toolbox was not recognised in the field of non-military, ‘soft’ security challenges.

Like many other EU Member States’, Hungary’s participation in the Common Security and Defence Policy (CSDP) is characterised by a particular duality. On the one hand, Hungary participates in all policy initiatives concerning CSDP. Hungary is a member of the European Defence Agency (EDA) and has taken on a role in 13 projects within the framework of PESCO. For example, in the summer of 2022, the European Defence Fund (EDF) awarded support to six multinational research

projects with Hungarian participation for the development of artificial intelligence, 5G communications, satellite technology, sensors and drone technology (European Commission 2022). Meanwhile, Hungary plays a leading role in one PESCO project (EUROSIM, which strengthens the sharing of tactical training and simulation experience) and participates in eight other projects (NÁDUDVARI et al. 2020: 27). As data provided by the Hungarian Ministry of Defence shows, Hungarian soldiers participated in 12 EU operations between 2004 and 2020, with a total of 2,335 troops, the largest number of them deployed in Bosnia and Herzegovina. The high-level political recognition of the Hungarian involvement in the Western Balkans was represented by the appointment of Major General László Sticz to lead EUFOR Althea in 2024.

On the other hand, the Hungarian Government is keen on retaining elements of national sovereignty within the European Union, following a model of 'an integration of strong nation states' in Europe building cooperation in intergovernmental decisions (versus a federalist 'ever-closer union' approach built around sovereignty-sharing). As CSDP has remained an intergovernmental area within the EU, calls for developing 'European armed forces' are only rhetorically supported, while the technical deepening, or the extension of qualified majority voting to new areas have categorically been refused until now (VARGA 2019; NÁDUDVARI–VARGA 2019; MOLNÁR et al. 2020).

#### THE STRATEGIC FRAMEWORK OF DEFENCE MODERNISATION

Considering the entire period since NATO accession, it can be said that the transformation and reshaping of the Hungarian Defence Forces was a slow, stagnant process, which was mostly affected by the underfunding of the defence sector and its consequences. Subsequent governments did not move the development of the defence forces forward in the same way: while some had a clear vision of the direction of the transformation of the force, others only wanted to 'operate' the HDF in a manner that it more or less met allied commitments and political expectations, without investing too many resources in substantial capability development.

The reduction of the military force – both in numbers and capabilities, equipment – was a dominant process from 1999 to 2009. The number of personnel of the HDF – first as a result of the strategic review of the first Orbán Government (1998–2022), then the defence review of the Medgyessy Government (2003), and the 'expeditionary army' concept of the second Gyurcsány Government

(2006–2009) – decreased HDF personnel to 23,950 troops by 2007, while the number of military units decreased to 33 by 2009 (Government of Hungary 2007). Moreover, the reductions were mostly carried out through across-the-board cuts, since the political and military leaders (officially) sought to maintain a full-spectrum military force, thus primarily focusing on its quantitative transformation.

Unfortunately, in the first decade of Hungary's NATO membership, no military reform was consistently implemented. Without providing additional resources, it was not possible to counteract the aging of the Hungarian Defence Forces' military equipment, change the practice of depleting existing stocks, or remedy the shortage of personnel in the HDF and the low financial recognition of its personnel (VÉGH 2018: 8).

The Fidesz–KDNP coalition government that came to power in 2010 relatively quickly began to review existing defence policy principles, and between 2010 and 2013 it implemented a number of minor organisational changes within the HDF – like starting to build up the voluntary reserve system, allowing three types of reserves: voluntary operational reserve, voluntary territorial defence reserve, and voluntary defence reserve; integrating the military career and national defence education into the system of public services; and transforming the Hungarian national security structure by establishing the Military National Security Service.

Even though the HDF became an all-voluntary and fully professional force in November 2004, its actual development could only take place after the dynamic increase in the defence budget began in 2016, underpinning the comprehensive National Defence and Armed Forces Development Program, then dubbed 'Zrínyi 2026'.

The strategic objectives and main pillars that make up the framework of this comprehensive national defence and armed forces development program can be mapped indirectly based on the 2020 National Security Strategy (NSS) (Government of Hungary 2020), the 2021 National Military Strategy (NMS) (Government of Hungary 2021), and some policy statements and scientific articles only, because the program's planning directives have remained classified. Specific Defence Industrial Strategies had also been adopted in 2021 and 2023, but these were not publicly disclosed either, thus can only be assessed through secondary sources.

The strategic goal up to 2030 is to create a comprehensive national defence system that can defend against military threats, protect against hybrid challenges, as well as perform civilian crisis management tasks (NSS, Article 126). To this end,

“The Hungarian Defence Forces must comprise well-equipped and well-trained forces in addition to flexible, effectively deployable, sustainable, and adequately

interoperable capabilities while striving to improve their ability to meet qualitative as well as quantitative requirements. In addition to its conventional territorial defence and international crisis management tasks, they must also be capable of contributing to the management of a crisis caused by mass migration or the threat of terrorism, playing a role in the prevention of hybrid attacks, and assisting in the mitigation of the consequences of natural or industrial disasters. The military must be developed to deliver effects in all the operational domains that are relevant to Hungary: land, air and cyberspace alike” (NSS, Article 135).

Therefore, the armed forces development plans did not aim at creating specialised (‘niche’) capabilities, but rather a – relatively – broad spectrum of HDF capabilities. The means of realising these goals were the national defence and armed forces development program (NSS, Articles 27–28), the strengthening of military cyber defence capabilities (NSS, Article 159), and the development of national defence industry (NSS, Articles 2, 5, 6, 28–29, 105, 128, 136) (CSIKI VARGA – TÁLAS 2020: 89–112).

In accordance with the NSS, the National Military Strategy not only clarified the government’s strategic considerations and the views of military commanders on modern warfare that were behind the armed forces development program but also summarised the drivers of the developments between 2016–2021 and set tasks for the 2020s. The strategy organised the tasks of the Hungarian Defence Forces into two comprehensive groups: the national dimension contains nine comprehensive tasks, the international dimension six comprehensive tasks, with numerous sub-tasks.<sup>2</sup>

An increased ambition and underpinning goals in procurement, personnel and structure can also be observed with a modernisation horizon of 2032. The HDF must become

“a highly mobile joint force that is equipped with modern arms and is capable of rapid reaction and effective intervention simultaneously in several theatres, through possessing information and decision-making superiority, by relying on

<sup>2</sup> National tasks are the following: defence, deterrence, crisis management, resilience, cooperation with civilian institutions in a whole-of-government approach, national defence (territorial defence, reserve forces, defence logistics, supporting law enforcement), civil–military relations (cultivating patriotism, ownership and defence-related obligations, recruitment), defence economy and representative roles. International tasks are NATO collective defence, international crisis management, host nation support, EU mutual assistance and solidarity; increasing interoperability in multinational formats; participation in regional defence initiatives.

its all-volunteer professional and reserve forces, within both national and allied frameworks” (STICZ – SEPRŐDI-KISS 2020: 6).

As a result, the Hungarian Defence Forces

“will be able to guarantee the security and sovereignty of Hungary both through credible deterrence based on its national capabilities, and within the framework of collective defence, together with allies (benefitting from security guarantees and contributing to strengthening these), as well as through international peace operations that contribute to the stability of the international system by building partnerships, security sector reform, and training” (STICZ – SEPRŐDI-KISS 2020: 6).

To realise these goals, the force structure development plans are built on a four-brigade structure through increasing troop numbers from the current 26,700 active, plus 11,000 reserves to 37,650 active duty plus 20,000 reserve soldiers.

As we can clearly see, technological modernisation has been a central element of the ongoing armed forces development program, which practically encompasses across-the-board procurements in almost every armed service: small and light weapons, ammunition, anti-tank weapons, infantry fighting vehicles, tanks, artillery ranging from mortars to long-range artillery; light and medium utility and multi-purpose helicopters, military transport, training and combat aircraft, air defence and missile defence; command, control and communication, as well as logistics, repair and maintenance capabilities are under modernisation. The current and future development of the national defence technological and industrial base supports this endeavour.

#### THE ONGOING COMPREHENSIVE NATIONAL DEFENCE AND ARMED FORCES MODERNISATION PROGRAM

As we mentioned before, the planning directives and detailed procurement plans of the comprehensive national defence and armed forces modernisation program have not been publicly disclosed, limiting transparency and oversight regarding the realisation of the program. Therefore, one can get a picture of the structuring and sequencing of the modernisation in retrospect, through the overview of recent years’ purchases and the announced medium- and long-term development plans. The program can be divided into two comprehensive phases and several smaller stages to achieve the sub-goals – although this is not an official government narrative.

The first comprehensive phase of the program takes place between 2016–2026, in line with the long-term, ten-year planning cycle of the Hungarian Defence Forces (hence the original name ‘Zrínyi 2026’). The second phase certainly includes the period between 2026–2032, in line with NATO’s current defence planning cycle (Magyar Hírlap 2020). These can be further divided into five smaller stages along the sub-goals.

In the first phase, the program was planned and prepared between 2015–2018, based on a comprehensive assessment of Hungary’s security environment and an analysis of military threats. The first military equipment procurement and defence industry development decisions were made, the first procurement and development agreements were concluded, and then deliveries began. In the fall of 2018, a decision was also made to increase the number of personnel in the Hungarian Defence Forces by nearly eight thousand people, to reach the aforementioned 37,650 active troop number, while the target number of volunteer reservists was set at 20,000 (KÁLMÁNFI 2022).

The second phase is the first stage of military equipment procurement and defence industry investments between 2018–2023, and its planning endpoint is achieving the operational capability of the medium rifle brigade offered to NATO. During this phase, procurements began, along with the delivery of military equipment, in several capability development projects of the air force (e.g. H145M helicopters, Zlin training aircraft), in the case of heavy equipment of the ground forces (Leopard 2A4 training tanks, PzH 2000 self-propelled guns), and the modernisation of individual weapons of riflemen (light weapons and small arms, personal equipment). During this phase, assembly and production lines for small arms were built in Kiskunfélegyháza, the Airbus parts factory in Gyula, the Lynx factory in Zalaegerszeg, and the Gidran production lines in Kaposvár. This five-year period laid the foundations for the expansion of military industrial production and the connections between the German and Hungarian military firms (Rheinmetall, Krauss-Maffei Wegmann), while the Hungarian military industrial portfolio was also expanded with two foreign military industrial companies (Hirtenberger Defence Systems, Aero Vodochody).

In the third phase, between 2023–2026, the part of major military assets that was previously contracted and is not purchased through off-the-shelf procurement, are manufactured and delivered, such as the Embraer KC-390 military transport aircraft, L-39NG aircraft, Airbus H225M helicopters for the air force, and the Leopard 2A7+ tanks and Lynxes for the ground forces.

The fourth phase, between 2026–2028, will continue the work aimed at creating the heavy brigade and achieving its operational capability through the delivery of previously ordered military equipment, the training of the personnel for the fielded

equipment, and through military exercises. The end of the phase will be reaching full operational capability of the heavy brigade offered to NATO in 2028.

Finally, in the fifth phase, between 2028–2032 and thereafter, long-term development will take place. The second half of the decade will be a period of ‘finetuning’ the operation of the modern equipment, the cooperation between subunits in national and international frameworks, and the deepening of interoperability, also in terms of possible first operational roles. By the end of the 2020s, the replenishment of the expanded force structure and the related training tasks will represent the greatest human resource challenge facing the Hungarian Defence Forces (CSIKI VARGA 2025).

#### RECONSTITUTING DEFENCE INDUSTRIAL CAPACITIES

To underpin the above assessed force development goals, subsequent Defence Industrial Strategies identified six clusters around which investments, partnerships and development will be centred in the next decade. These clusters and their flagship projects are as follows:

1. *IVF, APC production and military vehicles manufacturing in Zala, Somogy and Győr counties (Southwest and Northwest Hungary).* As the most important element, the joint venture Rheinmetall Hungary will provide Lynx infantry fighting vehicles (218 pieces, out of which 172 will be manufactured in Zalaegerszeg), supplied with StrikeShield active protection system, including Israeli LR-2 Spyke anti-tank rockets. Future innovation projects might include integrating the Israeli-made Trophy active protection system and Rheinmetall’s Oerlikon Skyranger anti-aircraft system to Lynx. Cooperation with Rheinmetall also includes the procurement/manufacturing of 300 armoured personnel carriers, 40 of which bought from Turkish Norul Makina in its original design (Ejder Yalcin), while the remaining 260 will become a Hungarian configuration called Gidran, equipped with a wide range of sensors and flexible in functional fitting (produced in Győr, in cooperation with Hungarian vehicle manufacturer Rába). 4 × 4 vehicles and military trucks will be produced in Kaposvár. This cluster also includes a test range (ZalaZone) and validation laboratories to support innovation, particularly for autonomous vehicles, based on the example of Rheinmetall’s Mission Master XT. The design and development of a new 8 × 8 hybrid next generation fighting vehicle in cooperation with Rheinmetall and Krauss-Maffei Wegmann is also

an option, which might even serve as a long-term replacement of the BTR-80 IFV in the HDF (currently unresolved). Furthermore, news of participating in the research and development phase of Rheinmetall's next generation main battle tank, the KF51 Panther – equipped with a 130 mm gun, active defence systems, AI-assisted fire control system, associated drones and a range of sensors – has been aired in 2023 (HUSZÁK 2023).

2. *Aviation industry in Békés county (Southeast Hungary).* A rather small but high-value footprint from Airbus Helicopters will provide for helicopter engine parts' production in Gyula, accompanied by surface treatment for helicopter parts by Satys PSP Hungary Ltd. Brazilian Embraer – from whom HDF procures 2 KC-390 military transport planes – also announced the establishment of an R&D centre in Hungary.
3. *Small arms production in Bács-Kiskun county (Southern Hungary).* Based on the licence of Česká Zbrojovka, MoD Arzenál assembles small arms in Kiskunfélegyháza, together with Unique Alpine machine guns, and the development of Hungarian-designed Gestamen small arms family. Colt CZ Group and N7 Holding Ltd. established a joint venture for small arms production. Dynamit Noble Defence and MoD Arzenál will produce reactive armour (possibly DND ERA to be integrated into the Lynx IFV), as well as anti-tank weapons for light infantry.
4. *Ammunition and explosives production in Veszprém and Fejér counties (Central Hungary).* Rheinmetall Waffe Ammunition develops two facilities in the vicinity of Várpalota: one to manufacture 30, 120 and 155 mm artillery shells (for the Leopard 2 tanks, Lynx IFVs, and PzH-2000 artillery), while the other to produce hexogen / RDX explosives. The relocation of the Hirtenberger Defence Systems' mortar production capacities to this area is to take place in 2024.
5. *Radio and satellite communication systems manufacture in Budapest and Fejér county (Central Hungary).* In the field of defence information technology, communication and space industry, 4iG – a joint venture of Rheinmetall AG (51%), 4iG Ltd. (39%) and MoD EI Ltd. (10%) – is the leading actor, also serving as a systems integrator for network-based C4 functions. 4iG Group has been expanding its portfolio beyond telecommunication services and IT system integration to include space, unmanned aerial vehicles (UAVs), counter-UAV and defence digitalisation. Furthermore, in 2022 4iG acquired an initial 20% stake in Israeli company Spacecom, with an option for further 31% in the next 3 years. From 2024 the orbital slot, currently providing space-based

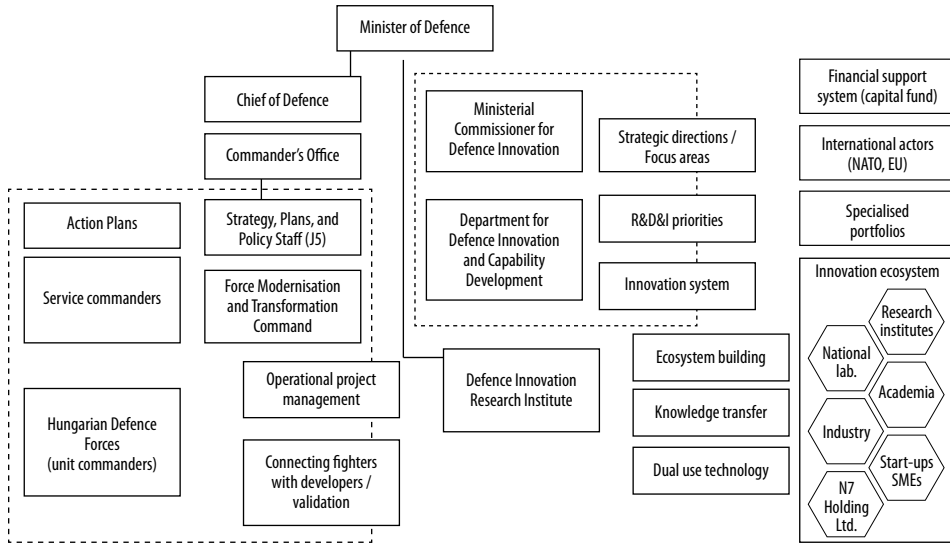


Figure 1. *Research, development and innovation in the Hungarian defence industrial ecosystem*

Source: Compiled by the authors based on VÉGVÁRI 2023: 77.

telecommunication opportunities for Spacecom in lease from Hungary, is occupied by CarpathiaSat, a 4iG joint venture. The slot is planned to be used for launching Hungary's first ever commercial satellite in approximately 5 years' time. Most recently, the 4iG subsidy Remred Space Technologies began to develop a facility (Remtech) in Martonvásár, capable of producing, testing and validating space systems, including satellites up to 400 kilograms, entering the market of low Earth orbit space assets in the coming years.

6. *Radar production in Szabolcs-Szatmár-Bereg county (Northeast Hungary).* When providing for the procurement of ELM-2084 multi-mission radars (11 pieces) for the HDF, Rheinmetall Canada places the production and later the maintenance of these assets to Nyírtelek.

In sum, one could characterise the next decade of Hungarian defence industry as attempting to grow from a backward garage-operated small enterprise into a well-established national, and in some areas an internationally recognised company with and innovative edge and sizeable arms export potential. Figure 1 summarises how the defence industrial ecosystem has been recreated and is being functionally developed to underpin the development programs described above.

## DEFENCE EXPENDITURE TRENDS

Like most European countries, Hungary also went from enjoying the peace dividend of the 1990s to residual financing of the armed forces after the turn of the millennium: only minimal resources were spent on the military, because it was among the last government portfolio elements in order of importance when planning the budget. This was also facilitated by the societal perception of security, because people did not perceive military threats, but rather focused on financial and economic security (RADVÁNYI 2008; ETL-TÁLAS 2020; DEÁK et al. 2022).

After the turn of the millennium, the defence budget stabilised at around 300–330 billion forints until 2008, which, together with the Gripen lease, made any meaningful modernisation impossible. However, from 2009 onwards, even this funding began to decline. Thus, in 2014, a decade after the Hungarian accession to the EU, and 15 years after NATO accession, the defence budget was 54.5 billion forints (17.5%) lower than in 2004. 2015 was the turning point, when, due to the previously mentioned strategic shocks, Hungarian security perception began to change and the improvement in the economic situation made more financial resources available. This drive was also strengthened by the political commitment sealed at the Newport NATO summit to increase its defence spending towards 2% of GDP, expected to be reached by 2024 (CSIKI et al. 2014).

The dynamic and predictable growth of the defence budget was ensured by Government Decree 1273/2016 (Government of Hungary 2016b) that extended the planned period of growth until 2026, assuming an annual growth of 0.1% of GDP, reaching a minimum of 1.79% by 2026. Finally, the significant resource requirement of the program was met through Government Decree 1283/2017 (Government of Hungary 2017a), creating the conditions of providing both for defence modernisation in real terms and meeting the NATO 2% requirement in 2023, one year ahead of schedule (NÉMETH-PALKOVICS 2022). Moreover, the government also set the goal of maintaining this level beyond 2024.

The launch of the national defence and armed forces development program was approved by Government Decree 1298/2017 (Government of Hungary 2017b) after the modernisation and procurement plans were completed in 2016. Following a 'lost decade' between 2004–2014, the defence expenditure increased sevenfold between 2014–2024 by reaching 4.68 billion euros, thus fulfilling both NATO Member States' Wales defence pledge and the commitment to spend a minimum of 20% of defence expenditures on procurements and modernisation (actually exceeding 35% since 2019) (NATO 2024). At the same time, it is also worth pointing out that the increase in resources supporting the modernisation program, initially estimated

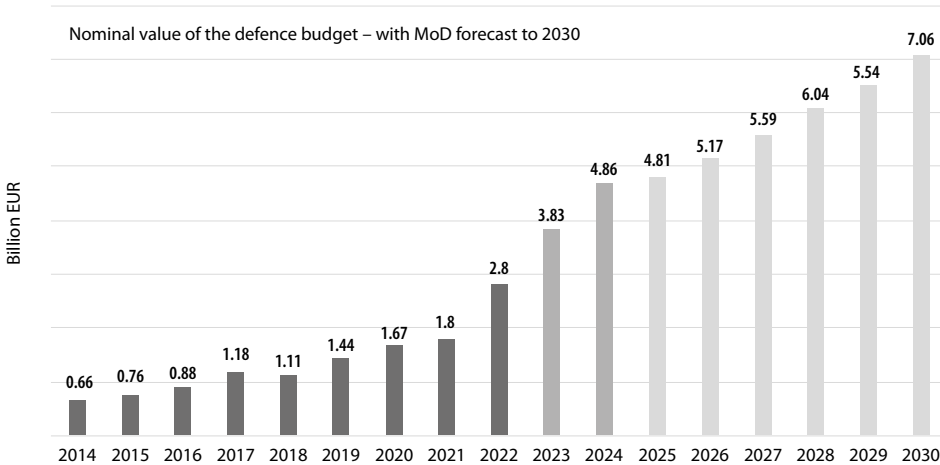


Figure 2. *The Hungarian defence spending trend, 2014–2030*

Source: Compiled by the authors based on Respective Laws on the Central Budget of Hungary, 2013–2024, and MoD forecast for 2025–2030.

at 3,500 billion forints, but a much larger expenditure overall, means nothing more than returning resources that had not been spent in the previous two decades in the national defence subsystem (CSIKI VARGA – LÁZÁR 2021: 6).

The current forecast of the Ministry of Defence to 2030 counts with not only sustaining the 2% GDP ratio but further expanding it by a gradual increase of 0.1% annually, to reach 2.6% by 2030, which would amount to about 7 billion euros (Figure 2). This investment background can stabilise armed forces development and offer substantial development prospects for the defence industrial base as well.

## CONCLUSIONS

After significant downsizing and capability losses during the 1990s and continued underfinancing that prevented major modernisation throughout the next decade, a fundamental transformation of the Hungarian Defence Forces began from the mid-2010s. The comprehensive national defence and armed forces modernisation program is the most substantial capability development package since the 1980s, building on pillars of large-scale equipment procurements, the reestablishment of defence industrial capacities with significant international tie-ins to European production chains, the expansion of manpower, and the dynamic expansion of defence expenditures. The program runs fully in line with NATO's defence

planning and capability development processes, which constitute the cornerstone of Hungary's defence and deterrence. These developments, running to the 2030s, make it possible for Hungary to evolve from security consumer to being a security provider within the Alliance.

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