

## Marketing-Report: Team Deutschland

### Modularer Fähigkeitsträger

Zukünftige Kampfboote im Spannungsfeld zwischen Landes-Bündnisverteidigung (LV/BV) und Krisenmanagement.

#### Autorenteam des „Team Deutschland“:

Hagenuk Marinekommunikation GmbH, HENSOLDT Sensors GmbH, TAMSEN MARITIM GmbH und PLATH Corporation GmbH



We are happy to provide you with an English translation of the article.

## Modular capability platform

### Future combat boats in conflict areas between national coalition defence and crisis management

'Team Deutschland' author team:

Hagenuk Marinekommunikation GmbH, HENSOLDT Sensors GmbH, TAMSEN MARITIM GmbH and PLATH Corporation GmbH

Planning to purchase floating platforms is generally a longer-term undertaking with regard to the armament acquisition process and runs contrary to the volatile geopolitical security situation that has become the new normal over the last ten years.



Source: TAMSEN MARITIM GmbH

On the one hand, the procurement agencies must anticipate geopolitical developments when formulating their capability requirements, and, on the other hand, the procurement officers must also consider the status quo of daily operations of the equipment users. New ship designs like the German MKS 180/F 126 face this challenge with an increased modular design, which promises a vastly higher degree of operational flexibility.

'Team Deutschland' – a consortium made up of several German small and medium-sized enterprises (SMEs) – took up this demand for greater flexibility to design a modular capability platform for the German navy, which could be used within the framework of national and coalition defence as well as for national risk and crisis management. This capability platform also provides growth potential to counteract future challenges.

The fundamental conviction of the team is that currently available combat boats in this size class neither do justice to the threats and requirements of today nor of tomorrow.

One current example of the ever-changing situation with regard to tactical threats is the first massive use of drones in the conflict in Armenia. Available reports and videos show that air defence systems which are considered modern can be successfully combatted using drones – despite activated radar systems. This threat is real and exists not only within the framework of maritime area access/area denial (A2AD) scenarios, but also as part of asymmetrical conflicts involving well-equipped militias without their own naval capabilities. Due to the range of these drones, this type of aerial attack is also a serious potential threat to seagoing units. At the moment, the boats available on the market – in the opinion of 'Team Deutschland' – do not offer any effective approach to counteract these threats.

## Key technologies from Germany

The future threat situation is the result of far-reaching 3D surveillance, precise and low-delay point-to-point combat and increasingly tight monitoring – for example, by local electro-optical sensors. This requires a smart and modular intelligent combat platform. In this regard, the involved companies put their expertise in the realisation of digital combat vehicles into the design of the modular capability platform. These new dangers are all the more relevant for conflict areas categorised as 'confined and shallow waters' (CSW), which, for the German Navy, have traditionally been in the responsibility of the Einsatzflottille 1 (EF 1) in Kiel. This is even more so underlined as the NATO Centre of Excellence for Operations in Confined and Shallow Water (COE CSW) is located in same naval base as the EF 1 headquarters. The Baltic Sea region is once again coming into focus as part of national and coalition defence. With the geographic peculiarities of this region, a smart and modular intelligent combat platform can live up to its full potential.

From the very beginning, 'Team Deutschland' has considered the ship platform as a means to this purpose and developed it as the nucleus of the term 'capability platform', consistently developing it with modularity in mind. Thanks to exchangeable and/or combinable (modular) capabilities, this platform offers a durable and effective foundation for current and upcoming operational scenarios that is unmatched by any other market available platform. The needs of special forces are initially at the forefront of the team's considerations.

The 'base configuration' has already been planned with the fundamental intelligence and weapons systems needed for a deployment.

The concept is based on overall reduced ship signatures, in particular with regard to radar, infrared and acoustics. Sensor systems with a low profile integrated in the superstructures (e.g. AESA radar surfaces recessed into the ship's side with 120° of horizontal cover each) and retractable passive sensor systems support this approach. The resulting reduction in the ship's own signature and the capability of passive intelligence gathering in broad ranges of the electromagnetic as well as optical spectrum ease undetected movements and tactically autonomous operations.

The platform's shipbuilding design approach represents a passive form of self-defence. Thanks to low signatures as well as a low height above the waterline, the capability platform is an extremely hard target for classic anti-ship missiles. The integrated electronic support measures and electronic intelligence systems are intended to aid in self-defence against steered loitering munitions. They provide intelligence with regard to radio communication accompanying this weapon type in order to enable the platform's crew to initiate suitable countermeasures.

# Intelligence capability

The modular integration of various sensors – such as AESA radar, EO sensors and laser, infrared and radar warning systems – for a combined situational picture, together with the available effectors (depending on the module configuration), enables an extraordinary level of self-defence capabilities and firepower that is unique among combat boats.

Electric support measures and electronic intelligence systems already planned for the German Navy offer capabilities that other nations would more likely attribute to signals intelligence (SIGINT) ships which offer additional capabilities in terms of self-defence. Doing so results in the capability of evaluating intelligence data either autonomously on board (for missions, a single unsupported platform) or to make it available to other units as part of a network through modern communication technologies.

The basic concept of a multifunctional mission deck for the new German frigates MKS 180 /F 126 was also included in the concept of the capability platform and designated for equipment such as dinghies, smaller autonomous underwater vehicles (AUV) or underwater scooters without aids. The mission deck can still serve as an installation location for new and/or expanded effectors and non-line-of-sight (NLOS) missiles or as an indirect fire support weapon. Additionally, the mission deck – with the right load-bearing capacity – should offer the possibility of installing future systems on standardised frames, if necessary on heavy cargo unit (HCU) pallets. The platform's on-board systems will provide an appropriate supply for the mission load.

Combining multiple capability platforms in various module configurations results in military projection capabilities previously reserved only for larger boats and ships. This – combined with air transport on A400Ms – means that the German Navy and the Bundeswehr can realise significantly faster reaction times, because there is no need for a lengthy transit phase before a deployment. This is a major advantage in times where conflicts can arise as quickly as they sometimes end.

Great range and high speed, combined with a mission endurance of several days in the area of operation, as well as the ability to be air-transported, enable high-end platforms – such as the K130, F125 or, in future, the MKS 180/F126 – to be kept available for other operational uses by the German Navy.



Source: Shutterstock

## 'Off the shelf' vs tailored

According to the assessment of the team, the use of 'off-the-shelf' military units is not a sustainable interim solution for the special forces of the Bundeswehr. The systems as well as the platforms would have to be heavily adapted to the current needs, which would entail a great amount of effort.

'Team Deutschland' stands ready for the further development and implementation of a sustainable, smart and modular intelligent combat platform that is up to the challenges of modern operational challenges.