

# Howitzer Systems

## Market and Technology Forecast to 2032



**M**ARKET  
FORECAST

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# 1 Introduction

## 1.1 Scope

This market study offers detailed analysis of the global Howitzer Systems market for two reference years and over the next eight years. The markets volumes are determined, market dynamics, industry, technological development, and government programs are analysed.

In particular, it provides an in-depth analysis of the following:

- **Overview:** Snapshot of the Howitzer Systems technology in the military market during 2024-2032, including highlights of the demand drivers, trends, and challenges. It also provides a snapshot of the spending with respect to regions as well as segments and sheds light on the emergence of new technologies.
- **Market Dynamics:** Insights into the technological developments in the Howitzer Systems market and a detailed analysis of the changing preferences of governments around the world. It also analyses changing industry structure trends and the challenges faced by the industry participants.
- **Segment Analysis:** Insights into the various systems market from a segmental perspective and a detailed analysis of factors influencing the market for each segment.
- **Regional Review:** Insights into modernization patterns and budgetary allocation for top countries within a region.
- **Regional Analysis:** Insights into the systems market from a regional perspective and a detailed analysis of factors influencing the market for each region.
- **Impact Analysis:** Analysis on how certain events will impact the missiles market. This will give you an indication on which factors are important for the forecast.
- **Key Program Analysis:** Details of the top programs in each segment expected to be executed during the forecast period.
- **Competitive landscape Analysis:** Analysis of competitive landscape of this industry. It provides an overview of key companies, together with insights such as key alliances, strategic initiatives, and a SWOT analysis.

## 1.2 Definitions

Under the artillery systems ground forces most often include howitzers, multiple rocket-launching systems and anti-aircraft systems usually up to the range covered by short-



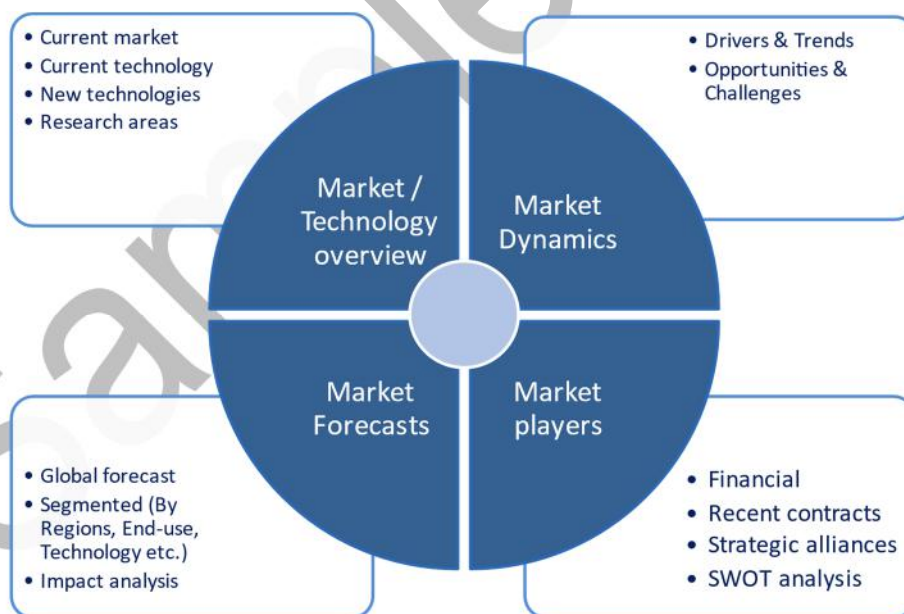
range air-defence systems (SHORADS) and in a few cases up to 120 km. The latter depends on the end-user, which for some countries it would be the air force and in a few ones the army.

In this report the aim will be to outline the technologies, offer a horizon scanning and market sizing for howitzers, both towed and self-propelled ones, which provide support by fires to ground forces. Therefore, the report will not include missile artillery or air-defence systems, neither 120/240mm mortar systems, naval weapons or armoured vehicles' turrets, as they are the scope of separate reports.

### 1.3 Methodology

The Market Forecast team that researched, analysed, and wrote this report, combines a range of skills and talents in all relevant areas, including defence-, aerospace-, space-, and aviation technology, economics, politics and policymaking, business, and general intelligence, as well as industry/market research and analysis.

In general, our market studies consist of four main parts: analysis of the market and technologies, the analysis of the market dynamics (current and future factors that will have an impact on the market seize), the market forecasts, and the key companies in the respective market.

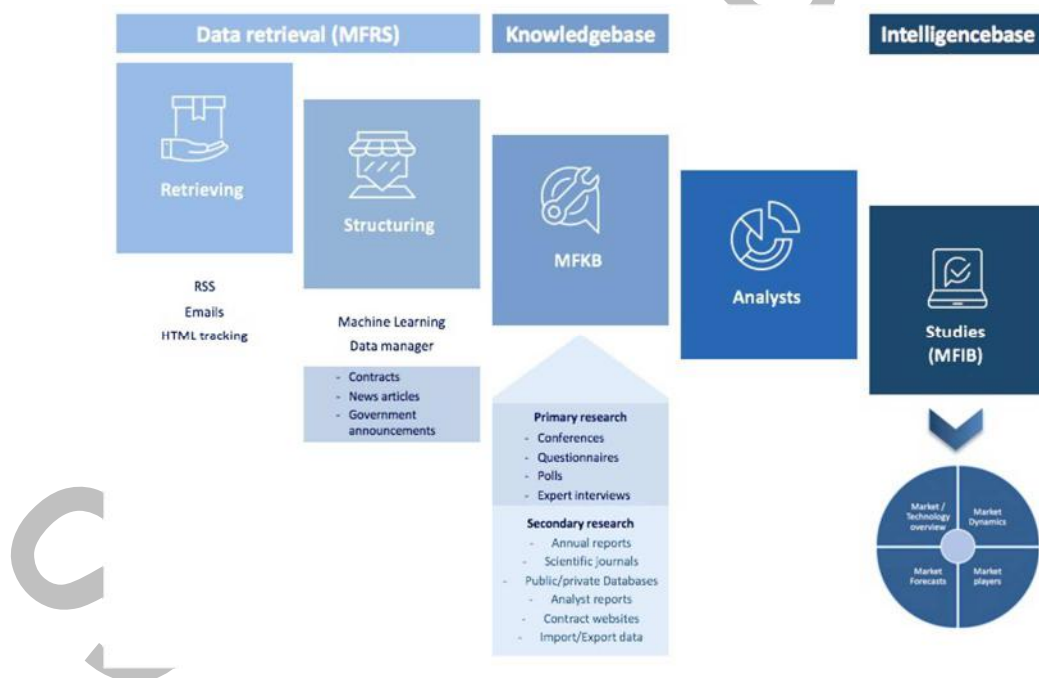


The Market Forecast methodology uses market-tailored approaches to assess the impact of new technologies, major socioeconomic or political events, or force structures in creating trends and new opportunities, or the needs generated by the existing inventories according to a capabilities-based approach. In most cases, we can base our forecast on data triangulation of requirements-, production-, and trends data, with each one of them weighing differently, depending on the market characteristics.

Unique to the defence and aerospace market is the availability of a considerable amount of information on government requirements and plans. When this information (requirements data) is available then it weighs more in market-sizing. However, when there is a scarcity of information, then the analysts will rely on trends which are based on data collected during reference years in combination with market factors, like drivers and inhibitors.

In our data structuring process, we define *programmes* for countries where we combine the requirements data from governments (customers) and production data from companies to one data set. This data set is the basis for further analysis based on *trends*. The *programmes* will in general be similar to the programmes that the defence organisations have in a country to fulfil a certain requirement, but they also could be fictitious *programs* when the requirement is not official or when it's about a civil *program*.

Since data is the fuel of forecasting, we have developed a proprietary knowledgebase and forecast tool: MF Knowledgebase (MFKB). This is part of a platform that contains a Data Retrieval module (MFRS) and the Intelligencebase (MFIB). The MFIB is used by our customers to access the studies.



Processing data in a structured manner in combination with expert procedures and skilled analysts leads to the best possible predictions, but not all the quantitative information is available for reason of protection and confidentiality, therefore forecasts, even the best-researched ones, are still exactly that - forecasts. Only the future will judge their accuracy. You should read our analysis and conclusions with an open mind and realize that unpredictable events could impact the market.

## **Impact Analysis**

In addition to the main market forecast, we discuss and analyse relevant scenarios to show what the impact of certain events is on the market. The focus is on describing cases and explaining what their impact on the market is. Where the main market forecast is based on a combination of traceable data and trends from predictable *forecast factors* so does the *Impact Analysis* which considers disruptive scenarios that are less like to happen, but with great impact if they do, such as a geopolitical event or a financial crisis reducing the availability of funding. These events are less likely, but still feasible and therefore of interest to understand the market.

### **1.4 Who will benefit from this study?**

This report is specifically intended to benefit executives in the field of land artillery howitzers, across all the tiers of the supply chain. More specifically it addresses to:

#### **Business Leaders & Business Developers**

The howitzer systems have been in the spotlight in the last two years due to the invasion of Ukraine, with the Ukrainian Armed Forces receiving large amounts of weapons and ammunition. A high-intensity warfare results in high rate of losses and consumption of ammunition.

For the defence industry and supply chain, especially the one involved in ammunition and land systems manufacturing, to address the necessary production spike it is necessary to mobilize resources and capacity that were previously not available. This is a strategic decision-making process that spans from the lower tiers of the supply chain all the way to the government bodies.

Therefore, C-level and business development executives throughout the supply chain need to have a solid understanding of the forces shaping the market and how they interact among them. Considering the urgency in the requirement for howitzer systems production and the resulting joint effort from western countries, the opportunities do not rely exclusively on the orders that companies can win, but on their ability to maximize the utility of their production lines for the general effort.

#### **Market Analysts**

Market analysts need to capture the competition and the dynamics of the market, the upcoming technologies by competitors, the preferences of the customers and the size of the market, segmented into key characteristics in order to gain a better understanding of it through different angles.





**Figure 4: US soldiers at an L119 battery fire direction centre**



Source: US DOD

### **3.3 Towed vs Wheeled vs Tracked Systems**

There is a debate on which of the wheeled or tracked artillery systems offers the most nowadays where limited funds are increasingly becoming a consideration for force planners. Except for the cases where the requirements are clearly defined, the debate will be ongoing for the foreseeable future.

Mechanized, motorized, and armoured units require increased mobility from their platforms, as speed is an important element when closing with the enemy. Being the heaviest, armoured units and mechanized infantry deploy their armour, mass and momentum against enemy fortified positions. Main battle tanks and armoured fighting vehicles are the tip of the spear, and all the supporting elements must be capable of following them in the area of operations.

The area of operations has been a key factor for several armies in determining what kind of artillery systems they will need. Mountain troops and airborne units, and other light infantry units, have opted for the towed howitzers. Their advantages include the low weight, due to the use of titanium or other metal alloys, the transportability which allows them to be carried even as a helicopter's external load, the limited space they take not only when carried but also when placed in a fire base or outpost on a mountain.

However, one drawback is the increased requirement for crew, as opposed to self-propelled ones. In the case of the M777 155mm the crew is comprised of eight soldiers and in the case of the smaller L119 105mm of six. On the other hand, the Archer 155mm SPH requires three to four soldiers, thanks to its increased automation, the M109 155mm six and the Caesar five to six. Another drawback is the lack of protection for the crew which is exposed to fire and shrapnel.

**Figure 5: French Army SPH Caesar deployed by train for the Dynamic Front '23 exercise. Trains provide a fast way of transporting heavy howitzers. However, if necessary wheeled SPH can travel long distances by road thanks to their higher average speed, low fuel consumption and maintenance.**



**Source: Danish MoD**

Self-propelled howitzers have the advantage of providing protection to their crew, but they are heavier and if the vehicle is damaged then the howitzer is out of battle as well. Nevertheless, tracked howitzers can move to any type of terrain and cross gaps or small obstacles without any problems. However, this comes at the cost of speed when compared to wheeled howitzers, at more moving parts versus the other two options, heavier weight, and the need for a more expensive and dedicated logistical and maintenance support for the platform. Finally, to transport tracked howitzers to long distances, a ground force must rely on trains or trucks, as the former cannot travel at high speeds and burn more fuel.

## 5 Market Analysis and Forecast Factors

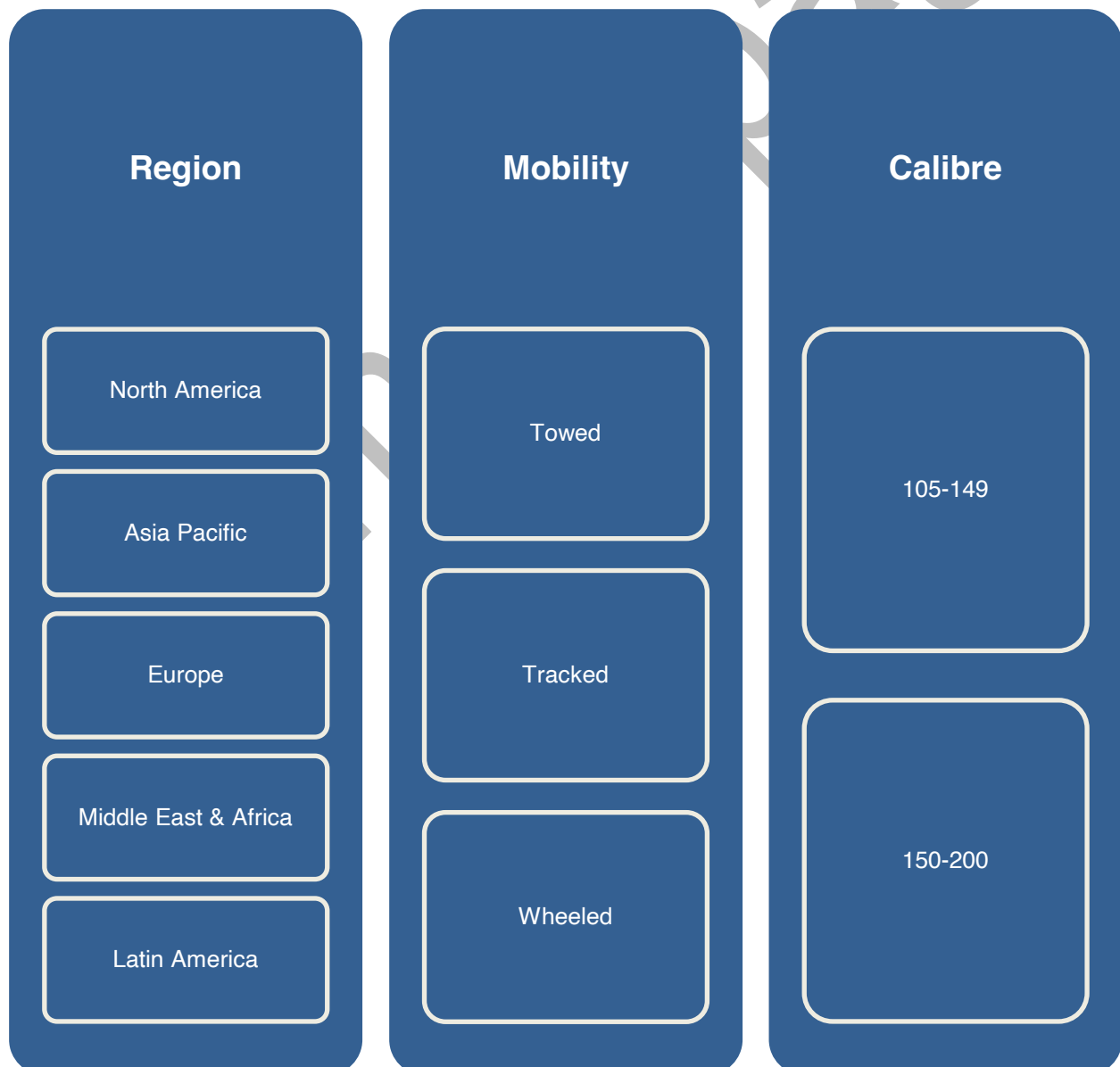
### 5.1 Market Segmentation

This chapter presents the segmentation that will be followed throughout the report and the factors that impact the market, which are in the form of drivers, trends, opportunities and challenges.

The segmentation will be based on the following variables:

- By region – N. America, Europe, Asia-Pacific, Middle East & Africa, Latin America
- By mobility depending on the platform type of the howitzers – Towed, tracked and wheeled (all types)
- By calibre, following the most commonly used calibre ranges – 105mm-149mm and 150mm-200mm.

**Figure 9: Market Segmentation and Sub Segmentation Howitzer Systems Market**





## 5.3 Trends



### Trend 1 – Automation

The procedures before the actual firing of a howitzer are complex as a large set of variables must be accounted for to strike a target with the first round. The process of organizing brigade's or division's fire plan is a process that needs to be well orchestrated. It starts early on with the collection of intelligence, logistical preparation of the operation and the outline of the plan.

Setting up the howitzers, firing and moving them quickly to alternative positions before counter-artillery enemy fires arrive is a process that requires well-trained crews and improved automation in every step.

More specifically, automation in the C2 structure to analyse and disseminate information rapidly, in the positioning of the howitzer and the entry of data received from the fire direction centre, and finally in the insertion of the projectile into the cannon.

Having the knowledge to do the above, in short time and under battle stress, is the culmination of a crew's capabilities, especially when operating in a battlefield with multiple threats. However, any degree of automation can significantly or incomparably reduce the reaction time especially against time-sensitive and moving targets, as well as reduce the crewing requirements.

## 7.2 Howitzer market by region overview

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Figure 14: Global Howitzer Systems Market Forecast to 2032 by Region [US\$ million]

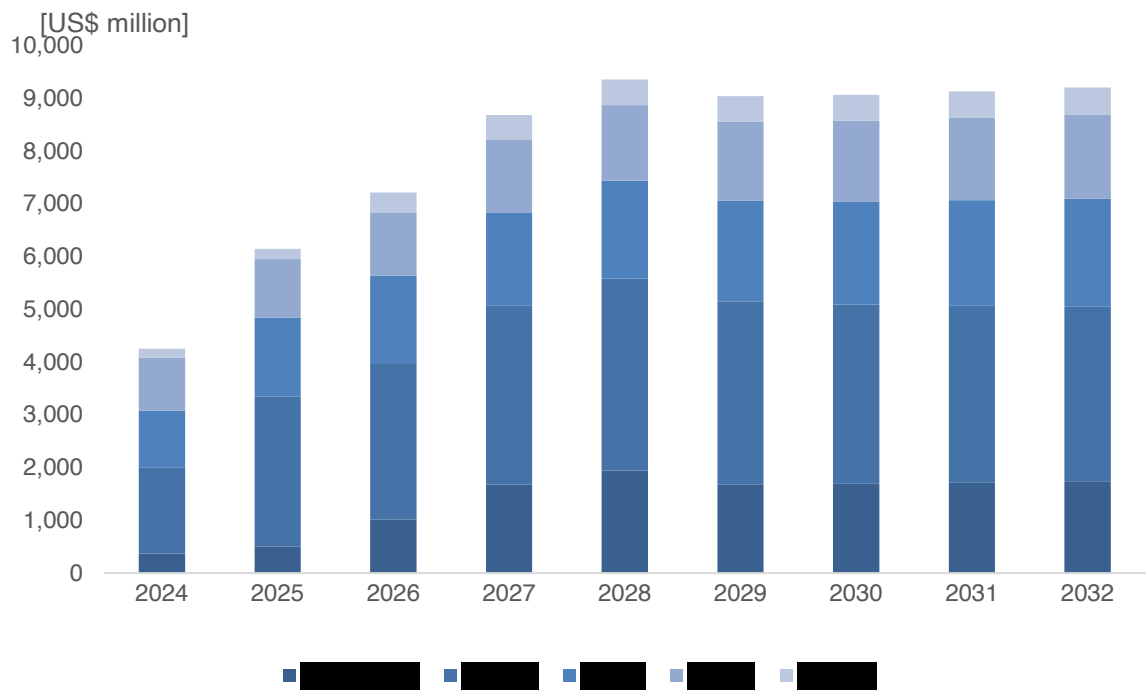


Figure 15: Global Howitzer Systems Market Forecast to 2032 by Region [%]

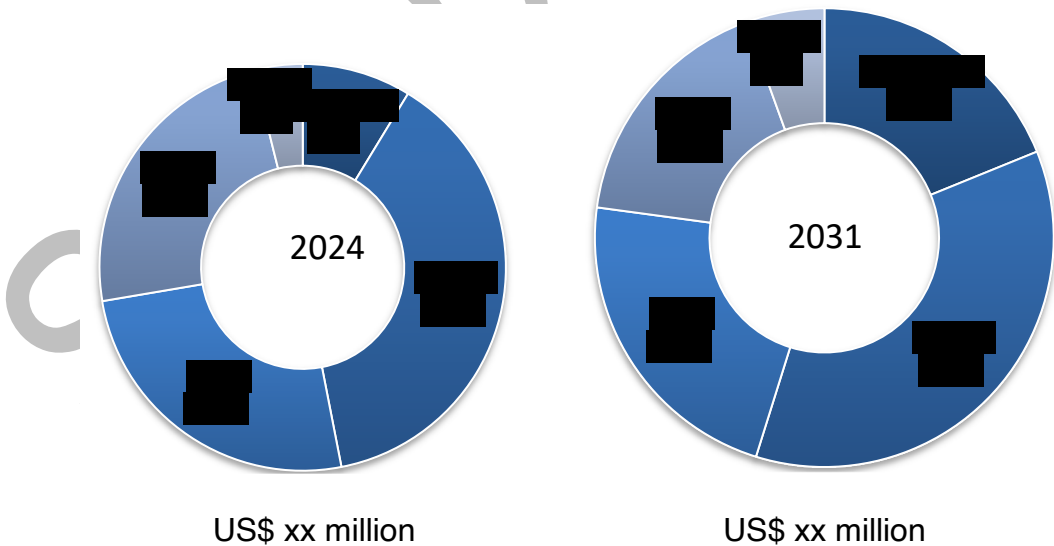


Figure 36: Howitzer Systems Market by region [US\$ million]

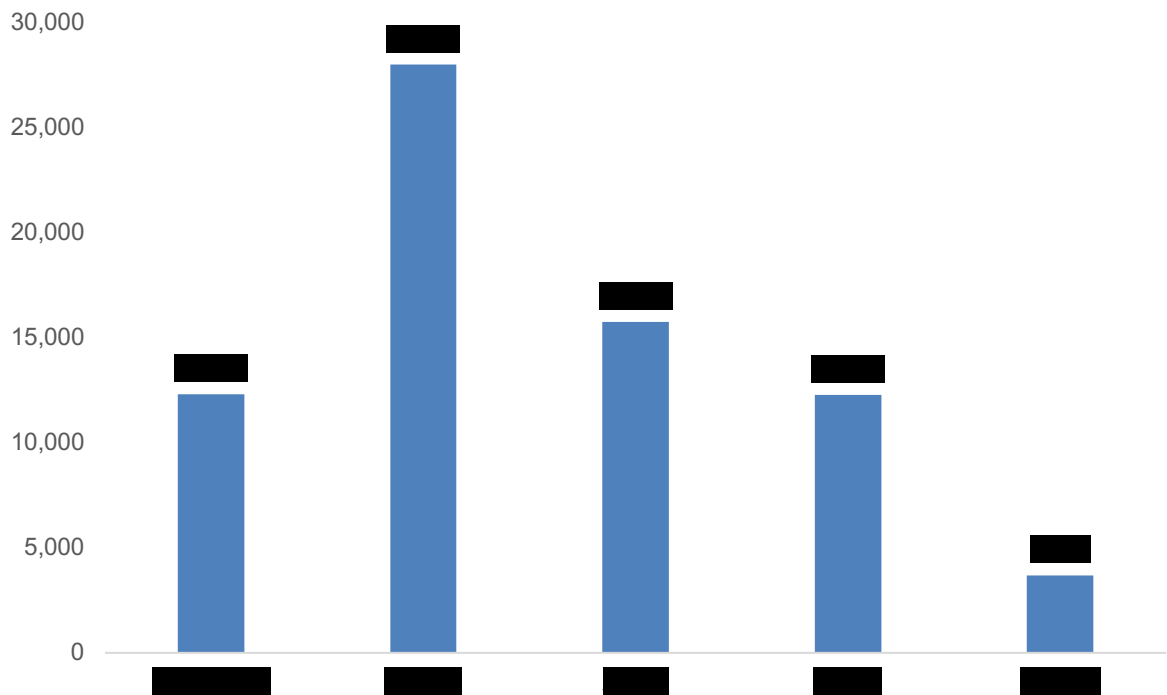
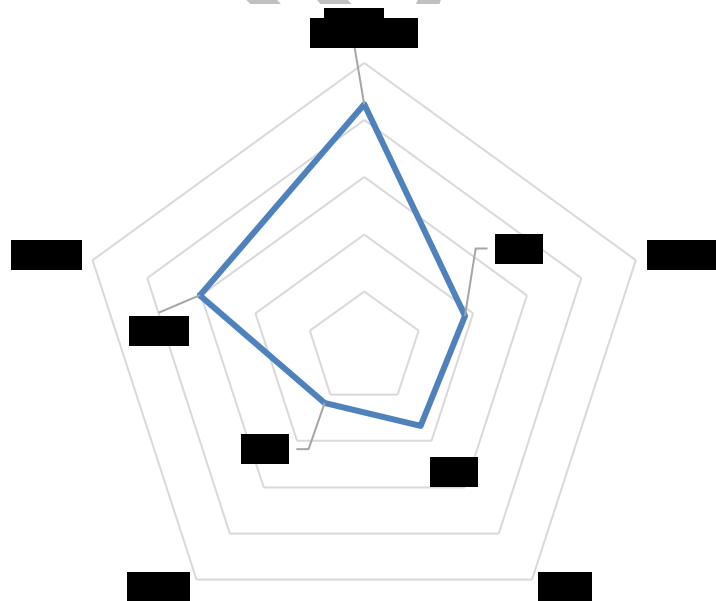


Figure 37: Howitzer systems market CAGR, 2024-2032 by region





## **11.3 Hanwha Defense**

### **11.3.1 Introduction**

Hanwha is a major South Korean conglomerate, based in Seoul, with its activities spanning across many fields of the economy, such as energy, aerospace and defence, financial services and retail. The company employs around 44,000 people in several locations worldwide.

One of its subsidiaries is Hanwha Aerospace (former Hanwha Techwin) which was established in 1977 as Samsung Precision Industry, adopting its current name in 2018 after a reorganization of the conglomerate's structure. In 2022 Hanwha Aerospace absorbed Hanwha Defense, which includes the artillery systems sector, among other ones. The K9 self-propelled howitzer has gained been a major success as it has been selected by many international customers (Poland, India, Turkey, Norway, Estonia, Australia and Egypt), including several NATO member-states, thanks to its technical characteristics and capabilities, and the market strategy.

### **11.3.2 Howitzers - Products and Services**

- K9

### **11.3.3 Recent Developments and Contracts**

December 2023: Finland and Norway, both users of the K9 SPH, have signed an agreement that simplifies the exchange of spare parts between the two countries.

October 2023: The company announced that a new batch of 18 K9 SPH has been shipped to Poland.

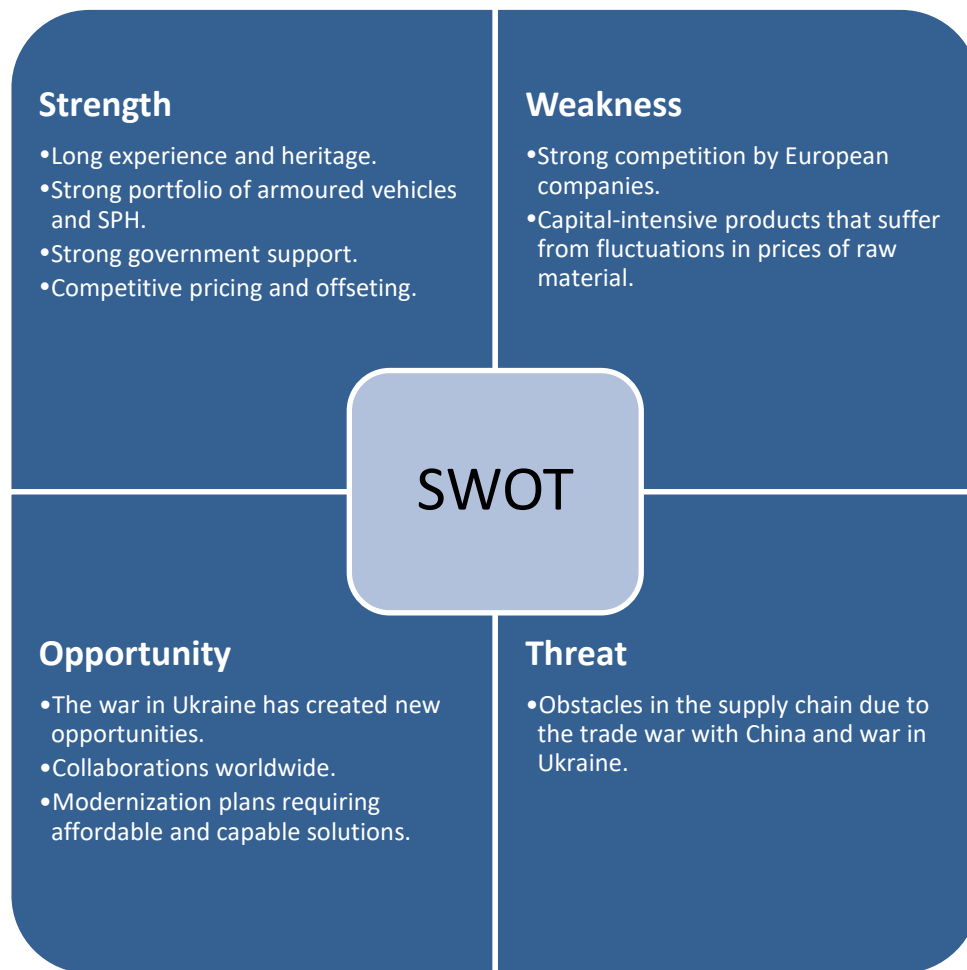
August 2022: Hanwha Defense signed a contract with Poland for the supply of K9 Thunder for a total value of US\$2.6 billion.

March 2022: Hanwha Defense and Lockheed Martin UK signed a partnership agreement to collaborate in the British Army programme for future howitzer systems.



### 11.3.4 SWOT Analysis

**Figure 84: Hanwha Defense Company SWOT Analysis**



## 13 About Market Forecast

### 13.1 General

*Market Forecast* provides intelligence studies on the Defence and Aerospace market to private and public sector organizations.

Our studies display opportunities to expand in existing markets or to develop new markets and support you in developing your market strategy.

To be able to make important business decisions you require reliable market forecasts and intelligence. Market Forecast reports provide information on stakeholders, customer requirements/potential, current inventory, available products, industry analysis, expert views and technological developments. Our research is based on a structured, consistent, and detailed research approach performed by experienced analysts.

Details on our standard research methodology are available as download on our website.

Market Forecast is a brand of the private owned company ASD Media BV and is located in Amsterdam, The Netherlands, Europe. The company exists for over fifteen years and has a long history on market research, computer models, and online products.

In our philosophy, the quality of the analyst is key for our product. Besides the unquestionable required market and analytical skills of our analysts we invest in the development of data collection and analysis technology to offer market research that is cost-effective, of high quality, up to date and instantly available.

New technology in combination with solid analyst expertise forms market intelligence that creates your competitive advantage.

### 13.2 Contact us

If you have any queries about this study, or would like any further information, please contact us at: [contact@marketforecast.com](mailto:contact@marketforecast.com)

**Address:**

Market Forecast  
Veemkade 356  
1019HD Amsterdam  
The Netherlands



## Appendix A: Companies Mentioned

BAE Systems

Elbit Systems

Excalibur Army

Hanwha Defense

KNDS – KMW

KNDS – Nexter

Konstrukta Defense

MKEK

PGZ Group – HSW

RBSL (Rheinmetall BAE Systems Land)

Rheinmetall AG

Yugoimport

Sample page



## **Appendix B: Abbreviations**

ABCT – Armoured Brigade Combat Team

AFATDS – Advanced Field Artillery Tactical Data Systems

DIVARTY – Divisional Artillery

FA – Field Artillery

FDC – Fire Direction Centre

IBCT – Infantry Brigade Combat Team

ISR – Intelligence, Surveillance, Reconnaissance

JTC2S – Joint Targeting Command and Coordination Suite

MRLS – Multiple Rocket Launching System

SBCT – Stryker Brigade Combat Team

Sample page



## Battlespace Technologies

### General

**BATTLESPACE** is an international defence electronics news service providing our readers with up to date developments in the defence electronics industry. The publications and associated e-mail services reach an international readership across the world. Our readers range from military electronic specialists through defence research establishments to the defence industry. BATTLESPACE provides a layered news service to its readers. More on: <https://battle-updates.com/about-us/>

### Contact

If you would like to purchase this study or need any further information, please contact:

Julian Nettlefold

Tel/Fax: +44 (0)207 6105520

Mobile: +44 077689 54766

e-mail: [j.nettlefold@battle-technology.com](mailto:j.nettlefold@battle-technology.com)

