



# MISSILE DEFENCE ADVANCES TO BETTER PROTECT EUROPE

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INSIDE COVER



Finland fired two AMRAAM® AIM-120C7 missiles from a NASAMSTM canister launcher during the international Thor's Hammer exercises in Sweden.

In an increasingly difficult security context, NATO and its members are working around the clock to protect against threats that seek to disrupt European security and safety.

Russia's agitations, from the annexation of Crimea to its testing of its weapons in Syria, have sent a message to NATO members. In the Middle East, Iran has the largest ballistic missile arsenal in the region, capable of reaching Turkey and Eastern Europe, and non-state actors like ISIS have unknown capabilities but could reach Europe if they acquire missiles. While we are all working to avoid any form of conflict, the risk remains real.

A wide range of missiles could be used against Europe, including higher-tier, exo-atmospheric, long-range missiles and lower-tier, shorter-range rockets and missiles launched from aircraft, helicopters and unmanned aerial vehicles (UAVs). These weapons affect the entire continent, not just the countries closest to conflict zones.

The best response is built on interoperability, with a "layered defence" that combines different types of protection to intercept and eliminate attacks coming at varying speeds, altitudes and distances. By connecting their missile defence systems, NATO member states can share information, make collective decisions and take swift action, whether through land- or sea-based systems.

The result is a shield of protection necessary to ensure European security and safety.

An example of layered defence might involve a missile launched to target a central European country that "en route" would travel over southern or eastern European countries. Interoperable, layered systems work together to detect the threat and use defensive systems from multiple locations to determine the best way to eliminate it, rather than rely upon only one country's capabilities. This means that the missile can be intercepted and destroyed well before it approaches its target using the most effective method.

We already see many benefits from interoperability. Five NATO members currently use the Patriot missile defence system manufactured by Raytheon, with Poland potentially joining in the coming years. Turkey requested help to protect itself from the threat of Syrian missile attacks, so NATO installed Patriot systems from Germany, the Netherlands and the United States in Turkey and connected them to the wider protective system. It provided military commanders across Europe with an early

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warning and defensive capability if a threat developed and needed to be addressed immediately, either in Turkey or if as part of a wider attack.

In addition, Raytheon's SM-3® missile defence system is already deployed on U.S. Navy ships in the Mediterranean as part of the Aegis programme. NATO announced that the first Aegis Ashore site had become operational in Romania using land-based SM-3 missiles. Shortly after, Poland and the United States held a ceremony at Redzikowo to mark the beginning of the second site construction. The land-based system is part of NATO European Phased Adaptive Approach (EPA) programme to protect allied member-states from missile attacks. The Polish site will host the fire-control installation with the land-based Aegis C3 suite and several Raytheon SM-3 missile launch modules. Other countries are now weighing their own investments to complement these systems.

In addition to providing better security, interoperable systems provide significant cost and efficiency benefits. User nations can take advantage of a mature training and support structure,

learning from each other's best practices. And at a time of new spending pressures as a result of the refugee crisis and continued austerity in some countries, the cost savings from sharing missiles and components, conducting joint testing exercises and coordinating on logistics and maintenance are considerable.

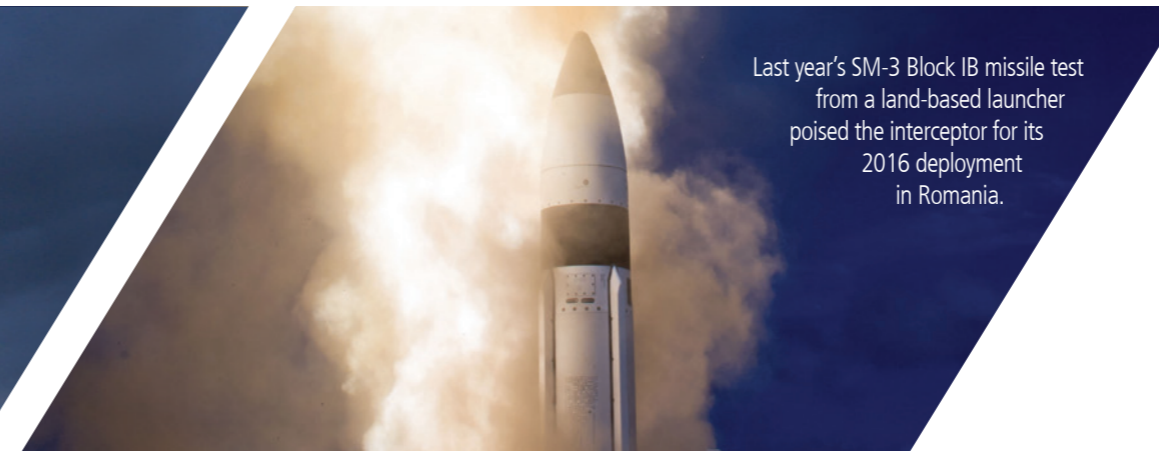
For the past 30 years, the United States has led missile defence efforts in Europe. But Europe's commitment to missile defence is being tested, and it will be an important topic at the upcoming NATO Summit in Warsaw. The nature of the threat to Europe requires urgent action and smart funding commitments. Investing in development projects that may never be operational, even after decades of research and development, is a luxury that Europe cannot afford. Similarly, Europe cannot afford an untested system that lacks broad international support and can potentially drop a booster rocket on the area it is supposed to be defending. Instead, Europe needs immediately available, well-connected systems that can be continually upgraded, while maintaining their compatibility with existing technology. That will ensure Europe has a strong, effective network to protect its people across the continent, now and for decades to come. ■

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A May 2014 test from the Aegis Ashore weapon system proved that the SM-3 missile can be land- or sea-based.



Last year's SM-3 Block IB missile test from a land-based launcher poised the interceptor for its 2016 deployment in Romania.



To learn more about how Raytheon can help protect Europe, visit us online.

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