

DIMENSIONS

THE RHEINMETALL MAGAZINE

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RETHINKING

A TURNING POINT, YES.
PACIFISM, NO. MILITARY SERVICE,
MAYBE. HOW DOES THE RETURN
OF WAR TO EUROPE CHANGE
OUR OPINION TOWARDS
DEFENCE?



KEEPING TRACK OF PUBLIC OPINION

What is the public opinion on current political, economic, and social issues? How do these issues affect daily lives? What are people worried about? Corresponding surveys can provide data-driven, insightful answers to these questions. The success story of modern opinion research began with a spectacular prediction: in 1936, social scientist George Gallup claimed that surveying just 2,000 people would allow him to predict the outcome of the US presidential election more accurately than traditional reader polls involving millions of participants. He was right. Opinion research is more popular than ever. It is not just politics that love the supposed certainty of figures, but also the media and the business world. However, not all surveys are created alike. Those lacking a scientific basis are on the rise, particularly on social media. Leading questions are designed to sway public opinion. To obtain reliable results regarding the attitudes of the respondents, methodological rigour is essential: a genuinely random sample being as representative as possible of the total population is just as important as a valid questionnaire which is free from manipulative wording. Opinion pollsters have a great responsibility, making the quality of their surveys all the more important. This is particularly true for socially relevant and sometimes rather controversial topics such as defence. Valuable insights concerning the turning point in mindset are presented in the annual population survey conducted by the Bundeswehr Centre of Military History and Social Sciences.



DEAR READERS,

Shortly after Russia's invasion of Ukraine, Olaf Scholz, who was Chancellor at the time, proclaimed a "turning point" in his historic speech in the Bundestag, the German Parliament. The term was named Word of the Year 2022 by the Society for the German Language, and has quickly become established in international political discourse and the public's collective memory.

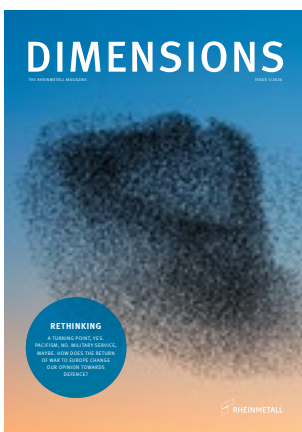
This marked a turning point in German security and foreign policy, cutting ties with the past. Above all, it became synonymous with the restoration of Germany's defence capabilities and security in Europe. The Federal Minister of Defence, Boris Pistorius, emphasised that Germany, considering its size as well as its economic strength and geostrategic role, must increase its efforts significantly. His goal is to convert the Bundeswehr into the strongest conventional army in Europe.

But what does the German public think about this redefinition? Has the turning point really made its way into the collective psyche of the German people? What price are we prepared to pay? In this issue, we would like to explore these questions. Our cover story, "Turning Point in mindset", offers an engaging introduction to the subject, drawing on representative data from several decades of public opinion research.

One thing is clear: security, being a public good, is back in the public consciousness and also at the forefront of business. In order to remain capable of acting in the face of global conflicts, companies must prioritise information security and the security of supplies. Marcus Gerlach, Rheinmetall's Chief Purchasing Officer, provides a prime example of how the Group manages global supply chains, minimises risks, and ensures production stability despite the enormous demand for defence equipment. In another article, we are looking behind the scenes at Rheinmetall's Security Operations Centre. I hope you will find it an interesting and insightful read.

Yours

Philipp v. Brandenstein
Head of Corporate Communications
Rheinmetall AG



ABOUT THE TITLE PAGE

When in danger, starlings transform into a fluid swarm in the sky. This phenomenon, known as a murmuration, sees thousands of birds move in unison, changing formation and direction. This collective power arises from individual behaviour. The same logic applies to social change: a new security situation can alter public attitudes towards defence.

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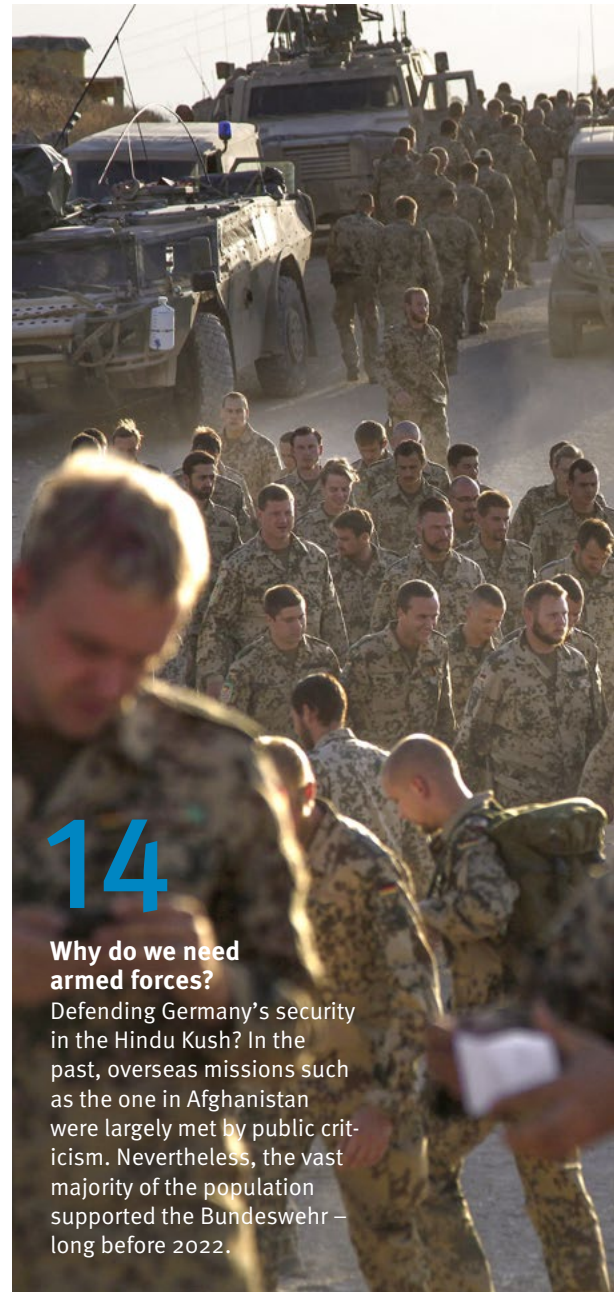
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DIMENSIONS is also available online at www.dimensions-magazin.de/en



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State visit

"We want you to be successful, because your success means security for our country," emphasised Defence Minister Boris Pistorius at the opening of the Rheinmetall ammunition plant in Unterlüß.

Change of industry

The former Pierburg site in Berlin will in future produce components for various types of ammunition – such as the lever screw for 155mm artillery shells.



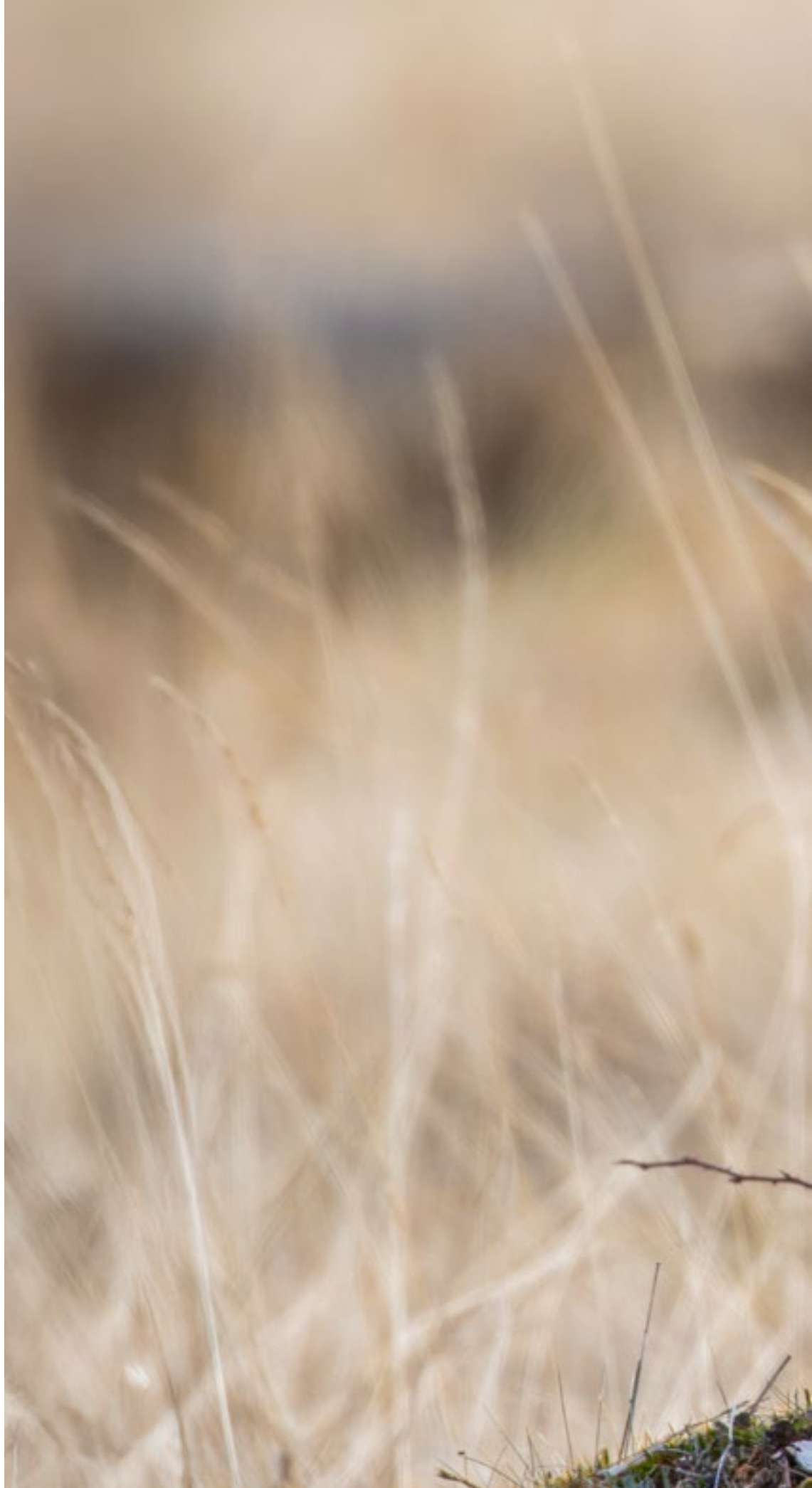
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WILDLIFE PROTECTION BETWEEN TANKS

At the vast area of the test centre in Unterlüß, an unexpected side of a high-tech industrial company comes into view. Amid test tracks, state-of-the-art defence technology, and strictly secured areas, the rare black grouse has found an unexpected refuge. The open heathland has proved to be a valuable habitat for one of Germany's most endangered bird species – and poses a particular responsibility for Rheinmetall.

Around 25 black grouse are currently living on the site, which covers an area of approximately 50 square kilometres. In order to help preserve the population, the technology group has established a wide range of measures in close cooperation with nature conservation authorities and external experts. These include annual population counts as well as precise clearing of shrubs across the heathland. Without this active maintenance, the landscape would gradually overgrow, and in the long term, the ground-nesting black grouse would disappear. As an active partner in the regional action plan to protect the species, Rheinmetall contributes with land, know-how, and resources – including €10,000 in funding for scientific research into the genetic diversity of black grouse populations in the Lüneburg Heath.

→ Read more about the ambitious conservation work in Unterlüß at www.dimensions-magazin.de/en





Unmanned fighter jet: Boeing's MQ-28 Ghost Bat is set to strengthen the German Air Force. For this, Rheinmetall plans to establish an industrial hub in Germany – to promote national sovereignty and added value in Europe.



COMBAT DRONES: RHEINMETALL AND BOEING COLLABORATE

Rheinmetall and Boeing Defence Australia have formed a strategic partnership. Their aim is to offer the MQ-28 Ghost Bat as a fully developed solution for the Bundeswehr's planned procurement of so-called Collaborative Combat Aircraft (CCA) by 2029. Boeing's unmanned com-

bat drone operates alongside manned jets and provides decisive combat capability in highly contested airspace. Its modular design allows for a wide range of operational possibilities, including reconnaissance, electronic warfare, and weapon system integration. As system

manager, Rheinmetall will ensure that the MQ-28 fits seamlessly into the Bundeswehr's system architecture, complies with national requirements, and remains fully operational at all times, both technically and logistically.

The Netherlands relies on Skyranger 30

Rheinmetall is consolidating its position as the global market leader in the field of ground-based, gun-mounted air defence with a major contract worth several hundred million euros: the Dutch Ministry of Defence has ordered a double-digit number of Skyranger 30 air defence systems from Rheinmetall Air Defence. This system is unique in its new configuration, which allows the weapon platform to be deployed both in a purely stationary role and in a mobile configuration on an armoured



breaching vehicle, such as the Dutch armoured combat support vehicle (ACSV) shown in the picture. The scope of supply also includes tactical command containers, simulators, and a comprehensive logistics package. Delivery of

the Skyranger 30 weapon systems to the Dutch armed forces is scheduled to begin at the end of 2028 and to be concluded by the end of 2029. A large proportion of the value creation will take place locally in the Netherlands.



Rheinmetall sets sail

Rheinmetall’s successful acquisition of NVL is a significant step in the strategy of the Düsseldorf-based group. By entering the naval sector, Rheinmetall is positioning itself as a full-range supplier of military systems. Alongside the construction of complex naval vessels, the focus of the common future lies on the development of unmanned and autonomous surface systems. The new Rheinmetall Naval Systems division is thus responding to the changing requirements of modern armed forces, where cost-effective, flexible, and networked maritime solutions are becoming

increasingly important, and where navies will operate within a network of manned and unmanned autonomous systems. Federal Minister of the Interior Alexander Dobrindt recently visited the Blohm+Voss shipyard to observe the development of the AMC12 autonomous test vessel, which was developed by the Naval Systems team. Meanwhile, the new Rheinmetall division has commenced serial production of the Kraken K3 Scout unmanned platform, as seen in the picture above during a test in the Port of Hamburg.

RECORD ANNUAL RESULTS

9.9
 BILLION EUROS
 GROUP TURNOVER
 (+29 %)

1,841
 MILLION EUROS
 OPERATING PROFIT
 (+33 %)

18.5
 PER CENT
 PROFIT MARGIN –
 NEW ALL-TIME HIGH

The 2025 fiscal year marks a new peak in the corporate history of Germany’s largest defence group. “We have achieved a new record operating result and will continue to increase the Group’s profitability,” emphasises Rheinmetall CEO Armin Papperger. “We are well positioned for new major projects with the armed forces. Our development into a cross-domain technology provider in the defence sector is already paying off.”

→ You can find all the latest news, information, and background stories on the DIMENSIONS website www.dimensions-magazin.de/en

 **1.1**
 BILLION EUROS

is the value of the major contract awarded to Rheinmetall ICEYE Space Solutions by the Federal Office of Bundeswehr Equipment, Information Technology and In-Service Support. The joint venture between Rheinmetall and the Finnish SAR specialist ICEYE will provide the

Bundeswehr with space-based reconnaissance data via exclusive access to the company’s own satellite network. Synthetic Aperture Radar (SAR) technology enables high-resolution radar images in all weather conditions, day and night – through clouds, smoke, and rain. One of the purposes of the data is to support the protection of the Lithuania Brigade and the security of NATO’s eastern flank. The contract is for a multi-year term with an option for extension. The joint venture plans to manufacture the required SAR satellites at its site in Neuss.

Europe is increasing its military spending, with Germany leading the way. In order to meet NATO's requirement of spending 3.5 per cent of gross domestic product on defence, Germany's defence budget is set to rise to over €150 billion by 2029. This apparent U-turn in fiscal policy is in fact a response to a serious situation. NATO Secretary General Mark Rutte has issued an urgent warning: Russia could use military force against NATO within five years. Consequently, defence must be reconsidered as a public duty. Just as essential as the supply of water or energy, national security is one of a state's fundamental tasks: it must be comprehensive, resilient, technologically sovereign, and have the necessary troop strength.

DEFENCE AS AN OPPORTUNITY FOR INDUSTRIAL POLICY

Necessary for military purposes, economically meaningful: massive investment in defence is opening up growth opportunities for the European industry and is providing a structural boost for regions. Modern armaments are high-tech, involving many companies in the supply chain. Dual-use technologies, which can be used for both military and civilian purposes, are also seen as an additional driver of innovation and strategic autonomy for entire economies. The prospects for Europe are good, the technological know-how is there. At the same time, a shift in mindset is taking place: customers, investors, and employees are increasingly considering defence to be a positively valued and future-proof sector.



MORE EUROPEAN SOVEREIGNTY

The potential of an integrated European defence system is enormous. Coordinated procurement increases order volumes, creating scope to expand production capacity as required. Reducing bureaucracy and conducting more joint research will strengthen the defence industry in the long term. One such flagship project is the Franco-German Main Ground Combat System tank programme. The land combat system of the future, which Rheinmetall is developing together with Thales and KNDS, is set to be launched in 2040. During their visit to Unterlüß in July 2025, Rheinmetall CEO Armin Papperger received political backing from German Defence Minister Boris Pistorius and his former French counterpart, who is now Prime Minister, Sébastien Lecornu.





MODERNISATION OF CONSCRIPTION

In addition to rearmament, the strength of a country's armed forces is crucial for its defence capabilities. France intends to strengthen its army by introducing a new voluntary service scheme. Germany has recently reformed its compulsory military service. According to the annual population survey conducted by the Bundeswehr Centre of Military History and Social Sciences, there is certainly no shortage of volunteer combatants in this country: in the age group of 20–40 alone, 54 per cent of men and 23 per cent of women say they would be willing to defend the country. According to the census, this equates to over five million men and over two million women in absolute terms.

1



gnirrut point

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annual ZMSBw population
survey.



2

in mindset



From the former “civilian power” to Europe’s strongest conventional military power: Germany’s turning point in defence policy was met by broad public support. How is this public approval to be explain, keeping in mind that most Germans are considered to be pacifists?

Author: Timo Graf



The Brandenburg Gate – scene of history:

1 The fall of the Berlin Wall in 1989: It was during this period that the American political scientist Francis Fukuyama coined the term “the end of history” – believing that major systemic conflicts were now related to the past following the victory of Western democracies.

2 Germany 1991: Nationwide protests against the Gulf War. Although the Federal Republic did not send its own armed forces to Iraq, it supported the US-led coalition forces with billions in funding.

3 Third anniversary of Russia’s war of aggression against Ukraine: On 24 February 2025, thousands of people took to the streets in Berlin and other German cities to show their solidarity with Ukraine – including wounded Ukrainian soldiers.

Since Russia’s total invasion of Ukraine in 2022, war has returned to Europe. It has long since posed a direct threat to Germany’s security. This horror scenario was actually thought to have been overcome with the end of the Cold War. The desire for “never again war”, cherished since the end of World War II, and the hope of creating “peace without weapons” finally seemed to be coming true. Western elites believed in Francis Fukuyama’s thesis of “the end of history”, and Germany disarmed itself.

After thirty years of peace in Europe, during which even the Global War on Terror following 11 September 2001 was of little interest to large parts of the population, disillusionment has set in. The epochal shift provoked by Russia is forcing Germany into a U-turn in defence policy: “We are not at war, but we are no longer at peace either,” emphasised German Chancellor Friedrich Merz in autumn 2025. The former “civilian power” is setting out to become Europe’s strongest conventional military power.

The fact that this change of course has met with such broad support among the population surprises many actors in the media, politics, and academia. After all, Germans are considered to be pacifists. At a closer view however, it is apparent that the majority’s attitude on security issues is shaped by pragmatism and is not con-

3

4 Protest by a minority: “This is not our war” – using slogans like this, mainly right-wing and left-wing groups are stirring up sentiments against supplying Ukraine with weapons. The majority of the German population, however, supports the military, civilian, and political aid being provided to the country under attack.

5 In 2022, the arrival of Ukrainian refugees sparked an unprecedented wave of generosity. Thousands of volunteers organised accommodation and donations.

strained by ideological guardrails. This change in defence policy is accompanied by a “turning point in mindset”. The majority has understood that freedom must be defended in times of peace – if necessary, even with weapons.

FROM CHEQUEBOOK POLICY TO THE DEPLOYMENT ORDER

With the end of the Cold War, Germany found itself “surrounded only by friends”. This reinforced the view held by many in politics and society that the armed forces should be downsized, and that the resulting “peace dividend” be made available to other departments. From then on, Germany defined its role in foreign policy as that of a civilian power. The Federal Republic assumed responsibility for international security primarily through financial, economic, and development aid, and less through military engagement – following the motto “creating

peace without weapons”. Yet this chequebook diplomacy offered no lasting solution. Alliance commitments and the desire for global engagement transformed the Bundeswehr from a defence force into a flexibly deployable instrument of German foreign and security policy. Across

4



5



the globe, it made its contribution to numerous crisis-management and stabilisation missions.

However, not everyone understood that Germany's security was also being defended in the Hindu Kush, as former Defence Minister Peter Struck put it in 2002. Even within the Bundeswehr itself, the purpose and legitimacy of these missions were critically questioned – at least in retrospect. The 2023 handbook *Innere Führung* (Internal Leadership), referring to leadership development and civic education, states: "Due to a lack of strategy and the assumption that society is looking critically upon its military, political decision-makers often downplayed and glossed over the objectives of deployments. [...] The justification and legitimisation of overseas engagements were often perceived as insufficient to derive any lasting sense of purpose from them."

In the period that followed, these overseas engagements were met with largely critical public opinion. Representatives from politics and the Bundeswehr, however, interpreted this attitude not as criticism towards the armed forces' political mandate, but as an expression of a fundamentally military-critical attitude within German society. The allegedly pacifist and post-heroic character of the German population was frequently invoked as an explanation for the growing gap between civil society and the deployed armed forces.

The suspension of compulsory military service in 2011 and the continuing downsizing of the armed forces reinforced this perception further. In doing so however, one crucial fact was overlooked: since 2000, at least three-quarters of the population have consistently expressed a positive attitude towards the Bundeswehr. Long before 2022, a large majority of the population supported the soldiers of the Bundeswehr – just not every war of choice to which they were sent by the government and parliament.

A TURNING POINT IN POLITICS – AND IN MINDSET

Russia's war of aggression against Ukraine has brought the era of wars of choice to an end and forced a realignment of German defence policy. Unlike during the interwar period from 1990 to 2021, the fundamental question "Is there a need for armed forces?" has once again received a clear answer since 2022: defence is an essential public responsibility. For the first time in more than 30 years, European and national security are once again under military threat. In order to deter Russia's military aggression, the

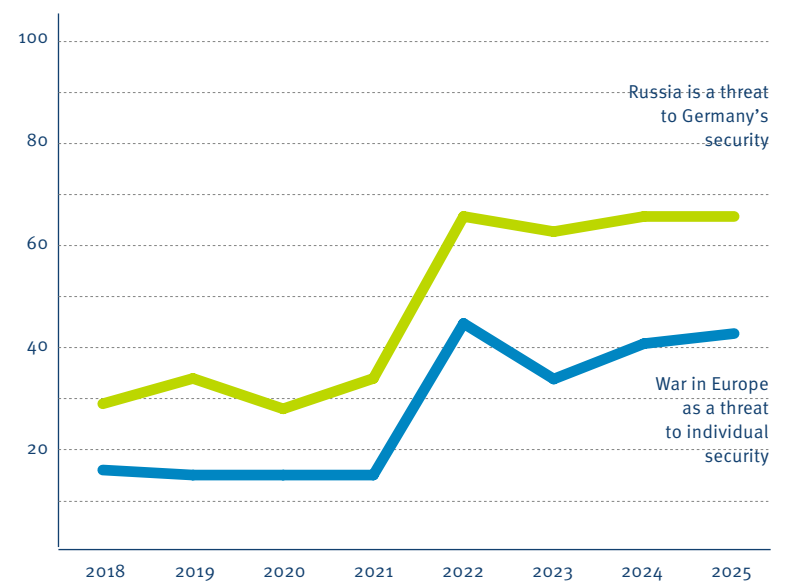
WARS OF CHOICE are military operations based on political decisions – such as missions aimed at stabilisation or peacekeeping abroad. By contrast, wars of necessity serve the purpose of immediate national defence.

Bundeswehr is returning to national and alliance defence as its main objective. For Germany to be able to fulfil this mission in full, it must strengthen its armed forces massively, both financially and in terms of personnel.

According to the assessment of the former Inspector of the German Army, Lieutenant General Alfons Mais, the Bundeswehr was "more or less bare" in 2022. To strengthen defence capabilities, the Federal Government made available a one-time special fund of €100 billion as start-up financing immediately after the outbreak of war. Since 2025, it has suspended the constitutional debt brake for defence and security spending. Germany is also accelerating the procurement of new equipment and, from 2026 onwards, introduced a new voluntary military service, which includes compulsory military registration for men.

This shift in defence policy may not be progressing quickly enough for some analysts and decision-makers, but its significance should by no means be underestimated: Germany wants to develop from its former status as a civilian power into Europe's strongest conventional military power – and the majority of citizens support this U-turn. The changes in public opinion on defence policy since 2022 are so significant that one can speak of a turning point in mindset.

PERCEPTION OF MILITARY THREATS TO ONE'S OWN SECURITY



Figures are expressed as percentages. The values combine response shares: for Russia, "strongly agree" and "somewhat agree"; for war in Europe, "strongly threatened" and "somewhat threatened". Data basis: ZMSBW population survey 2018 to 2025.

A CHANGE OF MENTALITY IN FIGURES

Since 1996, the Bundeswehr Centre of Military History and Social Sciences (ZMSBw) has conducted an annual representative population survey on the relationship between society and the Bundeswehr. According to the latest edition from September 2025, two-thirds of people in Germany currently see Russia as a threat to the country's security, while almost half feel personally threatened by war in Europe. By comparison, before 2022 only a third considered Russia to be a threat and a mere 15 per cent felt affected by war in Europe. In the current situation, two-thirds of the citizens also support strengthening the Bundeswehr both financially and in terms of personnel – more than ever before. Support for the defence of NATO's eastern flank has also risen sharply since 2022. An absolute majority advocates the introduction of a new form of military service. And that is not all. In the age group most directly affected – those aged 16 to 29 – 45 per cent of men would defend the country with a weapon in hand in the event of a military attack.

MAJORITY CONSENSUS

The latest survey shows clearly: strengthening the Bundeswehr and thus national defence capabilities is a consensus shared across society as a whole. It is supported by an absolute majority in all groups of the German population – regardless of gender, age, level of education, income, migration background, or party preference. Fewer than 10 per cent support a reduction in defence spending and in the size of the Bundeswehr, while a quarter favours maintaining the current level. The German population demands nothing more or less than what is laid down in the Basic Law: the Federation shall establish armed forces for defence.

DESPITE FORCED SAVING: SECURITY OVER SOCIAL BENEFITS

From a financial perspective, too, defence is enjoying a high priority among the population: 67 per cent support an increase in the defence budget – despite the limited state budget. Military security therefore ranks ahead of pensions (62 per cent), digitalisation (62 per cent), economic and industrial funding (52 per cent), environmental protection (41 per cent), development aid (23 per cent), and unemployment benefits (19 per cent). In other words, most citizens see greater scope for savings in the latter areas than in the security of their country.

How do people change their attitudes?



Emotion

Russia's war of aggression against Ukraine has altered our perceptions irrevocably. Supposed certainties collapsed: the reliable energy supply, but above all the notion of a conflict-free existence in Europe. In February 2022, the first refugees arrived at German railway stations – exhausted, traumatised. These images triggered shock and uncertainty. Suddenly, war became tangible, it had faces. In the period that followed, Russia systematically intensified its hybrid warfare against the West: drone sightings over European airports repeatedly led to flight cancellations. At the same time, terrorist attacks on critical infrastructure such as Berlin's electricity grid highlighted the vulnerability of everyday life. Events such as these have an emotional impact and illustrate the relevance of the threat.

Psychology identifies three forces that must work together: emotion, cognition, and action. Emotion opens the door, because fear or hope captures our attention. At the same time, the brain processes information that challenges our existing attitudes. When actions are in harmony with emotion and cognition, they embed the new way of thinking into our daily lives. This is how a change in mentality occurs: as a process that sharpens perception, refines judgements, and alters routines. The turning point in mindset begins where feelings, thoughts, and decisions find a common direction. • *Pk*



Cognition

The realisation has long since reached the mind: Russia poses a real military threat to Europe. Hardly a day goes by without news being aired about the security situation in Europe: billions being invested in defence, the reinforcement of NATO's eastern flank, or the expert analyses of geopolitical risks presented at the World Economic Forum in Davos. Media coverage of these emotionally charged facts is having an impact. Convincing arguments from credible sources lead to a change in attitude – provided they are understood and accepted. Cognition means not merely perceiving the threat, but comprehending it.



Action

Attitudes only become firmly established through concrete action. When new experiences clash with existing beliefs, the motivation to change arises. The threat to Europe posed by Russia calls for a change in thinking. Rearmament is becoming a societal consensus. A large proportion of the population supports increased spending on defence, even if this means higher debt and budget cuts in other areas. Those who take responsibility turn the new attitude into a lived reality: when young people begin their military service, complete their basic training, and place themselves at the service of the community, the attitude has changed. Insight leads to commitment.

HOW THE THREAT SITUATION CHANGES PUBLIC OPINION

The German public’s desire to strengthen the country’s defence capabilities is currently shaped by the perceived military threat posed by Russia. Respondents who perceive Russia as a threat to Germany’s security are far more likely to support an increase in defence spending and military personnel (73 per cent) than those who do not see such a threat (39 per cent). Even when other factors, such as personal attitudes towards the Bundeswehr, are taken into account, nothing shapes public support for strengthening the armed forces more than the perceived threat by Russia – by far.

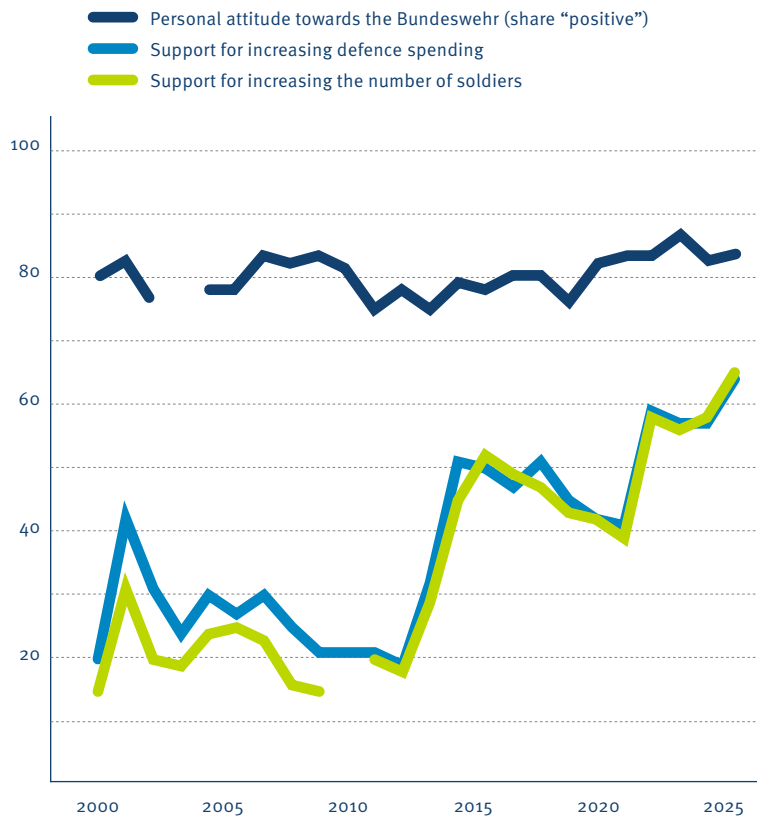
The major role that the assessment of geopolitical conflicts generally plays in shaping public opinion on defence can also be seen in earlier events: both in 2001, following the terrorist attacks of 11 September, and between 2014 and 2016, following Russia’s annexation of Crimea and the civil war in Syria, public support for strengthening the Bundeswehr rose sharply.

The population thus responded to the changing situation of security policy. While 9/11 merely sparked a flash in the pan in citizens’ awareness of security policy, the mental shift observed since 2014 and 2022 has proved to be more lasting.

IS GERMANY A NATION OF PACIFISTS?

The turning point observable in public opinion on defence policy is, on the one hand, entirely plausible. On the other hand, it runs counter to an assumption widely spread in politics, the media, and academia that considers the majority of Germans as being pacifists. Interestingly, both supporters and opponents of the turning point

THIS IS HOW GERMANS FEEL ABOUT THE BUNDESWEHR



Figures are expressed as percentages. If values are missing, the question was not asked in the respective years. Data basis: ZMSBw population survey 2000 to 2025.



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in defence policy share this conviction. While the “hawks” feel that the current change in mentality towards greater military readiness is not happening fast enough, the “doves” fear an abandonment of pacifism and a militarisation of German society.

The narrative regarding German pacifism is based on sociological research consensus: the German population is a post-heroic society that consciously distances itself from its past and, as a result, rejects the use of military means in foreign and security policy. As evidence, researchers cite, among other things, critical public opinion regarding the Bundeswehr’s foreign engagements, especially the one in Afghanistan.

Empirical studies, however, show that a fundamentally pacifist attitude hardly played a role in this context. Rather, the German population was convinced that the mission in the Hindu Kush had no prospect of success and posed too great a risk to the German soldiers deployed there. Assessments which unfortunately proved to be true.

REALISM AS THE BASIS FOR DECISION-MAKING ON SECURITY POLICY

It is true that the majority of the population generally favours civil solutions in foreign policy. However, this does not make Germans a nation of pacifists. Most citizens do not reject military means categorically. In order to obtain an objective picture of public opinion in German society, it is therefore necessary to determine its fundamental attitude towards both options.

Pacifists accept only civil means (approval) and categorically condemn the use of weapons (rejection). This framework also makes it much easier to distinguish them from other types of foreign and security policy attitudes – be they realists (approval/approval), isolationists (rejection/rejection), or militarists (rejection/approval).

Applied to the data from this population survey, a completely different picture emerges from the traditional one. Looking at the German population’s fundamental attitudes towards foreign and security policy over the period from 2016 to 2025 shows that Russia’s war of aggression against Ukraine since 2022 has not led to an abandonment of pacifism in two respects.

Firstly, most Germans were already not pacifists but realists even before the war in Ukraine. Secondly, the proportion of pacifists within the German population did not decline as a result of the outbreak of the war in 2022 but had already

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6 The terrorist attacks of 11 September 2001 shook the world. Just a few weeks later, NATO invoked the collective defence clause for the first time in its history. With the aim of crushing the Al-Qaeda terrorist network, the United States and the United Kingdom launched their military intervention in Afghanistan on 7 October.

7 After the United States, Germany provided the second-largest number of troops in Afghanistan. Between 2002 and 2021, around 160,000 Bundeswehr soldiers served in the Hindu Kush. Fifty-nine of them lost their lives. Foreign deployments such as this one were met with considerable criticism in German society.



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been decreasing since 2018. Further research shows that political realism is the dominant line of thought across all socio-demographic and voter groups in Germany, both before and after the outbreak of the war.

Moreover, there is no empirical evidence of a militarisation of public thinking among Germans. Even before the war, the group of militarists represented a minority, and it has not grown since the outbreak of war. The same applies, incidentally, to the group of isolationists. The turning point in mindset on defence policy can therefore be explained primarily by the fact that the majority of citizens are realists or pragmatists. They align their attitudes towards defence policy with the requirements of the security situation rather than with ideological convictions.

MOVING AWAY FROM PSEUDO-DEBATES, RECOGNISING THE SOCIETAL CONSENSUS

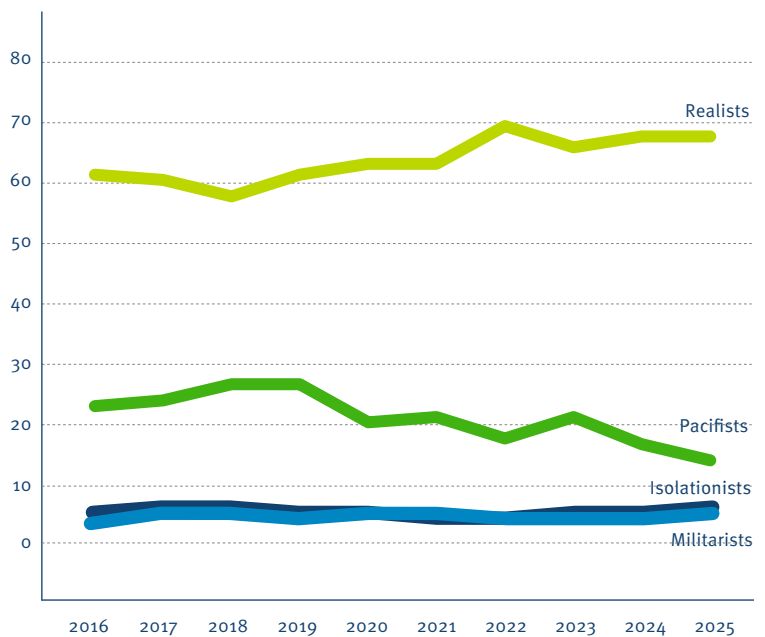
The empirical findings make it clear that the debate currently being conducted in politics and the media, at times heatedly, regarding the hoped-for or feared abandonment of pacifism is a pseudo-debate. Its basic assumptions simply do not withstand close empirical verification.

Even before the war in Ukraine, the majority of Germans were not pacifists, but realists. They support the current U-turn in defence policy because they see Russia as a threat to Germany’s security. In view of the actual military threat posed by Russia, this legitimate desire for a

strengthening of national defence capabilities should certainly not be discredited as a militarisation of public opinion.

Consequently, further calls for a profound change of mentality in society seem unnecessary. Military historian Sönke Neitzel shares

DISTRIBUTION OF SECURITY POLICY TYPES WITHIN THE GERMAN POPULATION



Figures are expressed as percentages. Data basis: ZMSBw population survey 2016 to 2025.



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this view. In his assessment, “[...] society is far more aware of what is at stake than politicians realise”.

DEFENCE AS AN ESSENTIAL PUBLIC RESPONSIBILITY

The widespread public support for this turning point in defence policy represents a clear mandate for politicians to once again regard defence as an essential public responsibility and to ensure the protection of the population against military threats. This is the consensus on which a clear majority across all population groups can agree. It is important for politicians and the media to acknowledge this broad societal consensus, as it challenges the narrative of social polarisation and fosters confidence in the solidarity of the democratic community. There may well be a few genuine warmongers and too many Putin sympathisers in Germany, but they do not represent majorities within the population, and should therefore not dominate the public and political discourse on the defence of our security and freedom, no matter how effectively they stage themselves in the media.

However, the debate also involves many actors who have either failed to update their outdated views on the world or deliberately refuse to do so. Many still believe that Germans are pacifists – despite the obvious mental shift concerning defence policy. When Germany was surrounded only by friends, it could afford such ignorance and intellectual lethargy.

Since Russia’s full-scale invasion of Ukraine, the situation has changed. Anyone who continues to believe that the majority of Germans are pacifists runs the risk of pursuing a policy of self-deterrence rather than an effective defence policy, as demanded by a clear majority of citizens. Conversely, anything other than a resolute continuation of this turning point in defence policy carries the risk of many citizens losing confidence in a state capable of taking action and a democracy capable of defending itself. ●

→ The ZMSBw population survey 2025, entitled “Deutschland in der militärischen Führungsrolle?” (“Germany in a Military Leadership Role?”), can be found online at: www.zms.bundeswehr.de

8 On 12 November 2025, the governing parliamentary coalition of the CDU/CSU and SPD agreed on a new military service model. Defence Minister Boris Pistorius explains the decision – the focus is on voluntary service and making service in the Bundeswehr more appealing.

9 Germany is developing into Europe’s largest military power and thus into a central guarantor of security on the continent. Alongside investments in armaments, the Bundeswehr is intensifying its international military exercises – as shown here as part of the Enhanced Forward Presence Battlegroup (EFP) in Pabrade, Lithuania.

Europe's difficult path to a world power

In the struggle for a new world order, the EU is often criticised for being too hesitant, too fragmented, and too weak. Unlike the US, Russia, and China, Europe is not a superpower. Nevertheless, in the long term, European nations have the potential to play an important role on the global stage.

Author: Dr Theodor Benien



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DR THEODOR BENIEN worked as Head of Communications for over 30 years in various divisions of the Airbus Group. He also served as Vice President Communications at the Eurofighter consortium. Since 2020, he has been working as an independent communications consultant specialising in international security and defence policy.

To turn this aspiration into reality, two fundamental tasks need to be accomplished. European governments should resolutely accelerate Europe's political integration process and refrain from unilateral national actions in order to finally grow together as a true union. Additionally, they must expand not only their political and economic power, but also their military strength – hence, their ability to defend themselves.

PRESSURE FROM ALL SIDES

The political pressure on Europe is enormous and comes from different directions. Firstly, President Vladimir Putin wants to restore Russia to its former glory and is therefore seeking to change the security architecture in Europe. He considers the collapse of the Soviet Union to be

the greatest political catastrophe in his country's history. Secondly, China is both a partner and a competitor. As a systemic rival, the People's Republic is pursuing an expansionist course and is attempting to extend its influence, including in Europe. Thirdly, US President Donald Trump is shaking up the existing transatlantic rules of the game. Washington is demanding that Europeans take on more responsibility and invest more in defence. The key question is whether Europe can still rely on US protection. Polish Prime Minister Donald Tusk summed up this precarious situation succinctly. It can't possibly be that 500 million Europeans are constantly asking 300 million Americans to protect them from 140 million Russians, who have been unable to defeat 40 million Ukrainians for more than four years.

“A sovereign Europe is our best response to the new era. Uniting and strengthening Europe is our most important task today.”

FEDERAL CHANCELLOR FRIEDRICH MERZ IN HIS SPEECH AT THE MUNICH SECURITY CONFERENCE 2026.



¹ In the search for a peaceful solution to the conflict in Ukraine, Europe has the opportunity to act as a political player. This photograph shows Federal Chancellor Friedrich Merz welcoming Ukrainian President Volodymyr Zelensky to Berlin.

A UNITED EUROPE AS THE KEY TO LASTING STABILITY

Europe is compelled to respond to these profound challenges. But what can be done? Here are a few suggestions. *Politically*, individual states need to work more closely together so that Europe can turn into a powerful entity. *Economically*, the continent must continue to improve the conditions that facilitate sustainable growth and international competitiveness. *Industrially*, consolidation in Europe’s defence industry, for example, should be resolutely promoted. This high-tech sector is still too fragmented and oriented towards individual countries. *Militarily*, Europe must expand the capacities and capabilities indispensable for playing a serious role on the global stage.

Therefore, the EU has decided to invest an additional €800 billion in defence. This includes EU loans (SAFE) totalling €150 billion, as well as exempting defence spending from EU debt rules. Further proposals are set out in the EU’s new “White Paper for European Defence – Readiness 2030”. The aim is to strengthen European sovereignty and strategic autonomy, and to reduce dependence on the US. This was summed up concisely by German Defence Minister Boris Pistorius at the inauguration of the new artillery ammunition plant in Unterlüß on 27 August 2025: “NATO must become more European so that it remains transatlantic.” Needless to say, NATO is and will remain Europe’s indispensable security guarantor.

ECONOMICALLY A GIANT – POLITICALLY A DWARF?

Europe’s limited scope for action was revealed in August 2025 (once again) when its leaders would have liked to attend the talks between Trump and Putin in Alaska. It was not until the subsequent Ukraine summit in Washington, DC, however, that a delegation of European heads of state and governments was given the opportunity to present their proposals to the US President. One way for Europe to increase its geopolitical influence is to work with the US to find a peaceful solution to the conflict in Ukraine. This would demonstrate Europe’s political will to become a world power.

Only through unity, strength, and resilience can Europe succeed on the world stage. This is how European leaders managed to persuade the US to abandon its plan to annex Greenland. At the World Economic Forum in Davos in January 2026, President Trump announced that he would not use military force and would refrain from imposing additional tariffs on Europe. He had apparently learned that a brutal confrontation with the surprisingly resilient Europeans would have resulted in too great a political and economic damage for the US.

At present, Europe is not yet strong enough. However, Europeans have the potential, capabilities, and strength to achieve this long-term goal, even if the path to it is very difficult. ●



Germany as a hub



If required to defend, the German armed forces do not only fight at NATO's external borders. Crucial tasks must also be carried out directly within Germany. The Operational Plan for Germany, Germany's national operational defence plan, coordinates military planning with civilian authorities and organisations.

BURGHARD LINDHORST works as a freelance journalist, specifically as chief reporter for a specialist defence publisher. During his career as a professional soldier, he served as a battalion commander and chief editor of *Bundeswehr aktuell* at the Federal Ministry of Defence. Later, he was also responsible for the *Newsletter Verteidigung* and the *Hardthöhenkurier*.

In response to Russia's open and covert hybrid warfare in Europe, Germany is fundamentally realigning its defence capabilities. Purely military measures are not sufficient for this. All civil authorities and aid organisations, such as the Federal Agency for Technical Relief and the German Red Cross, are playing their part.

THE OPERATIONAL PLAN FOR GERMANY

Experts from all branches of the Bundeswehr, who are working together with representatives of the federal, state, and local authorities, the emergency services, and the business community, have developed the military component of a national defence plan: the Operational Plan for Germany (OPLAN DEU). The Bundeswehr Operational Command in Berlin is responsible for the continuous updating of this classified document comprising more than 1,000 pages.

PLANNING PROVISIONS

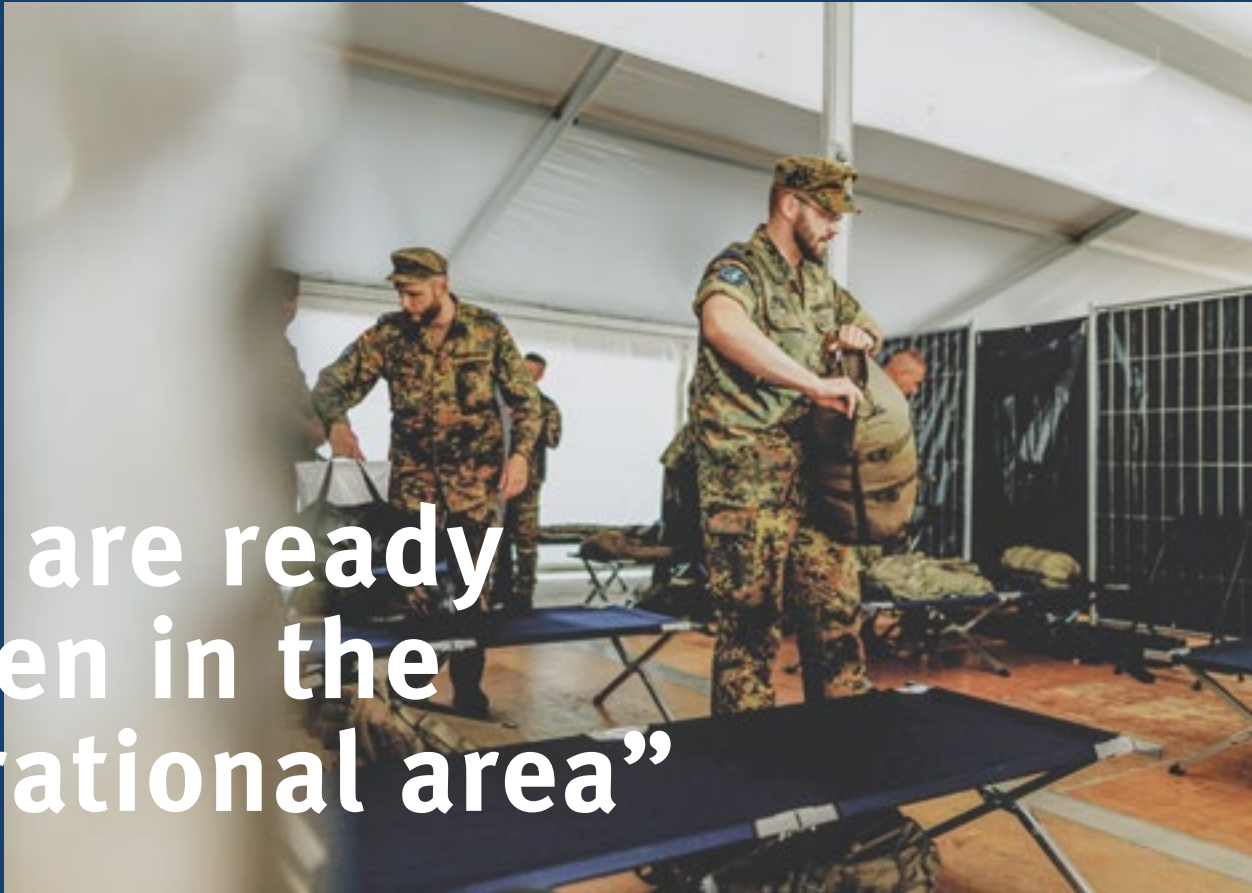
OPLAN DEU brings together the military components of national and alliance defence in Germany with the necessary civilian support services. The aim is to ensure rapid action across all departments and state borders. The focus is on the procedures, processes, and responsibilities for the coordination of all involved players with regard to two main tasks:

- the protection of Germany's territorial integrity and its citizens, as well as
- ensuring the smooth deployment and supply of Allied forces on NATO's eastern flank.

MILITARY PROTECTION

In Germany, the Bundeswehr is not only responsible for protecting military facilities such as barracks, airfields, and ports. Its tasks also include securing critical infrastructure, such as power stations and bridges. The newly

¹ Many Allied convoys will also march through the "German hub" to their areas of responsibility, as shown here with US combat and supply vehicles during an exercise.



“We are ready – even in the operational area”



Paul Walf, CEO of Rheinmetall Project Solutions GmbH, talks to DIMENSIONS about mobile field camps, the cooperation with the Bundeswehr, and his company’s role in the Operational Plan for Germany.

PAUL WALF has been in charge of the Projects and Services business unit since 2026. Prior to this, he was CEO of Rheinmetall Hungary Zrt., where he was responsible for setting up the plant in Hungary.

Mr Walf, in February of 2025, Rheinmetall Project Solutions signed a framework contract with the Bundeswehr for logistical services relating to troop deployments. With this major contract, you are the first industrial partner to take on tasks as part of the Operational Plan for Germany. What are these tasks?

As a contractual partner of the Bundeswehr, we are responsible for setting up and operating field camps in designated operational areas. Specifically, this involves providing logistical support for the deployment of forces through, within, and out of Germany. We set up holding and assembly areas – known as Convoy Support Centres (CSCs) and marshalling areas – for the Bundeswehr and for allied forces from NATO, the United Nations, the EU, and the Partnership for Peace countries. The contract covers both

training operations in peacetime and, for the first time, operations in the context of national and alliance defence.

There are many logistics service providers. What does Rheinmetall Project Solutions offer that others do not?

We see ourselves as a full-service partner for the Bundeswehr and allied forces in the areas of infrastructure, medical facilities, and explosive ordnance disposal. Our self-conception is this: whatever services the customer requires, we are ready – even in an operational area. One of our key advantages is the extensive experience we have gained from the Bundeswehr’s overseas deployments. We have set up numerous field camps, and know about the specific requirements.

What can troops on the move expect at the temporary Convoy Support Centres?

The camp is fully equipped and can accommodate up to 500 soldiers. It has 48 showers, a field kitchen offering a choice of meals, and five vehicle refuelling points. The fence-enclosed site is protected by a private security service. We also monitor the area within a 20-kilometre radius using drones.

How long does it take you to set up such a mobile barrack?

It depends on the situation. For planned training exercises by the Bundeswehr, we are given sufficient time in advance. In the event of national or alliance defence, we can set up field camps at pre-surveyed sites very quickly. Full operational capability can be reached within a few days.

How many field camps can you operate simultaneously in case of an emergency?

We can set up and operate at least ten Convoy Support Centres and three marshalling areas at the same time. Our partner companies provide the necessary equipment and personnel. Experienced teams from Rheinmetall Project Solutions handle on-site coordination and management. These employees are highly skilled in military logistics processes and can be redeployed from our daily business at short notice in the event of a national or alliance emergency.

The Bundeswehr tested the concept for the first time during the Quadriga 2025 exercise. What lessons did you learn?

We consistently receive very positive feedback from the participating soldiers. Following each exercise, we hold joint workshops with the client to identify areas for improvement ahead of the next deployment. As part of its training operations, the Bundeswehr must call off services under the framework agreement at least three times a year. Currently, coordination is handled by the Bundeswehr Operational Command. In the future, however, this responsibility will lie with the Army's Land Component Command. Overall, our cooperation with the Bundeswehr is characterised by a high degree of trust and mutual professionalism.

established Homeland Defence Division of the Bundeswehr is particularly involved in this task. The other branches of the armed forces also have specialised protection units.

GERMANY AS A HUB

Should the security situation worsen, large NATO contingents will be deployed to the Alliance's eastern flank. According to NATO plans, up to 800,000 soldiers with up to 200,000 vehicles will move into their areas of responsibility via the "Germany hub" within six months. Whether by road or rail, via sea or airports: during this transit, the soldiers must be protected and supplied. OPLAN DEU defines the requirements for the Bundeswehr as well as for other state and civilian organisations in this regard.

CIVILIAN SUPPORT

Maximising civilian support is a key element of OPLAN DEU. Various tasks must be carried out through coordinated and targeted cooperation at federal, state, and local levels. For instance, decisions need to be made regarding transport routes, relevant bridges, the location of temporary holding areas, and protective arrangements in close consultation with the police.

PREMIERE IN UPPER LUSATIA

NATO recently exercised another scenario as part of Quadriga 2025, simulating the deployment of large-scale units to the Baltic states. For the first time, the supply of troops at the Upper Lusatia military training area was not managed by a military supply system. Instead, Rheinmetall Project Solutions GmbH set up a Convoy Support Centre under its own management. This was a successful debut: the Rheinmetall subsidiary provided comprehensive operational support from a single source. Outsourcing supply logistics takes some pressure off the Bundeswehr and frees up resources for its core military tasks. ●

Renaissance of the reserve

Espionage, drone flyovers, and fake news: Russia's hybrid war against the West is intensifying. In the event of a NATO collective defence clause, the Bundeswehr must protect critical infrastructure and secure the routes of the "German hub" – a task primarily for the reserve component of the home defence and security forces.

Author: *Jan-Phillipp Weisswange*



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Consisting mainly of reserve component soldiers, the home defence and security forces protect what is essential in the event of defence: ports, airports, bridges, railway lines, energy infrastructure, and digital networks. Their second core task involves what is known as host nation support: they ensure the freedom of movement of German and allied forces, including the evacuation of wounded personnel and prisoners of war as well as damaged combat vehicles and other defective equipment. Drone defence and disaster relief complete their mission spectrum.

BACK TO THE STRATEGIC RESERVE

In terms of its reserve forces, the Bundeswehr is thus returning to its former role. During the Cold War, alongside its reserve forces within the field army, it operated a territorial army consisting largely of reserve soldiers to protect rear areas. With the fall of the Berlin Wall and

the subsequent collapse of the Soviet Union, national and alliance defence gradually lost their significance. Transformed into an "army of deployed operations", the Bundeswehr required relatively few reserve personnel, who primarily filled vacancies in the active forces caused by deployments abroad. The old units of home defence and security within the army had outlived their purpose. From 2012 onwards, Regional Security and Support Forces were re-established within the Joint Support and Enabling Service, albeit with significantly fewer personnel. They complemented the Territorial Reserve, which consisted of liaison detachments to state governments and district and local authorities and primarily provided advice on civil protection. Russia's attack on Ukraine in February 2022 marked the turning point: since then, national and alliance defence have once again been the Bundeswehr's focus, and with it the ability to grow and sustain forces as the reserve's true strategic role.



1 Protecting critical infrastructure may require combat actions in an urban environment. Here, during the company exercise “Bollwerk Bärlein” in November 2025, this was not practised by the home defence forces, but by the Federal Ministry of Defence Guard Battalion.

2 The new force’s distinctive feature: the stone-grey/olive-coloured beret with the badge of the Home Defence Division.

Emerging from the regional security and support forces, the home defence regiments were formed under the Joint Support and Enabling Service Headquarters, which has been disbanded in the meantime. Today, these regiments are once again under the command of the army. The Home Defence Division, established in April 2025, operates exclusively on German territory. Alongside long-serving reserve soldiers, it is currently also the home for many conscripts, who volunteer for between seven and 23 months of military service. The training companies of the home defence regiments provide basic military training over a six-month period for them. The guiding principle is that recruits must master everything they need to survive on the battlefield and in home defence. After completing their military service, they remain assigned to home defence as reserve duty personnel, contributing to the renaissance of the reserve. ●

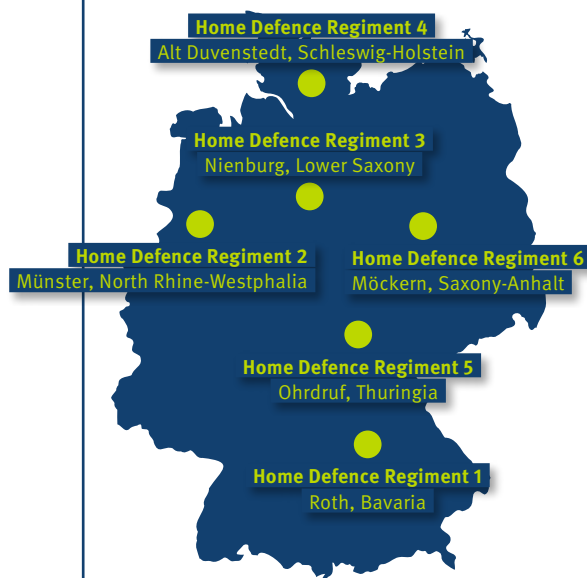


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HOME DEFENCE AND TERRITORIAL RESERVE

The Bundeswehr’s home defence forces and Territorial Reserve form a key pillar of Germany’s comprehensive security readiness. The Territorial Reserve brings together the home defence forces grouped within the German Army, as well as the liaison organisation for civil–military cooperation (CIMIC), which is subordinate to the Bundeswehr Joint Force Command.

Stationed in Berlin, the Home Defence Division currently consists of six home defence regiments with a total of **60 companies** at **42 locations**:



The territorial CIMIC network is structured into **16 regional territorial commands**, **34 region liaison detachments** (BVK) at an administrative regional level, and **414 district liaison detachments** (KVK) in the counties and independent cities of all federal states.

“We procure freedom”

Security of supply as a foundation: in an ever-changing world, Rheinmetall’s purchasing department and its team are mastering the “turning point”. In an interview, Chief Purchasing Officer Marcus Gerlach explains how the Group manages global supply chains, minimises risks, and ensures production stability despite the enormous demand for defence equipment.

Mr Gerlach, you are probably the largest purchaser of armour steel in Germany. Your background is in Rheinmetall’s automotive division, and now you have to master the turning point. How does that feel?

This is a major challenge that we must all face. I am tackling it with great enthusiasm. Since the change of government in Washington in early 2025, and certainly since Vice President Vance’s speech in Munich shortly after, the dynamic has been completely different, with a new sense of urgency. Everything has to move even faster, including the supply chains. Incidentally, we will be purchasing over 100,000 tonnes of steel this year, around 15 per cent of which will be armour steel.

So, it’s about more than just making a bargain ...

Purchasing is a central strategic function within the Group. The primary focus is not on reducing costs, but rather on increasing volume and scaling up, while ensuring security above all else. We must be resilient and ready to deliver at all times. This is how we strengthen the security of Germany, Europe, and NATO.

A great challenge ...

Yes, definitely. What we have to implement now is coming up against a supply chain that had no significant capacity for a long time during the “peace dividend” era. Everyone was in a deep sleep, and now the demand

is: “Fast – and much more!” We now have to go for a sprint without much of a warm-up, but running the distance of a marathon.

The Group’s strong growth is certainly helpful in this regard ...

Indeed. Given the weak volumes of the past, it simply wasn’t economically viable to bring in a second or third supplier. The sole supplier knew they were set for life and naturally acted accordingly when setting prices. Things are different today. However, our existing suppliers remain important to us, and they benefit from our cooperation: our growth is so strong that they grow with us. And not on their own anymore.

A portrait of Marcus Gerlach, a man with short brown hair and glasses, wearing a dark suit jacket over a white shirt. He is gesturing with his right hand, palm facing forward, as if speaking. The background is a blurred office setting with a window.

“We must be resilient and ready to deliver at all times. This is how we strengthen the security of Germany, Europe and of NATO.”

MARCUS GERLACH, born in 1971, offers a comprehensive overview of Rheinmetall: 27 years with the Group, 12 positions, 5 functional areas, across 3 continents. Since 1 January 2023, Rheinmetall AG’s Group-wide procurement activities have been consolidated within the Rheinmetall Group Purchasing unit under the direction of his team. As Chief Purchasing Officer (CPO), he reports directly to René Gansauge, Chief Operations Officer of Rheinmetall AG.

What is the volume for which the central purchasing department is responsible?

We see ourselves as a collective purchaser, as our focus is on cooperation across all divisions. With a consolidated turnover of just under €10 billion, we purchased production materials worth €4.4 billion in 2025, which amounts to around 45 per cent of the turnover. A further €1.5 billion was spent on investments, such as the construction of new plants and machinery. In total, our purchase volume therefore amounts to around 60 per cent of the turnover.

That’s impressive. How big are the savings which you and your team achieve?

It is actually quite a lot. Depending on the project, we sometimes achieve significant cost savings. This is thanks to our 1,030 colleagues working in Group Purchasing across the entire Group, 980 of whom are in operational roles. The remaining 50 colleagues coordinate our activities, ensuring that we are a unified front: one face to the supplier.

Could you give us an example of your team’s work? What is important here?

First and foremost, we need matrix capabilities: everyone must be willing to work together. This is especially true for the product groups, which we have organised into so-called commodity teams. Take the purchase of screws,

for example: the commodity manager has overall responsibility for this area. At each site, they work closely with colleagues who purchase screws locally. They regularly exchange information and develop commodity strategies together. Ultimately, we compile a bidders list, which evaluates the performance of suppliers.

You need to know what the requirements are at each site. Does the Group have enough standardised data for the purchasing department to work efficiently?

We’re making progress, but there’s still much to do. We have now largely standardised the supplier master data across all companies. It’s similar with material master data, where we use

the so-called UNSPSC codes. This is a United Nations product classification system that gives us a clear overview.

Rheinmetall is one of the fastest-growing companies in Germany. This makes it an attractive choice for potential suppliers. Are suppliers queuing up to do business with you?

Yes, we do receive applications in the four-digit range every year. But not every supplier that has previously produced large volumes for a car manufacturer can operate profitably with our comparatively low quantities. We welcome any supplier who can help us expand our network. However, the quickest way to increase volumes, as is now expected of us, is to work with existing suppliers. They are already established and approved by the customer. New suppliers are only brought in as a second step.

In the past, supplying the defence industry was considered a stain on

a company’s reputation. Is this now changing?

Absolutely. Many well-known companies, ranging from mid-sized businesses to large-scale industries, are now actively seeking to establish business ties with Rheinmetall. We have become a highly attractive partner, and many wish to be part of our success. The importance of national security, and consequently of rearmament, is also having an impact.

Are there any indicators or criteria that make a supplier particularly attractive to Rheinmetall?

Secure supply chains are essential to us. If they are also local, all the better. We can then operate in a more environmentally sustainable way and minimise risks within the process. Naturally, we expect our suppliers to accept our Supplier Code of Conduct, in which we clearly set out our expectations regarding good corporate governance.

Meeting ESG criteria – that is, environmental, social, and governance criteria – is surely another decisive factor?

Certainly. Acting in accordance with ESG or CSR principles is, of course, part of our corporate strategy at Rheinmetall. We use rating systems such as EcoVadis and rating agencies to evaluate our suppliers in this regard. We also emphasise the importance of building personal relationships with our suppliers, so that we can continuously assess their transparency.

You’ve spent three years at the top of Group Purchasing. What stands out most in your memory?

The biggest highlight for me was the successful construction of the artillery plant in Unterlüß. We supported this project throughout the purchasing process from the very beginning. When CEO Armin Papperger said at the ground-breaking ceremony on



“Where there are global dependencies on raw materials such as rare earths, we focus either on the targeted redesign of our products or on developing new supply chains.”



12 February 2024, “The plant will be ready in 15 months”, I was sceptical, to put it mildly. But we did it – a wonderful experience! Everyone was committed to the common goal. The purchasing team focused on adhering to schedules while securing the best possible deals.

What part does Group Purchasing currently play in ensuring the supply of rare earths and other critical raw materials?

We have taken precautions. We have significantly increased our stocks, so we won't face any issues in the short term. However, there are still certain dependencies at the lower levels of the supply chain – the so-called Tier N levels – concerning countries such as China. However, we are working on reducing these dependencies. To this end, we are using risk management tools and examining the supply chains to receive the greatest possible transparency. This allows us to identify where difficulties exist at each level. Our development division is also making valuable contributions, such as approving alternative materials.

Let's continue with China: how do you reduce strategic dependencies?

We achieve this through consistent diversification and technological innovation. Our figures show that

we are on the right track. Of a total purchase volume of €4.4 billion for production materials, we sourced 88 per cent – almost €4 billion – entirely “China-free” in 2025. Where there are global dependencies on raw materials such as rare earths, we focus either on the targeted redesign of our products or on developing new supply chains.

What happens to all the scrap that inevitably accumulates?

Of course, we mustn't overlook the circular economy at the end of the process, like recycling and the scrap management process. We should consider our scrap as strategic raw materials and keep it within Europe. We need to use scrap and recycling routes remaining within our borders as a strategic competitive advantage.

How do you assess European efforts to achieve self-sufficiency in raw materials?

They are right, but far too slow and hesitant. Germany needs a raw materials strategy that aligns with the European Critical Raw Materials Act. Rapid action is of the essence here, too.

The company is set for massive growth and aims to almost quadruple its turnover by 2030. What does that mean for you?

Our supply chains must grow alongside the Group. Division of labour, the ability to collaborate, and scalability are crucial in this regard. Digital tools will help us achieve all of this as we move forward. It will be essential that we design our products to be fully scalable, producing more of the same to reduce the number of variants and thus enable growth.

Rheinmetall is discontinuing its former automotive division. Will this free up capacity within the purchasing organisation?

I had the privilege of working in the Automotive division for many years. It was structured to be self-sufficient and organised, with a high degree of autonomy. Therefore, the separation will have little impact on our work in Group Purchasing. However, within the Group, we will continue to benefit from the focus on process efficiency that has always characterised the Automotive division. The division has set the standard, particularly regarding supplier quality development in the early stages of projects.

What inspires and motivates you every day to advance purchasing at Rheinmetall?

For me, working at Rheinmetall means pursuing a mission of profound meaning. Our guiding principle is: “We procure freedom”. We therefore take on the responsibility of establishing the foundations of peace and freedom by ensuring secure supply chains. Every decision we make contributes to this – and that is what drives my team and me. It certainly fulfils us.

Mr Gerlach, thank you very much for this insightful conversation! ●

The interview was conducted by Maja Schmidtke and Oliver Hoffmann.

Cold War 2.0

Sabotage, disinformation, and destabilisation – Russia’s hybrid war against the West is escalating. A stress test for Europe’s democracies.

Author: *Dr Gerd Portugall*

HYBRID WARFARE

The term dates back to 2005. At that time, Lieutenant General James N. Mattis and Reserve Lieutenant Colonel Frank G. Hoffman published their article “Future Warfare: The Rise of Hybrid Wars” in the US Naval Institute’s journal *Proceedings*. Both authors served in the US Marine Corps, with Mattis later becoming Secretary of Defence.

Since 2014, Russia’s authoritarian, revisionist government has been waging a war of annihilation against Ukraine. Moscow denies the country any right to sovereign independence. At the same time, the Kremlin has been waging a hybrid war against the West, particularly against Germany. Already during the Cold War, the Federal Republic was the primary target of Soviet attempts at destabilization carried out by the Soviet Committee for State Security (KGB), in which Vladimir Putin served as an officer. Today, reunified Germany, being centrally located in the heart of Europe, is once again of strategic importance to the ruler in the Kremlin.

Lieutenant General Alexander Sollfrank, Commander of the Bundeswehr Operational Command, views Russia’s disruptive activities as an increasing security threat. “We are no longer at peace,” he informed the German Press Agency in January. His superior, Germany’s Defence Minister Boris Pistorius, was even more explicit at the end of 2023: “Putin is launching a hybrid attack. (...) We must prepare ourselves so that we can confidently counter Putin’s threat.”

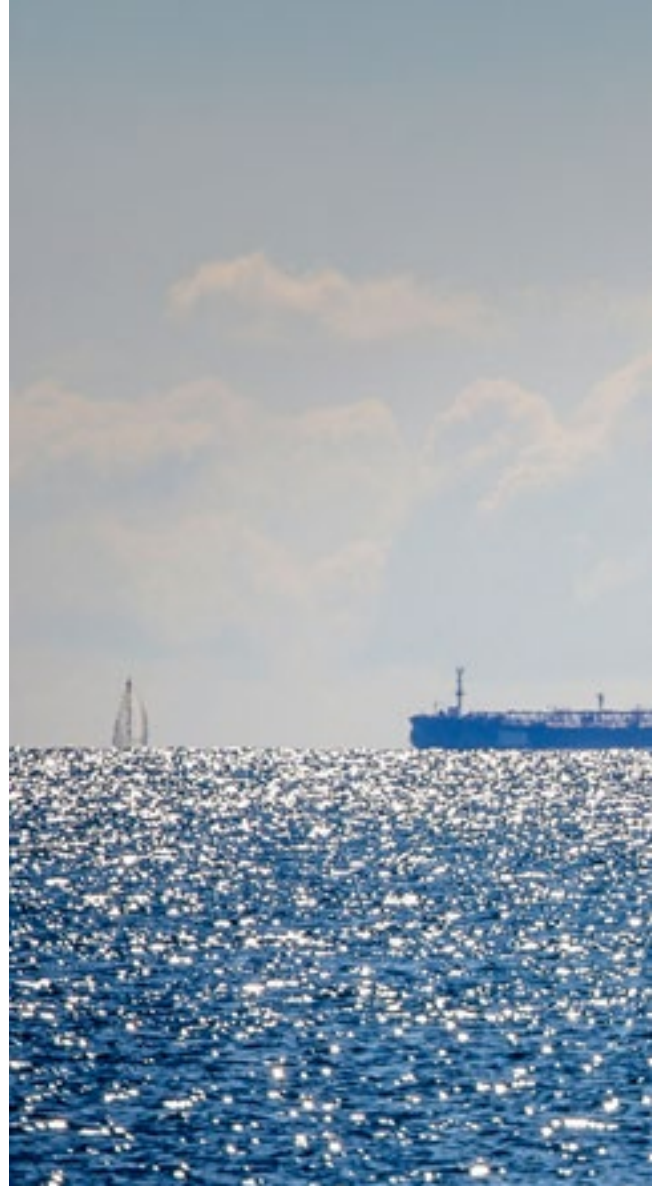
Hybrid warfare operates below the threshold of open combat operations, or “short of war” as it is termed in international law of armed conflict.

Its arsenal is manifold: threats of conventional or nuclear war exert political pressure. Propaganda, disinformation, and psychological warfare undermine public opinion. Steering migration fuels domestic political tensions. State terrorism, espionage, sabotage, and cyberattacks target critical infrastructure and systemically important industries.

GERMANY AS A TARGET

On 14 October 2024, the heads of the German intelligence services warned of the growing hybrid threat by Russia during a hearing at the Bundestag’s Parliamentary Control Panel. The former president of the Federal Intelligence Service (BND), Bruno Kahl, emphasised that the Kremlin viewed Germany as an adversary, partly because of its support for Ukraine. Moscow’s strategy is directed against the West and aims at establishing a new world order.

In this context, Martina Rosenberg, President of the Federal Office for the Military Counterintelligence Service (MAD), spoke of worrying attempts at espionage against the Bundeswehr.



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1 There have been repeated incidents involving damaged deep-sea cables in the Baltic Sea. The authorities suspect that Russia's so-called shadow fleet is responsible for the sabotage. By sailing often outdated oil tankers under false flags, Moscow is circumventing Western energy sanctions and financing its war efforts. Monitoring illegal vessels in order to protect coastal states has become a key task for the Federal Police, the German Navy, and their NATO allies. Unmanned vessels, such as those developed by Rheinmetall's Naval Systems division, will play an increasingly important role in reconnaissance operations in maritime areas in the future.

DR GERD PORTUGALL has been working as a social scientist and specialist journalist in the fields of security policy and the military for more than 35 years. Since 2022, he has been writing as a freelance editor for a specialist military publishing house.

Thomas Haldenwang, who was then President of the Federal Office for the Protection of the Constitution (responsible for domestic affairs), drew attention to an “operational influence” by Russian intelligence services to spread disinformation and propaganda in Germany.

INTERNAL DESTABILISATION

One objective of hybrid threats is to influence public opinion within a country in favour of the foreign actor. The BND points out that this can involve supporting political parties or radical groups. During the Cold War, such forces were referred to by Western security agencies as “Moscow’s fifth column”. Today, Russia is focusing on both right-wing and left-wing populist parties in Germany.

The right-wing populist party Alternative for Germany (AfD), the largest opposition group in the federal parliament, called for the immediate lifting of economic sanctions against Russia and the repair of the Nord Stream pipelines in its manifesto for the federal election. During the election campaign, the left-wing populist alli-

ance led by Sahra Wagenknecht (BSW) warned of a “possible war with Russia” that would “inevitably escalate into a nuclear conflict”. Both parties are therefore perpetuating Russian narratives.

“SHAPING THE BATTLEFIELD”

The German security authorities have clearly identified the threat. Russia is systematically testing the boundaries, without openly confronting anyone, but with increasing intensity. Moscow is shaping the strategic environment according to its own interests, using methods such as sabotage, disinformation, and political influence. Hybrid warfare is a major challenge for the defences of European democracies. Germany and its European NATO allies must respond decisively by better protecting their critical infrastructure, strengthening their cyber defences, and building social resilience. ●

Task force for more information security

Businesses are facing an increasing number of cyberattacks that are becoming more sophisticated and damaging. This issue is a top priority at Rheinmetall, and the Group's Security Operations Centre is equipped accordingly.

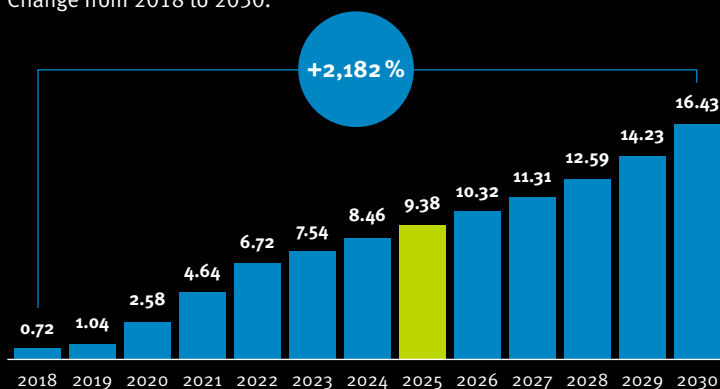
At 2:30 a.m., Wolfgang Reichmann's phone rings. Rheinmetall's Chief Information Security Officer knows immediately that this is not good news. An hour later, the situation is clear: the company is under attack by ransomware, which is encrypting vital data. At 3:45 a.m., Reichmann makes a drastic decision after consulting closely with the security team and IT management: "Shut down the systems and take them offline." It was only through the level-headed, swift, and decisive action of everyone involved that the Group was able to avert greater damage. When Wolfgang Reichmann talks about his responsibilities, it becomes clear that cyberwarfare has been a reality for many years. Since 2020,



1 Operating around the clock: Rheinmetall's Security Operations Centre monitors all of the Group's IT activities worldwide and can respond to threats in under five minutes.

CYBERCRIME IS DRIVING UP COSTS

Estimated global cost of cybercrime (in billions of euros).
Change from 2018 to 2030.



Source: Cybersecurity in Figures 2025/26 | Statista Market Insights (as of June 2025)

he has been the Chief Information Security Officer (CISO) at Rheinmetall IT, responsible for the security of the Group's data, networks, and applications. These days, companies and public authorities are increasingly exposed to malware attacks. Cybercriminals aim at stealing sensitive data, manipulating systems, or – a practice that has become particularly widespread – extorting millions in ransom. Previously, an external service provider managed Rheinmetall's IT operations. Considering the current threat level, taking back responsibility in-house has proven to be the right decision.

WIDE-RANGING SCOPE OF ACTIVITY

In recent years, Rheinmetall has invested heavily

2 Wolfgang Reichmann is pictured here in conversation with his colleagues. His department is in the top 0.5 per cent worldwide for cyber security, with external certification and annual audits.

in security technology and skilled personnel. Today, the security team comprises nearly 80 people working worldwide. Most of these employees work in the Security Operations Centre based in Germany. The setting is reminiscent of the command centre from a James Bond movie: the room is dimly lit, with a world map displaying all Rheinmetall sites projected onto a large video wall. In front of it, IT specialists sit in front of their monitors, observing every detail on the network so they can initiate defensive measures immediately.

The number and scale of cyberattacks have risen dramatically, particularly since the start of the war in Ukraine. These attacks are no longer just the work of hacker groups, but also of state actors who have ample funding and other resources.

THE NATURE OF THE ATTACKS IS CHANGING

The modus operandi has also changed in recent years. “We are observing a clear shift towards so-called third-party attacks,” explains Wolfgang Reichmann. In such attacks, it is not the company itself that is targeted, but rather individual employees or service providers. “They

often don’t even realise that they’re acting as a gateway,” says the CISO. Attackers use fake social media accounts, manipulated websites, or fake PDF documents containing malware. This code is specifically tailored to the company in question.

“Traditional threats, such as viruses and phishing, are becoming less significant,” says Reichmann. “Today’s cyberattacks are more sophisticated and increasingly target the human factor. This is why it is crucial to respond quickly, consistently, and appropriately in an emergency, as well as taking the right preventive measures. This can be achieved by using modern technologies and targeted training and awareness initiatives for all employees.” The Group’s IT security therefore also lies in the hands of the workforce, emphasises the CISO. “Those who act attentively and cautiously can significantly minimise the risk of external attacks.”

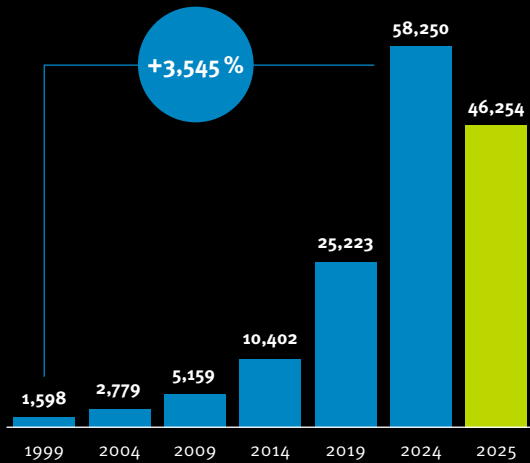
ALWAYS ONE STEP AHEAD

Cyber defence also means staying one step ahead at all times. For the security team, this involves analysing a vast amount of data. “Here, we collect what are known as ‘events’ – around



IT VULNERABILITIES HAVE RISEN BY OVER 3,500 %

Number of IT security vulnerabilities in businesses documented worldwide.



Source: Cybersecurity in Figures 2025/26 | Common Vulnerabilities and Exposures (as of 23 April 2025)

50 to 60 million a day,” explains Reichmann. But what does that mean? “Employee XY successfully logged into her computer at 07:26 with the correct password – that’s an event.” Some of these processes reveal anomalies. Most can be dealt with as part of routine procedures. But every now and then, the alarm bells ring louder. “That’s when our specialists step in, dissecting bits and bytes to investigate the anomaly,” reports Reichmann. “They could just as well be working as hackers.” The Cyber Defence Team often knows who is on the other side. Reichmann explains, “There are a number of targeted groups that focus on attacking companies in the defence sector.”

“We have an exceptionally good team,” emphasises the CSIO. “We have young talents who have just finished their training, older staff with plenty of experience, people from other sectors, and the typical ‘nerds’. We also have a high proportion of women. In my experience, the more diverse the team, the better.” Everyone has the same right to express their opinions, thoughts, or even criticism. “There’s no hierarchical mindset,” says Reichmann. “If my door is open, anyone can pop in. Any time. Whether they’re a department head or an intern.”

“NOTHING IS EASIER TO ATTACK THAN AI”

Could artificial intelligence help to protect companies such as Rheinmetall from cyberattacks? Security experts are divided on this issue. “Many



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people think AI is the solution to a wide range of problems. This is partly true, as AI-based functionalities will help us analyse potential security incidents in the future.” At the same time, however, Reichmann warns: “The risk of attacks on AI systems cannot yet be fully assessed. From a cybersecurity perspective, this is currently a moving target – almost nothing is easier to attack than AI.”

The challenges for Wolfgang Reichmann and the entire security team will not decrease in the coming years. On the contrary, their workload is growing, particularly when it comes to protecting the company online. “Yes, there are many threats coming from all sorts of directions,” Reichmann notes. “But we have them under control.” ●

3 Wolfgang Reichmann, born in 1965, has been responsible for data and system security worldwide as Chief Information Security Officer at Rheinmetall IT since 2020. Prior to joining the Düsseldorf-based technology group, the electrical engineer specialising in communications technology at Atos headed up global cybersecurity at Siemens.



From underdog to investment star

For a long time, the turning point in security policy drove defence stocks from one record high to the next. Euphoria has been followed by consolidation. Now defence companies have to profitably meet their ambitious growth targets. At Rheinmetall, the practical test is in full swing.

Author: Richard Schramm

The political decisions made by Western European countries, particularly by Germany, regarding their military capabilities after the collapse of the Soviet Union and the Warsaw Pact have proved to be seriously wrong. This was painfully demonstrated by Russia's attack on Ukraine on 24 February 2022 – the consequence being a radical U-turn in Western defence policy.

As usual, investors reacted quickly to this paradigm shift. While the defence industry had previously led a shadowy existence on the stock market due to its poor growth prospects, it soon became one of the most popular investment options. The industry is now also viewed more favourably in terms of sustainability and ESG (environmental, social, and governance). This has triggered a global run on defence industry shares, pushing their prices and valuations to unprecedented heights.



CORRECTION AFTER SOARING HIGH

But even in the stock market, constant growth has its limits. At some point, even the most optimistic expectations are priced in. It seems that this point has now been reached. Almost all shares in the sector have lost value since their peak – in some cases quite significantly.

There is no doubt that the defence industry's high growth expectations are well-founded. Europe's NATO member states have significant operational capability gaps. At the same time, there is a broad political consensus on the need to substantially increase defence spending. NATO has almost doubled its target for member states, setting it at 3.5 per cent of gross domestic product by 2035. In addition, a further 1.5 per cent is allocated for relevant infrastructure. The German federal government intends to reach the 3.5 per cent target by 2029 – a goal that appears realistic, given the €500 billion special

RICHARD SCHRAMM worked as an equity stock analyst for industrial stocks (including Rheinmetall) in the investment research department of a major international bank for over three decades.

fund that has been agreed. Numerous countries outside of Europe are also planning increases. The potential demand for the industry has multiplied.

NOW IT'S TIME TO DELIVER

Given the critical security situation, politicians and military leaders are currently demanding everything from their defence technology suppliers at once, and immediately. The pressure on defence companies in terms of order volumes and delivery deadlines is enormous and will not change in the coming years. The significant increase in order volumes confirms this: for example, Rheinmetall expects to have an order backlog of approximately €135 billion by the end of 2026, representing ten times its projected annual turnover.

The top priority is therefore to increase capacity by adding production lines, improving efficiency and introducing more automation. Accordingly, companies are pushing ahead with a whole series of investment projects at their domestic and foreign sites. Rheinmetall is particularly active in this area, not least through joint ventures, investments, and acquisitions. These open up new markets for the corporation, such as for navies and satellites, as well as providing important expertise in digitalization.

FOCUS ON PROFITABILITY

In the coming years, it will be equally important to ensure that growth in volume is profitable. Investors will pay particular attention to this aspect. They expect revenue growth to correlate with higher profitability. Realising economies of scale and preventing margin pressure, even if only temporarily, through large investments or acquisitions is therefore the second major challenge for defence companies. This is the only way they can justify their current high valuations and open up opportunities for further price gains. With its ambitious yet well-founded growth targets, Rheinmetall is addressing these challenges. By 2030, the Düsseldorf-based corporation aims to increase its revenue fivefold to around €50 billion compared to 2024, with an EBIT margin of over 20 per cent. ●

 RHEINMETALL

Realising the turning point



Ground-breaking ceremony in February 2024, inauguration in August 2025: after just 15 months of construction, Rheinmetall began operations at what is currently Europe's largest and most modern munitions plant in Unterlüß. This marks a turning point in more ways than one.

Author: *Jan-Phillipp Weisswange*

Mass production instead of small-scale manufacturing, months instead of years – Europe and NATO need ammunition, and they need it fast. With the support of the relevant authorities, Rheinmetall built the new Lower Saxony Plant at its long-established site in Unterlüß in the Lüneburg Heath in record time. “By working at a new Rheinmetall pace, we have created the capability to independently meet the Bundeswehr’s future requirements through domestic production and to guarantee independent deliveries to partner nations, when necessary,” emphasised Rheinmetall CEO Armin Papperger. “This is a real turning point.”

The international guest list was further evidence of how times have changed. Numerous representatives from politics and the military travelled to the plant opening in Unterlüß: Vice Chancellor and Federal Minister of Finance Lars Klingbeil, Federal Minister of Defence Boris Pistorius, NATO Secretary General Mark Rutte, General Carsten Breuer, Inspector General of the Bundeswehr, as well as Olaf Lies, Minister-President of Lower Saxony and, as Bulgaria’s highest-ranking guest, President Rumen Radev.

“Here we are investing in our security,” Lars Klingbeil emphasised in his speech at the opening ceremony. “This plant shows that we are taking action.” Federal Minister of Defence Boris Pistorius addressed Rheinmetall and the defence industry as a whole: “You, the industry, deliver what is important: speed and substance.”

1 At the opening of the Lower Saxony plant, Rheinmetall CEO Armin Papperger welcomed Defence Minister Boris Pistorius, NATO Secretary General Mark Rutte, and Vice Chancellor Lars Klingbeil, as well as many other high-ranking guests and numerous media representatives, to Unterlüß.



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2 NATO Secretary General Mark Rutte, Vice Chancellor and Finance Minister Lars Klingbeil, Defence Minister Boris Pistorius, and Rheinmetall CEO Armin Papperger (from left to right) cut the ribbon at the ceremonial opening.

3 Armin Papperger and his guests watch on screen as robots fill the projectiles with explosives in sheltered rooms.



NATO Secretary General Mark Rutte emphasised in his speech: “Being strong and successful is exactly what Rheinmetall is.”

Rheinmetall also stands ready as a partner internationally. “Rheinmetall is not limiting itself to Germany when it comes to building such plants,” Armin Papperger pointed out. “This means that we can also erect comparable plants in other NATO countries within a very short time, thus creating a pan-European defence ecosystem.”

The urgency of the defence alliance’s need for ammunition was underscored even before the actual ceremony began. Just before the inauguration ceremony, NATO member Romania awarded Rheinmetall a major order for an ammunition production facility. Radu-Dinel Miruță, Romania’s Minister of Economy, and Armin Papperger signed a corresponding letter of intent on site. Together with partners, the Düsseldorf-based Group is planning to invest around €550 million in the new plant in Romania. Specific projects have also already been launched in Lithuania and the United Kingdom. More are to follow. ●

4 At present, the projectiles are still being sealed by hand.

5 Federal Minister of Defence Boris Pistorius: “We want you to be successful, because your success means security for our country.”

6 In the forge, robots load the projectiles onto pallets.

7 The finished, painted, and printed shell bodies are forwarded for packaging.

8 The projectile heads are formed in the forge using inductive heat treatment and pressing.



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ONE OF THE LARGEST AMMUNITION MANUFACTURERS IN THE WESTERN WORLD

The Lower Saxony plant is one of the largest and most advanced ammunition production facilities in Europe. Rheinmetall has invested around €300 million in the factory. Supported by state-of-the-art machinery and robotics, around 350 employees are set to produce up to 350,000 artillery projectiles per year on a site covering around 30,000 square metres. Production has commenced in stages. Additionally, engine production for artillery rockets is scheduled to begin in 2027.

The supply of ammunition is essential for restoring the defence capabilities of Germany and its European allies. As a leading manufacturer, Rheinmetall is taking responsibility in this area and making large-scale investments. Most recently, in the summer of 2023, the Group spent around €1.2 billion on the acquisition of the Spanish manufacturer Expal Systems. Within its production network, which also includes sites in Spain and South Africa, Rheinmetall aims to produce a total of around 1.1 million artillery rounds per year from 2027 onwards. This makes Rheinmetall one of the largest ammunition manufacturers in the Western world.

Europe's new powder chamber

Rheinmetall's Firepower project is a response to the urgent demand for ammunition in Germany and across Europe. The technology group is investing heavily in expanding its sites, including its powder production facilities. This marks the beginning of an unprecedented transformation for Rheinmetall's subsidiary Nitrochemie.



Only a few months have passed since Rheinmetall subsidiary Nitrochemie in Aschau am Inn completed its latest major expansion. Located in the Bavarian Alpine foothills, the company primarily produces propellant powder. Between 2023 and now, the workforce has grown by 20 per cent to over 700 employees. Work is carried out in shifts around the clock. The plant now produces 1,700 tonnes of powder and around 200,000 propellant modules per year. “The capacity expansion has been a resounding success,” says Pascal Schreyer, Nitrochemie’s CEO. Besides its location in Aschau, the company is also present in Wimmis, Switzerland. “This gives us a real boost. It will help us to tackle the challenges ahead of us.”

For there is much more happening at Nitrochemie. Over the next 24 months, production of powder and propellant charge modules is set to more than double. “Our goal is to produce an additional 2,500 tonnes of powder and 550,000 modules in Aschau,” says Oliver Becker, Aschau’s Senior Vice President of Operations. In addition, Rheinmetall’s sites in Wimmis, and in Burgos, Spain, are involved in the Firepower project. To achieve these ambitious goals, the company plans to recruit around 500 new employees in Aschau and around 50 in Wimmis.

AMMUNITION INITIATIVE

Day by day, it is becoming increasingly clear just how significant the defence backlog is in Germany and the EU. Countries must be robust enough to withstand the upheavals and challenges that influence global events. With Project Firepower, Rheinmetall is responding to the urgent need for ammunition. A key component is the propellant charge, often referred to as gunpowder. Upon ignition, it propels the projectile out of the gun barrel at high speed, giving the projectile the energy it needs to reach its target. “Unlike explosives, there is no explosion when the propellant charge is fired,” explains Becker, “but rather a sudden, controlled combustion of the powder in the barrel.” The projectile itself can ultimately take effect at the target through its kinetic energy. He continues: “Based on the type, this may also be aided by an explosive charge.”

Demand for ammunition within NATO, the EU, and the Bundeswehr is enormous – and it’s not just about Ukraine anymore. Rheinmetall is investing heavily in its production facilities by building new ammunition plants, such as the one in Unterlüß, and expanding existing sites, such as Nitrochemie. The Düsseldorf-based

1 Propellant powder: The granule press moulds the powder into strands, which are then cut into cylindrical pellets.

2 Hamburg, September 2025: Prime Minister Evika Siliņa and Rheinmetall CEO Armin Papperger finalise plans to build an ammunition factory in Latvia. Expanding production capacity in the Baltic States and other European countries requires a secure supply of raw materials such as propellant powder.

technology group supplies the “full shot” from a single source, covering everything from the projectile and fuse to the primer, propellant charge, and payload. “None of these components shall be a bottleneck,” says Schreyer. “This is particularly important when it comes to propellant, as there are only a few manufacturers worldwide. Our self-sufficiency is therefore crucial.”

NEW PROCESSES, INCREASED OUTPUT

Capacity expansions are almost always accompanied by far-reaching changes in production processes. For instance, Wimmis has primarily supplied nitrocellulose pulp to Aschau, where it is manually processed into powder in several stages of production. “In future, we will receive pre-processed granules from Wimmis,” says Becker, explaining the changes. “Instead of rolling the raw material as we have done until now, we will soon be producing it using the granulate pressing process, thereby significantly increasing output once again.” Dozens of further process changes and a significantly higher degree of automation are being implemented.

At the same time, the Burgos site needs to be integrated into the project workflow. Highly complex processes must be modified and re-coordinated as quickly as possible. “We now have extensive capabilities and expertise in project management and plant installation,” says Schreyer. “We are confident we can do this.” The initial test results for products manufactured using the new process route provide additional reasons for optimism. “We have tested a small production batch on a ballistic system belonging to the Bundeswehr in Unterlüß,” says Schreyer. “The results are very good.”

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450 MILLION FOR INCREASED FIREPOWER

The scale of the investment underlines the importance of the Firepower project for Nitrochemie. “We are investing around €250 million in Aschau, around €100 million in Switzerland, and roughly €100 million in Spain,” says Schreyer. In this way, the subsidiary is helping the parent company to achieve its ambitious goal of producing 20,000 tonnes of propellant powder annually by 2030. This will be used to manufacture propellants for around 1.1 million rounds of artillery ammunition, 150,000 rounds of tank ammunition, and 3.2 million rounds of medium-calibre ammunition, amongst other things.

A tour of the Aschau site reveals the scale of the changes taking place there. The capacity expansion requires space, which Nitrochemie is creating by purchasing land in the immediate vicinity and through land clearance. The company fully offsets the latter through reforestation



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elsewhere. “All these measures are being carried out in strict compliance with construction regulations, environmental protection laws, and safety regulations,” emphasises Becker.


THE CHALLENGE OF GENERATIONAL CHANGE


The planned growth in staff numbers is ambitious in itself. However, the site faces an additional challenge in the form of a generational change, as many industrial companies are currently experiencing: the baby boomers are retiring. “We need to replace them, not just in terms of numbers, but also in terms of the quality of their expertise,” emphasises CEO Pascal Schreyer. In recent years, his company has taken significant steps to ensure that this transition is as smooth as possible. “We are currently recruiting skilled workers who are helping to set up the new facilities, which they will operate later,” reports Becker. The roles are varied, ranging from shift workers to production managers.


The forward-looking HR strategy is paying off today. Two years ago, Nitrochemie launched intensive recruitment campaigns as part of its capacity expansion. This experience is helping to attract qualified staff. On top of that, two further factors are working positively for Nitrochemie and its parent company, Rheinmetall. Firstly, the economy is faltering in other sectors, particularly the automotive industry. Many of the skilled workers made redundant in these sectors have precisely the skills in demand at Rheinmetall and Nitrochemie. At the same time, attitudes towards the defence industry have shifted. “The situation on the labour market has changed in our favour. Rheinmetall’s appeal as an employer brand has increased considerably,”

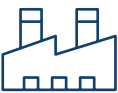
PROJECT FIREPOWER

From 2030 onwards, Rheinmetall aims at producing 20,000 tonnes of propellant powder each year. For Nitrochemie, one of the Group’s major propellant powder producers, this means:

 An increase in staff numbers: The Aschau site is set to grow from 700 to around 1,200 employees and the Wimmis site from 250 to 300.

 Cross-border cooperation between Rheinmetall Nitrochemie sites in Wimmis (Switzerland) and Aschau am Inn (Germany), as well as with Rheinmetall Expat Munitions in Burgos (Spain).

 Changes to the production process: In future, the powder will largely be pressed from granules rather than rolled in order to increase output.

 Expansion of infrastructure: New buildings will be constructed or acquired, significantly expanding the company’s premises in Aschau.



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says Becker. “We are now in the public eye, and the polarising element has largely disappeared.”

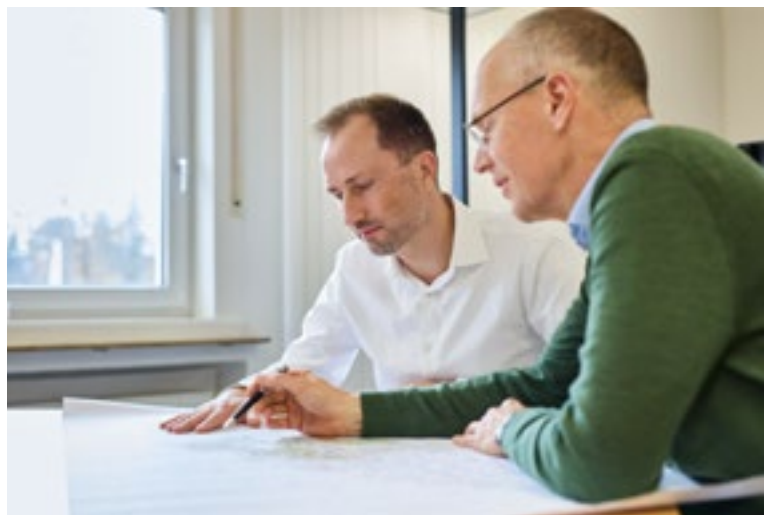
These days, job applicants are looking for a sense of purpose in their work, and they find it at Rheinmetall. “Many people say, ‘I want to make a difference. I want for those who are protecting us to have the right equipment, whether in Ukraine or at NATO’s external borders,’” says Pascal Schreyer.

KEEPING SUPPLY CHAINS SECURE

Skilled workers are one thing. However, for Project Firepower to be successful, the supply of raw materials must also be secured. This is a major issue, and not just for Rheinmetall. The Group is thinking ahead here, too. “We are constantly evaluating our supply chain and making adjustments where necessary,” says Schreyer. The Nitrochemie CEO explains how this works in practice using a current example: “As part of our capacity expansion, we will be manufacturing an explosive in-house that we have previously bought externally.” A production facility for this purpose is already in the planning stage. Although these quantities are small, they are essential, according to Schreyer. Oliver Becker adds: “For other raw materials, we can rely on a large stock.” In some cases, Nitrochemie has stockpiled supplies for the next three years.

REMAIN COMPETITIVE

One issue is clear: the high demand for ammunition and propellant powder is a direct result of ongoing geopolitical crises and conflicts. Like most people, the team at Nitrochemie yearns for peace. Nevertheless, the defence industry



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remains relevant. “By expanding our capacity, we are improving our production processes and are hence strengthening our competitiveness,” says Schreyer. “There will be times when we will have to stand more firmly in the face of international competition. We are seizing this opportunity to optimise our position in this respect.”

At Nitrochemie, it’s now time to tackle the job. Project Firepower requires new facilities, new processes, and additional staff to be implemented. The management team is approaching this task with optimism. “We have every confidence in the capabilities of our organisation and our workforce,” says Pascal Schreyer. “With this foundation, nothing can go wrong.” ●

3 Propellant modules from Aschau am Inn: Over the next 24 months, Nitrochemie will increase production of powder by 2,500 tonnes and of modules by 550,000.

4 and 5 Pascal Schreyer (left), CEO of the Energetic Materials business unit, and Dr Oliver Becker (right), Senior Vice President of Operations, are planning the expansion of the Aschau am Inn plant. Nitrochemie is investing a total of €250 million in the project.

**PRECISION
CRAFTS-
MANSHIP IN
WOMEN'S
HANDS**

Sewing cartridge pouches, filling powder, or assembling projectiles: women kept ammunition production running in the factory halls, not only during the years of war – as cheap labour and with greater manual dexterity than their male colleagues.

Such traditional gender roles are now considered to be old school. Today, women are involved in shaping the future of the Rheinmetall Group as technicians, engineers, and in leadership roles.



1960

The art of precision



Millimetres and grams make all the difference. Whether a projectile hits its target depends on exact dosing, precise production, and a high level of craftsmanship. A search for traces through the history of Europe's largest munitions manufacturer, Rheinmetall.



1889

The Paris World's Fair celebrated the Eiffel Tower. Meanwhile, Düsseldorf was making industrial history. On 13 April 1889, the newly founded Rhine Metal Goods and Machinery Factory received its first order: a jacketed bullet for a 7.92 mm small bore rifle. Delays in the delivery of machinery from England almost forced the young company to shutdown its business. After mass production of the innovative ammunition finally began five months later, the first batch of 20,000 rounds left the rented factory premises on Talstrasse just a few days later. From 1890 onwards, production took place at the newly built factory in Derendorf.

→ More at
www.dimensions-magazin.de/en



POPULAR LARGE CALIBRES

From the 1960s onwards, Rheinmetall demonstrated its production expertise world-wide, particularly with two types of ammunition. To this day, the 155mm projectiles remain the standard calibre for NATO artillery. In 1979, 120 mm ammunition for the Leopard 2 main battle tank went into series production – as a fin-stabilised arrow-shaped projectile with a high starting speed. Rheinmetall produced both types in very large quantities.



SMART PROJECTILES

Rheinmetall has been developing smart munitions in collaboration with Diehl since the late 1980s, specifically projectiles that autonomously lock onto their target and drastically in-

crease the impact probability. The RB 63 DM 612 bomblet munition is being utilised for the first time in the US Multiple Launch Rocket System (MLRS) and its European counterpart, MARS.



In modern warfare, so-called loitering munitions are becoming increasingly important. These kamikaze drones, equipped with a warhead, circle in the airspace undetected until they are given their target and attack command via a data link. Rheinmetall has several precision weapon systems in its portfolio.

High-tech from the Lower Rhine

Rheinmetall has built a state-of-the-art factory in Weeze in record time to manufacture fuselage components for the world's most advanced stealth fighter aircraft, the F-35 Lightning II. This is a €200 million investment in European security, ensuring Germany's future as a technology hub.

Author: *Patrick Rohmann*



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Until now, Weeze's nationwide popularity was mainly due to cheap flights to Mallorca and the annual Parookaville music festival held at the airport.

However, this small town in the district of Kleve is now making a name for itself in a completely different way. Since the summer of 2025, it has been the site of production for the “heart of the Lower Rhine's fighter jets” (*Frankfurter Allgemeine Zeitung*) – a symbol of Germany's new direction in security policy. Here, Rheinmetall is manufacturing 400 centre fuselage sections for the F-35 fighter jet on behalf of the US corporation Northrop Grumman. Following the start-up phase, the new plant is set to produce up to 36 of these sections each year. The 30,000-square-metre factory for the fifth-generation stealth fighter is located in the immediate vicinity of Weeze Airport. Construction took less than a year and a half, and North Rhine-Westphalia's Minister-President, Hendrik Wüst, visited the site for the inauguration ceremony. The head of government explained that the new facility represents a “significant contribution to this new era and to Europe's collective security”.



1 The Lockheed Martin F-35 Lightning II will form the backbone of many NATO air forces in the future. To date, a total of 20 countries, including Germany, have ordered the advanced stealth fighter jet.

2 400 of these highly complex fuselage centre sections, weighing two tonnes each, will be manufactured by Rheinmetall at its new factory in Weeze.

3 At the opening of the factory in July 2025, Stephen O'Bryan (Northrop Grumman manager), Henrik Wüst (Prime Minister), and Armin Papperger (Rheinmetall CEO) emphasised the importance of such major industrial projects for the transatlantic partnership.

for managing the CH-53G helicopter fleet at Bundeswehr bases in Diepholz, Laupheim, and Holzdorf, providing services ranging from basic and full scale maintenance to repairs and daily support for flight operations. However, as the model is being phased out, this service will end in the near future.

TRANSATLANTIC PARTNERSHIP

In February 2023, Rheinmetall, Lockheed Martin, and Northrop Grumman signed a letter of intent for the construction of F-35 fuselage centre sections in Germany. The aim was to establish an integrated assembly line and increase the share of the F-35 programme held by the European industry. While Lockheed Martin is responsible for development, sales, and final assembly as the prime contractor, Northrop Grumman supplies key technologies such as sensors, avionics as well as aircraft and training software. The fuselage centre section manufactured by Rheinmetall is a vital component of the F-35, connecting avionics, weapon systems, fuel cells, electrical and hydraulic systems, and parts of the propulsion system. The new Rheinmetall production line in Weeze is very similar to the one operated by Northrop Grumman in Palmdale, California.

WHY WEEZE?

The decision to choose Weeze as the appropriate location followed an intensive search. Out of over 70 potential sites in twelve of the German federal states, the 60,000-square-metre site on the Lower Rhine was ultimately chosen. Decisive factors included its proximity to the airport, favourable ground conditions, and the support of local and state politicians. The proximity to the industrial centres of the Ruhr region and the Rhineland was another key factor. Just under 18 months passed between the groundbreaking ceremony in late summer 2023 and the start of production in July 2025.

LONG-TERM PERSPECTIVE

The production of 400 F-35 Lightning II fuselage centre sections is scheduled to continue for at least 20 years. This secures the site's long-term future – well beyond 2040. Around 400 highly skilled jobs will be created. Not only will Weeze become part of a global supply chain, it will also become a visible symbol of the turning point in European security policy. ●



3

A NEW ROLE IN AVIATION

Rheinmetall Aviation Services GmbH operates this state-of-the-art production facility. Founded in Bremen in 2019, the subsidiary of Rheinmetall AG embodies the Group's growing ambitions in the field of military aviation. Initially established as a strategic service provider for maintenance and repairs, the company now also manufactures key aircraft components. Until 2026, the company was responsible

Weapons, yes – but safely!

Hardly any other product group is subject to stricter controls than military equipment. National laws, European regulations and directives, international conventions: a closer look at the regulation of arms exports dispels misconceptions and offers a new perspective on the security and defence industry.

Author: *Elke Röhling-Kampmann*

Weapons are being misused worldwide to violate human rights and breach international humanitarian law, whether they are in the hands of Somali paramilitaries, Islamist terrorist groups, or pirates on the Nigerian coast. Behind this lies a global illegal market. These examples alone demonstrate the considerable dangers posed by the unregulated trade in arms. Nevertheless, weapons are necessary for maintaining internal security, defending the nation and its alliances, ensuring peace through deterrence, and carrying out military and humanitarian missions.

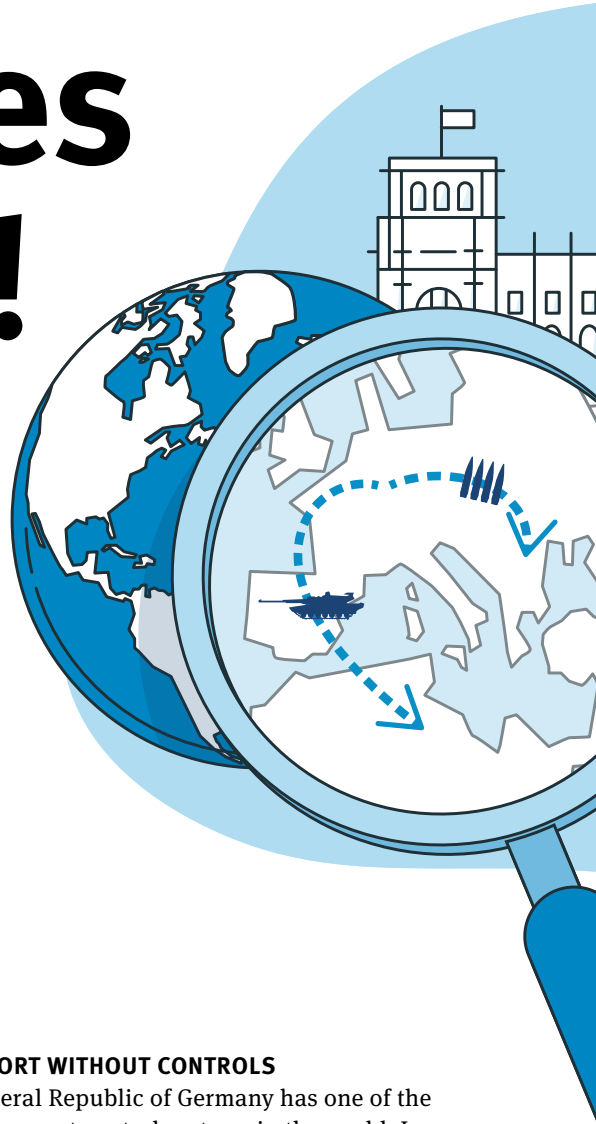
In Germany, this ambivalence is primarily governed by the Basic Law (constitution): acts intended to disrupt the peaceful coexistence of nations or to prepare for a war of aggression are unconstitutional and will be punished. The federal government must approve the production, transport, and sale of weapons which are intended for warfare (“weapons of war”), and this naturally also applies to Rheinmetall. Other armaments, including weapons and ammunition, that are not weapons of war are also subject to strict state approval and secondary obligations.

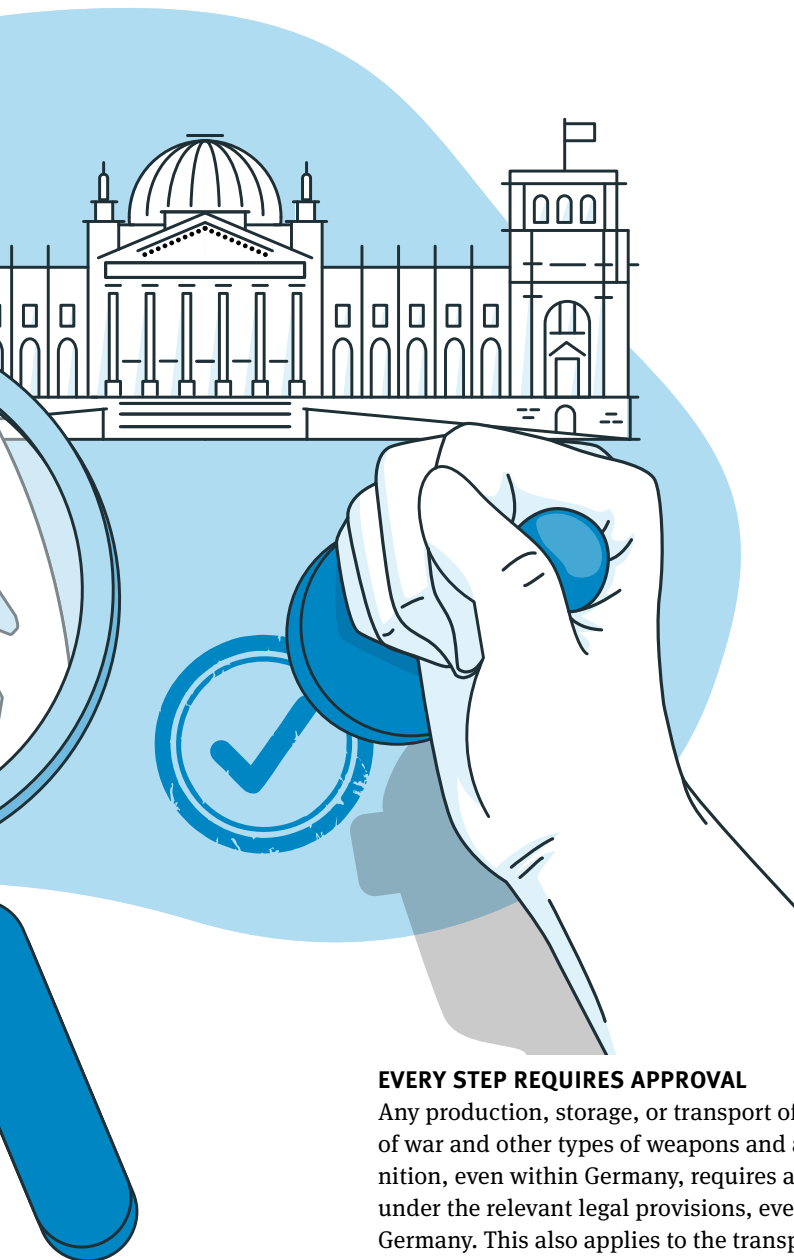
NO EXPORT WITHOUT CONTROLS

The Federal Republic of Germany has one of the strictest export control systems in the world. In addition to the Basic Law, German arms exports are governed by the War Weapons Control Act and the Foreign Trade and Payments Act (AWG) in conjunction with the Foreign Trade and Payments Ordinance (AWV).

This serves the purpose of maintaining peace and preventing war. It regulates the production, transfer, placing on the market, acquisition, and transport of items, substances, and organisms that are classified as weapons of war. The law clearly defines what is considered to be a weapon of war – the intended purpose is a particularly crucial factor. Examples include main battle tanks, armoured combat support vehicles, machine guns, certain types of ammunition, warships, and fighter aircraft.

Also, the export of other military equipment is regulated by law. For example, the export of weapons and ammunition is governed by the Weapons Act, while the export of explosives is governed by the Explosives Act. The relevant export licences are required depending on the end users.





EVERY STEP REQUIRES APPROVAL

Any production, storage, or transport of weapons of war and other types of weapons and ammunition, even within Germany, requires a licence under the relevant legal provisions, even within Germany. This also applies to the transport by German ships or aircraft outside German territory, also comprising imports, exports, and transit. At Rheinmetall, employees in the operating companies who have received the necessary training and possess sufficient experience ensure strict compliance with these regulations. Every delivery and every transport must be reported, even when a Puma infantry fighting vehicle, for example, is transported to an exhibition at the Day of the Bundeswehr in Wunstorf. So-called dual-use items, which can be used for both civilian and military purposes, are controlled by the Federal Office for Economic Affairs and Export Control (BAFA). These include chemicals, electronics, machine tools, software, and technology.

The federal government's political principles also limit the discretion of the licensing authorities. One key element is the end user's compliance with human rights. If there is reasonable suspicion that the military equipment will be misused

for internal repression or other ongoing, systematic human rights violations, the export is prohibited. Furthermore, Germany distinguishes between EU and NATO countries, NATO-equivalent countries (Australia, New Zealand, Japan, and Switzerland), and third countries. The German government authorises exports to third countries only where, in individual circumstances, particular foreign or security policy interests of Germany are involved – for example in counterterrorism or efforts to combat international drug trafficking. In critical cases, the Federal Security Council, which meets in closed sessions, decides on the export licence. As a general rule, a licence for the export of armaments is only granted if it is guaranteed that they remain in the recipient country. The end user must usually confirm this with an end-use certificate. Following delivery, BAFA and the relevant German embassy may verify this by means of on-site checks.

GLOBAL STANDARDS AND EMBARGOES

Germany implements international arms embargoes through the AWV. Under the Wassenaar Arrangement, 42 participating states have agreed to standardise their controls on the export of conventional arms and dual-use items, as well as related technology. Under the Arms Trade Treaty, more than 100 states have committed themselves to comply with internationally agreed standards for trading armaments. Germany does not deliver goods to war zones or crisis regions as a matter of principle. One exception is Ukraine in its defence against Russia's aggressive war. German export regulations also ensure compliance with various sanctions regimes, including those of the UN and the EU. Various authorities work hand in hand in this regard: BAFA, the German Federal Criminal Police Office, the Federal Office of Administration, and Customs exchange data to monitor all relevant exports.

ZERO TOLERANCE FOR VIOLATIONS

Strict laws, a restrictive authorisation process, and rigorous checks, combined with the comprehensive internal compliance programmes of the respective manufacturers – including Rheinmetall – ensure that violations remain rare. However, if they do occur, penalties can range from fines to prison sentences of several years, depending on the severity of the offence, particularly in cases involving commercial activities. Germany sets the standard for export control at both state and corporate levels. This fosters trust and security, ensuring that weapons do not fall into the wrong hands. ●

From cars to artillery

The former Pierburg plant in Berlin is undergoing a fundamental transformation as a supplier site: moving away from the struggling automotive industry towards the growing armaments sector. Since July 2025, the company has been operating in Berlin under the name Rheinmetall Waffe Munition GmbH, thereby securing the future of 300 jobs in the German capital.

The Gesundbrunnen subdistrict of Berlin has a long industrial tradition. As early as the 19th century, large factory buildings, such as those belonging to the locomotive manufacturer Schwartzkopff, dominated the townscape. Until recently, Rheinmetall subsidiary Pierburg manufactured valves, pumps, and cooling water systems for the automotive industry on this historic site, not far from Humboldthain train station.

Everything has changed since last year. Rheinmetall strategically realigned its business. Going forward, the Group intends to focus exclusively on its armaments business. Negotiations regarding the sale of the Power Systems civilian automotive division, which includes Pierburg, are expected to conclude in spring 2026. However, the Berlin plant is unaffected. Since July 2025, the site has belonged to Rheinmetall Waffe Munition GmbH. Soon, 80-centimetre-long, 42-kilogramme projectile bodies for 155-millimetre NATO-standard-calibre artillery ammunition will be hardened and processed here.



1



PORTRAIT
RHEINMETALL WAFFE
MUNITION GMBH
BERLIN



“The reorientation towards military production is a real stroke of luck for the Berlin plant. Practically all of the roughly 300 employees have decided to stay.”

2

1 The Rheinmetall plant in Berlin’s Wedding district now produces steel shell bodies and other ammunition components, instead of valves, pumps, and cooling water systems.

2 Dr Andreas Müller, born in 1963, has been managing the Berlin production site since 2014. This site recently became part of Rheinmetall Waffe Munition following its transfer from the Rheinmetall subsidiary Pierburg. Prior to this, the electrical and production engineer with a PhD held various positions, including that of CEO of Pierburg in Ústí nad Labem in the Czech Republic.

EVERYTHING TURNED INSIDE OUT

Andreas Müller has been with Pierburg, or rather Rheinmetall, since 1999, and has been managing the Berlin plant since 2014. The electrical and production engineer with a PhD, whom many colleagues simply call “Doc Müller”, emphasises that the conversion of the site to military production is a “real stroke of luck for the Berlin plant”. This applies to both the nearly 300 employees who will all stay on board and to Müller himself. Even though almost nothing will remain the same in the course of the reorganisation.

A tour of the production halls shortly before the turn of the year 2025/26 provided insight into what this process involves. The conversion is carried out during ongoing operation. The old production facilities are still being used to fulfil remaining orders for the automotive sector and to support sister companies, such as the one in Szeged, Hungary. Next door, a large factory hall has been completely cleared and fitted with a new floor at great expense. Machines for

manufacturing projectile bodies stand, still fully packed, in the cleared areas, waiting to be put into operation.

“We’re already starting production of warheads for loitering munitions”, explains the “Doc”. These are intended for use in both the loitering munition from Rheinmetall Electronics (FV-014) and UVision (HERO) and in other systems. However, there are still a few temporary solutions in place, and some of the work can only be completed at a later date. “It’s like building a house,” says Müller. “You move in even if the attic hasn’t been painted yet.”

SUPPLIER FOR UNTERLÜSS

From 2027 onwards, Rheinmetall plans to manufacture up to 1.1million artillery shells per year. The Berlin plant will produce around 120,000 of the required shell bodies. These robust steel bodies will later be used for both live and training artillery ammunition. In addition to these, the Berlin plant supplies all the small mechanical parts required for the projectiles. Other types

of ammunition are also manufactured there, including individual components, though no explosives. The customer for all of these products is the new Rheinmetall plant in Unterlüß, Lower Saxony, which began operating in August 2025 as Europe’s largest factory for large-calibre ammunition.

The plant manager believes that 2026 as the transitional year will be even be more challenging. “After that, we’ll be in calmer waters.” In the future, Rheinmetall will produce about 50 different series components in Berlin. Currently, this includes artillery shell bodies and associated small parts, as well as multipurpose shell bodies and components for loitering munitions. This represents a significant reduction in logistical complexity compared to the automotive era. “Back then, a single production line sometimes covered over 25 different products for various customers,” recalls Müller.

ATTENTION TO EVERY DETAIL

The plant manager’s office is covered in charts containing tables and timetables. When will the factory floor be ready? When can the old production lines be dismantled and replaced with the new ones? When can the hardening furnace and the new machines be commissioned? He and his team must keep track of every detail. Andreas Müller is no stranger to challenges like these. In 2004, he helped set up the Pierburg plant in Ústí nad Labem in the Czech Republic. Nevertheless, the transformation of the Berlin site is far from routine for him. “It’s not every day that a company decides, ‘Okay, we’re going to do something completely different now.’”

A RENOVATION WITH CHALLENGES

And that’s not all. Modernising an old facility is often more complicated than building a new one. “Renovating the hall floor, for example, takes a lot of time,” explains Müller. “First, we have to remove the existing 4,000-square-metre surface before we can lay the new screed. The new floor must then meet certain groundwater protection requirements.”

Particularly when demolishing the floor, problems can arise that have remained hidden for decades. The site on which the plant in Berlin stands has been used for industrial purposes since 1883. “Wherever the construction workers break ground, there are surprises,” says the plant manager. “A pipeline is lifted, and suddenly they discover old Eternit, meaning asbestos, which requires special disposal. That doesn’t



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4

happen with a new building.” To ensure that they are not building on contaminated soil, Andreas Müller is taking soil samples at all relevant locations.

RETRAINING FOR NEW TASKS

The complete reorientation of production also brings new tasks for the production staff. Rheinmetall is investing not only in machinery but also in a comprehensive training programme. “This retraining is particularly challenging for employees who have previously worked on highly complex machines on the assembly line,” explains Andreas Müller. “In future, these skilled workers will primarily be deployed in the equally demanding field of



lathe machining.” There are also fundamental differences in tool setting compared to previous workflows. Training courses will take place in both Berlin and Unterlüß, as well as online. “For those colleagues who were already working in lathe machining before the restructuring, little will really change.”

THE “MINI-FACTORY” STAYS

Despite the fundamental transformation of the plant, one thing that remains unchanged is the mini-factory. This agile working model has already proven its worth during the Pierburg era. Rather than rigid department settings, specialists from production, logistics, and quality assurance work together across divisions. “The teams decide for themselves how to prioritise incoming work orders and issues that arise on a daily basis,” explains Müller. “We only specify the production goals and the how – production processes, material logging, and quality standards.” From the plant manager’s perspective, this extensive freedom of decision-making not only makes the work more efficient, but also more attractive. “In everyday business, colleagues act independently within the framework of established processes. That’s motivating.”

TIMES CHANGE

Rheinmetall Waffe Munition is located right in the heart of the German capital. Even though nothing which is manufactured in Berlin is subject to the War Weapons Control Act (see pages 56 ff. in this issue) the site’s reorientation is sparking heated discussions. The security situation in Europe has changed, as has the public perception of the defence industry. This rethinking is also evident among the workforce. All 300 employees decided to stay. In a very short amount of time.

“In a way, the whole plant has taken this step together,” says “Doc Müller” with pride. “The team is fully motivated, as we are literally realising everything at once.” He adds thoughtfully: “As a supplier to the struggling automotive industry, a site like ours would be unprofitable in the future.” At the same time, he emphasises that for the people here, it is about more than just a secure job: “We are contributing to our own security,” says Andreas Müller. This is important to many. There is also the fact that with the plant, the industrial tradition in Gesundbrunnen lives on. Since the 19th century, this area of what is now Berlin’s Mitte district has been a centre of production – and that is certainly not going to change any time soon. ● Pk

3 The first machines on the new production lines have already been installed, such as this one for further processing after hardening the 155mm shell bodies.

4 In the future, the Rheinmetall plant in Berlin will produce around 50 components for various types of ammunition, including the so-called lever screw used to transport 155mm artillery shells.

RHEINMETALL WAFFE MUNITION GMBH, BERLIN



The former Pierburg site, located in the heart of Berlin, has been part of Rheinmetall Waffe Munition GmbH since 1 July 2025. The Rheinmetall subsidiary, which is headquartered in Unterlüß in the state of Lower Saxony, specialises in developing and producing weapon systems and ammunition.



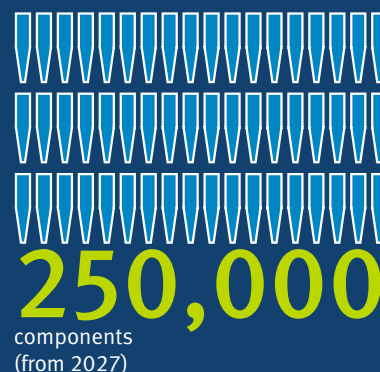
BUSINESS AREAS

From mid-2026, the plant in Berlin’s Gesundbrunnen subdistrict will produce components for 155 mm artillery ammunition and warhead components for loitering munition, supplying Europe’s largest large-calibre ammunition factory in Unterlüß.

EMPLOYEES



ANNUAL PRODUCTION VOLUME





Good question

What drives communication? Here are the answers. After all, Rheinmetall is currently under public observation like almost no other company. A cross section of the dozens of media enquiries that the DAX-listed group receives every day from all over the world.



Will tanks still be needed in the future, now that drones are increasingly important?

Main battle tanks and other combat vehicles combine firepower, protection, mobility, and reconnaissance abilities. These capabilities enable them to conquer and hold terrain. Thanks to their striking power, modernised main battle tanks will still be key players on future battlefields. Future tanks and main battle systems will be interconnected with infantry forces, command posts as well as manned and unmanned platforms on land, at sea, in the air, in space, and in the cyber and information domains. This will ensure they always have up-to-date situational awareness and can detect and counter any kind of threat at an early stage, including drones. As demonstrated by Rheinmetall on the Panther, future main battle tanks will be protected against drones by passive and active defence measures, including accompanying air defence.



What does Rheinmetall say to the accusation that it is a war profiteer?

Rheinmetall's revenues are rising because the Group and its employees are performing well. The company manufactures what the market needs. As demand increases, so does production and revenue. Rheinmetall supports the German government in strengthening Germany's and Europe's defence capabilities. This role is widely recognised. The Group is making invaluable contributions to Ukraine's self-defence efforts. Rheinmetall is also a major employer: the number of employees is set to rise from 42,000 to up to 70,000 by 2030. For each of these jobs, an average of three additional jobs are created among suppliers and service providers.



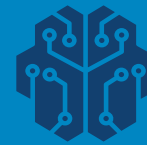
How are China's export restrictions on rare-earth minerals affecting Rheinmetall?

Rheinmetall is reducing its strategic dependencies by consistently diversifying and innovating technologically. More than three-quarters of its purchasing volume is already "China-free". This issue's interview with Rheinmetall's Head of Procurement, Marcus Gerlach, from page 32 onwards, provides fascinating insights into this topic.



Working with Gen Z: Why is the defence industry an attractive employer for the next generation today?

In addition to the meaningful nature of its products, Rheinmetall is renowned for its stability and international perspectives. In an ever-changing global landscape, young professionals are increasingly seeking roles with social relevance. Rheinmetall offers this purpose: the Group substantially contributes to defence capabilities across national borders, thereby helping to safeguard liberal values. The company's talented staff are motivated by the certainty that every contribution, across all departments, is part of a greater whole: ensuring security as the foundation of our society.



How does Rheinmetall use artificial intelligence (AI)?

For Rheinmetall, AI has long been an integral part of its corporate strategy, with the Group evolving into an "AI house". AI is an important tool in internal business processes, such as quality control and process automation. In general, these technologies are designed to ease the burden on individuals operating in highly complex environments and situations. In a military context, AI plays a role in gathering and analysing information, in decision-making, and in operational superiority. For instance, AI can be trained to detect and identify enemy vehicles and is able to offer operational options. AI thus supports humans in improving situational awareness and decision-making in dynamic environments. When faced with vast amounts of reconnaissance data, soldiers are provided with well-founded options for action in real time. It is crucial to emphasise that ultimate responsibility always lies with humans, particularly with regard to decisions on the use of weapons, and that the human-in-the-loop principle remains.

Enemy of the good

In light of the steady growth in electromobility, the Rheinmetall Technology Centre has developed an innovative component for charging infrastructure in collaboration with the Emerging Technologies business section. These novel curb chargers are now being fully handed over to the operational unit as part of the upcoming industrialisation process. However, the saying still holds true: standing still means falling behind!

Author: **Folke Heyer**

As early as mid-2024, Rheinmetall had launched a pilot project for its newly developed curb charger together with the charging point operator TankE.

In the Cologne urban area and a surrounding community, this form of kerbside charging was tested extensively under real-life conditions. The study examined acceptance and frequency of use among e-mobility users, as well as the reliability, ergonomics, and overall technical availability of the technology. This pilot phase was deliberately designed to run for a relatively long period to cover all seasons and their specific requirements.

In the meantime, a great deal of electricity has flowed through the charging devices, generating international interest in this unconventional method of “fuelling” electric vehicles. As a result, the first curb chargers are already in use in several cities, including Düsseldorf, Cologne, Dortmund, and Braunschweig. Further installations in Hamburg, Stuttgart, Leipzig,

and Potsdam are currently being planned. The developers have also seen equally high levels of private interest.

“Nevertheless,” says Dr Dirk Kamarys, Head of the operational business unit, “our target market will remain the B2B sector. The reasons for this is the potential quantity, not to mention our company’s existing key account sales structure. This sector alone is already a highly attractive market for us.”

“OUR SYSTEM IS NEEDED”

Added to this is the unique positioning of Rheinmetall’s curb charger, which is protected by a large number of patents. Dr Felix Stracke, who is responsible for the basic concept of the curb chargers alongside his team, and who has also played a key role in their development for series production, comments: “At present, the proportion of electric or electrified vehicles in the total vehicle fleet is still in the single-digit percentage range. However, based on current



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1 High charging stability and excellent reliability: users rate Rheinmetall’s curb charger significantly higher than conventional charging stations.

2 Handover: from now on, the industrialisation of the curb charger will be handled by the Emerging Technologies business section within Rheinmetall’s Power Systems division. Dr Dirk Kamarys (right), head of the section, is taking over from developer Dr Felix Stracke of the Rheinmetall Technology Centre.



trends and not least the renewed government funding, it is already clear today that we will need 10 to 15 times the current public charging infrastructure in the future. It is impossible to imagine covering this demand in our urban landscapes with charging stations alone. That is the reason why our system is needed!”

AWARD-WINNING PRODUCT DESIGN

This is the general justification for the system, which has already demonstrated an impressive availability of over 99 per cent, even in its pilot phase. Conventional charging points typically achieve 95–97 per cent availability. This is a remarkable achievement, given that the developers in Neuss and their colleagues in the business section are operating in an entirely new branch. Nevertheless, they have developed their new product to perform reliably even under harsh environmental conditions, a product that has also been honoured with the renowned Red Dot Design Award.

BETTER THAN CHARGING STATIONS

During the evaluation in the pilot phase, the developers of the Curb Charger wanted to gather as much objective feedback as possible, so they collaborated with the operators to conduct a case study. This involved analysing anonymous reviews from over a hundred customers who had used the chargers. Overall, the feedback was extremely positive. Any limitations perceived by e-mobility users in terms of the visibility of the charging points, which were not yet listed in the relevant apps during this initial phase, were more than compensated for by their high

charging stability and reliability, as well as the innovative appeal of this novelty.


Compared with conventional charging stations, the curb chargers received better ratings for accessibility and easy handling. Additional advantages included an improved cityscape, preserved sightlines, clear pavements, and low susceptibility to vandalism. Last but not least, the technology is so robust that even being accidentally driven over does not really matter. Charging point operators also quickly became real fans of the curbs.

NO ELECTRICITY, NO REVENUE

Long-term availability is a crucial factor in the overall cost analysis, particularly with regard to charging infrastructure. In addition to reliability, another important factor to consider is how quickly the charging point can be repaired in the event of a failure, since the operator inevitably loses revenue during any downtime. Again, the new technology scores highly in this respect, as the electronic module can be replaced within a short time if it shows a malfunction. However, this is by no means the end of the modules’ development story. Examples include an expanded international service network, bi-directional charging, replacing special concrete with grey cast iron, and a special cable protection programme. After all, the same principle applies: better is the enemy of good! ●

2



A man with a beard and glasses, wearing a dark jacket, stands with his arms crossed in front of a large red fire engine. The engine has 'RHEINMETALL' and 'WERKFEUERWEHR' written on it. The background is slightly blurred, focusing on the man and the engine's details.

THOMAS SCHLICHT was born in 1967 and has been working at Rheinmetall since 1990. After spending 19 years as an operations manager in the service department in locations such as Kosovo and Afghanistan, he joined the Unterlüß plant fire brigade. Since 2009, he has been working as the chief fire officer at the plant, ensuring the safety of his colleagues. He is also the corporate fire safety officer for all Rheinmetall sites worldwide.

Protection for the crew

Barbara 7 is the amiable nickname given to the armoured fire engine of the Rheinmetall plant fire brigade in Unterlüß. Named after the patron saint of gunners and firefighters, this armoured colossus protects emergency personnel working in areas contaminated with ammunition. Chief fire officer Thomas Schlicht explains why this life-saving innovation is more than just an emergency vehicle to him.

I grew up in the fire station – I lived there for 22 years,” says Thomas Schlicht, laughing. He joined the youth fire brigade at the age of ten, so it was almost inevitable that he would follow in his father’s footsteps later on. Gerhard Schlicht headed the Unterlüß plant fire brigade from 1988 to 2003, a position that Thomas took over in 2009. His wife, Angela, also has close ties to the company, working as a logistics coordinator at Rheinmetall Landsystems. “Rheinmetall and the fire brigade are a big part of our lives,” says the former soldier of the Bundeswehr, also a trained master craftsman and technician. The Barbara 7 armoured fire engine is more than just an emergency vehicle: it symbolises the new direction taken by the plant fire brigade.

The situation at the Unterlüß site has changed fundamentally since Russia’s invasion of Ukraine. “People used to point fingers at us,” recalls Schlicht. “Today, we employees are proud to be working to ensure the security of our country.” However, the turning point brought challenges as well as progress. Rheinmetall built Europe’s largest ammunition plant at the site in record time, with an annual production capacity of up to 300,000 rounds of artillery ammunition. This meant that the fire brigade at the plant had to be expanded significantly, from five full-time staff members to 29. This development was personally overseen by the plant’s chief fire officer and the Rheinmetall Corporation’s fire safety officer.

Schlicht reports that recruiting new employees went surprisingly smoothly. “The great thing is that they are all people who were already firmly established in the working world. They all have experience of working with the volunteer fire brigade.” However, the plant fire brigade received more than just personnel reinforcement – it also received unparalleled non-human support in the form of the armoured fire engine Barbara 7.

“Our main concern was that we needed to protect our firefighters better. Since 1899, we have been firing different calibres into the heather landscape on our test site, and our team works in areas contaminated with ammunition,” explains Schlicht. The solution was found quickly: a MAN Rheinmetall recovery vehicle which was converted in-house. Barbara 6, the “little sister” with a capacity of 10,000 litres of water and an armoured cabin of Level 2 standard, has been in active service since 2021. Its unique feature is that firefighters do not have to leave the vehicle, as the extinguishing unit can be operated entirely by radio remote control. Barbara 7, the latest firefighting vehicle built by Rheinmetall, is now providing life-saving support for the Unterlüß plant firefighting team. The 13,000-litre water tank offers additional flexibility in the event of a fire, and the further reinforced Class 3 protective armour means that the passengers can survive even large explosions unscathed.

However, progress at the site is not limited to the fleet: a new fire station is already under construction. “It’s a gigantic building,” says Schlicht enthusiastically. According to a letter of recognition from the state authorities, the Unterlüß plant fire brigade is one of the largest in Lower Saxony, with a particularly high hazard potential. With 125 fire calls, 189 assistance calls, 53 ambulance calls, and 424 fire watch assignments last year alone, the emergency responders are kept busy. Fortunately, Thomas Schlicht and his team are always ready. They have Barbara at their side, and the will to make a valuable contribution to the safety of their colleagues. ●

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MARITIME SAFETY OF THE FUTURE



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The growing demand for maritime capabilities is contested by a severe shortage of personnel. How can this gap be bridged? Rheinmetall is making Hamburg the centre of the solution: through its Naval Systems division, one of the leading providers of complex naval vessel design and construction, the technology group is developing autonomous and unmanned surface systems at its Hamburg site, channelling its maritime expertise in the process. The Hanseatic city is therefore becoming a leading competence centre for technologies that will fundamentally transform maritime operations.

Want to read more? You can find the full story from Hamburg, along with other exciting news, interviews, and features by and about Rheinmetall, in the online edition of DIMENSIONS at dimensions-magazin.de/en. It's well worth having a look!

