

# Modular Ground Based Air Defence (Modular GBAD)

Letter of Intent <sup>1</sup> signed	Memorandum of Understanding <sup>2</sup> signed	Delivery
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## Participants



## What is a Modular GBAD?

The Modular Solution for Very Short Range, Short Range, and Medium Range Ground Based Air Defence (Modular GBAD) High Visibility Project<sup>3</sup> provides its participants with a multinational framework for the potential development and procurement of a capability, responding to air threats along the entire very short, short and medium-range spectrum. The project will implement a systematic modular approach, with the objective to equip participating Allies with versatile, scalable solutions. This will in turn allow them to create threat-tailored ground-based air defence force packages for individual operations.

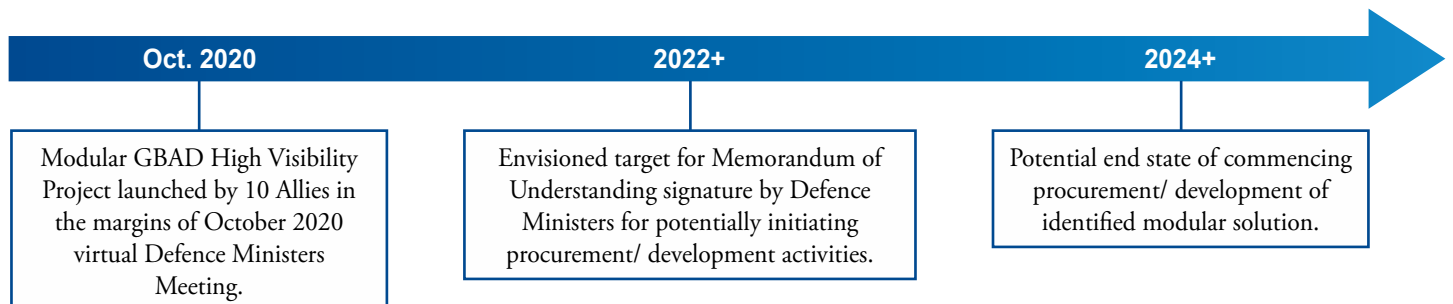


Very short-range, short-range and medium-range systems currently in use. From left to right: Crotale (France), NASAMS (Norway), Stinger (United States) and SPADA (Italy).

## Multinational effort

In 2018, Allied National Armaments Directors initiated the development of a structured approach for facilitating multinational cooperation in key capability areas. The response to this aspiration has been the creation of the Enabling Multinational Cooperation in the CNAD<sup>4</sup> work strand. The approach has been validated in 2019 through a first pilot case exploring cooperation opportunities in the area of GBAD. One of the cooperation sub-areas investigated was the development and procurement of short, very short, and medium range GBAD capabilities.

Following further analysis and negotiations, Belgium, Denmark, Germany, Hungary, Italy, Latvia, the Netherlands, Slovenia, Spain and the United Kingdom launched the multinational Modular GBAD High Visibility Project through the signature of a Letter of Intent in the margins of the October 2020 Defence Ministers Meeting. Following the signature of the Letter of Intent, the 10 participating Allies started working on the development of a detailed set of common requirements and a corresponding Memorandum of Understanding. The latter will provide the legal basis for the potential development and procurement of the actual modular GBAD capability.



1 Initial non-binding document outlining participants' will to explore the area in question further.  
 2 Legally binding document specifying details of cooperation.  
 3 High Visibility Projects are multinational initiatives tailored to address key capability areas, usually launched at Defence Ministers' level.  
 4 Conference of National Armaments Directors – senior NATO committee responsible for promoting armaments cooperation among nations.

## Why is it important?

GBAD capabilities are crucial for protecting NATO populations, territory and forces. As such, it is vital for Allies to be equipped with effective cutting-edge GBAD capabilities able to defend against increasingly sophisticated air threats. Allied GBAD forces currently use a broad set of systems for different ranges, depending on the threat. This situation complicates the provision of flexible and adaptive GBAD forces, and contributes to interoperability challenges due to the use of different systems across the Alliance. This is especially evident during joint missions and exercises. The Modular GBAD solution aims to address these issues by simplifying and streamlining the inventory of participants' GBAD assets. As a result, it will contribute to significant increases in operational flexibility, scalability and interoperability among Allied GBAD forces.

## How does it work?

The Modular GBAD High Visibility Project aims to facilitate the potential development and acquisition of a GBAD system that is designed entirely modularly, around a common Fire Distribution Centre. This approach will enable participants to mix and match individual components to easily create threat-tailored GBAD force packages, based on a single system that can cover the entire very short to medium-range threat spectrum. Furthermore, it will considerably increase participants' ability to seamlessly integrate national modules into multinational GBAD force packages.

### Did you know?



1. For NATO, medium range is defined as up to 50 km. As such, the modular solution covering the very short to medium-range spectrum will have a reach of up to 50 km.
2. Currently existing very short-range GBAD capabilities are often in a form of so-called "MANPADS" (man-portable air defence systems). This means that they are hand-held and soldiers carry them on their shoulders. These are most often used to tackle low-flying enemy aircraft, especially helicopters.
3. In recent years, NATO has been working on strengthening its air and missile defence capabilities. The Modular GBAD multinational project further highlights Allies' commitment to this mission.