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US IBCS CONFIGURATION FOR THE POLISH PATRIOT SYSTEM

The "US configuration for the Patriot air/missile defence system" in case of the Polish Wisła programme translates into the Polish system including the IBCS solution. In 2022, when the first batteries are scheduled for delivery, IBCS software component of the Polish system would be identical to the one used by the US Army. The batteries, on the other hand, are to be configured in line with the Polish RFI that has been known for some time now.

The latest news concerning the Wisła programme was presented last Tuesday by the Deputy Head of the Polish Ministry of Defence, Wojciech Skurkiewicz. The main goal of the Wisła programme undertaken by the Polish Ministry of Defence is to acquire an air/missile defence system, including a medium range missile defence solution. Back in 2015, the Polish MoD decided to base the Wisła system on the US-made Patriot solution. Then, in July 2017, a decision was made to divide the whole procurement into two phases. In late January a negotiation procedure was finalized, with a goal to arrange the content of the LOA (Letter of Offer and Acceptance) agreement for the Phase I. The negotiation involved the US government and it was a part of the FMS procedures.

Skurkiewicz said the following on Tuesday: *After the US offer cost was analysed, a decision was made to amend the Phase I configuration, so that it resembles the typical US Army configuration, and to use the FMS only to acquire the key element of the system. Meanwhile, the remaining elements will be acquired within the framework of national procedures, from the Polish defence industry.*

The statement referring to the *"typical US Army configuration"* has raised some questions followed by a certain degree of further speculation: how deep the changes to the original acquisition plans are going to be, in comparison to the final agreement?

Defence24.pl found out that no major changes shall be expected. This is because the above pertains to the IBCS (Integrated air and missile defense Battle Command System) element, rather than the Patriot system configuration. The IBCS solution developed by Northrop Grumman is bound to become the primary air defence management asset in the future - both in the United States of America, as well as in Poland. Poland is going to receive IBCS variant equivalent to the one used by the US Army in 2022, when, as Skurkiewicz said, both Patriot batteries belonging to Phase I of the Wisła programme are scheduled for delivery.

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The "American configuration" does not mean that the Wisła system battery structural composition would be identical to the Patriot battery in the US Army, as we have found out. No changes would occur, when it comes to quantity and type of the Patriot system elements that are being procured via

the Wisła programme.

The release issued by DSCA in November 2017 mentions four AN/MPQ-65 radar packages, four Patriot command and fire control stations, four Radar Interface Unit systems plugging the Patriot radar into the new generation IBCS IFCN, 18 Launcher Integration Network Kits (LINKs), including 2 spares (used to embed the launchers in the IFCN system) and sixteen M903 launchers. The information published also suggested that the Polish package includes 208 PAC-3 MSE missiles plus 11 test effectors, as well as IBCS components, including software, 14 Engagement Operation Centre units, 15 IFCN units, four Electrical Power Plant III units and five MIDS-LVT terminals that are to make it possible to connect the whole system to the Link 16 communication suite.

All of the aforesaid elements are to be placed within the Patriot system batteries procured during the Phase I of the Wisła programme. And the Polish Ministry of Defence did not resign from acquiring any of the components listed above. However, some of them are planned to be manufactured domestically, this, for instance, applies to vehicles and containers.

No information has been released so far, with regards to the pricetag that Phase I of the Wisła programme is going to entail. DSCA release issued in November mentions the maximum contract value though, placing the price at the level of USD 10.5 billion. We also know that the price was renegotiated, and now it is significantly lower. This is a typical scenario in case of the FMS acquisitions. The amounts mentioned by the Polish media, and by the politicians too, range between 4.5 and 6 billion dollars.

The US military remains in possession of 15 “operational” Patriot battalions (squadrons) now. Each of the battalions includes four batteries. Each battery includes six launchers, most of which use the PAC-2 missiles (usually 4 - Poland is not procuring the said effectors). The remaining launchers are coupled with the PAC-3/PAC-3 MSE missiles. The battery also includes a sector scan radar - the only model that is integrated with the Patriot system at the moment. Further components are the system-specific command and control system, i.e. Antenna Mast Group, BCP battery command position or ECS control station being the fire control asset.

Higher level command assets are placed within the battalion/squadron structure, this includes ICC and TCS coordination, control and command elements that allow the user to obtain information from external sources. Thus, Patriot units usually are grouped into larger elements (e.g. battalions). Introduction of the DPICC stations enhances the autonomous profile for the Patriot batteries of standard configuration.

In the future, after the system becomes a part of the IBCS network, the organizational structure would be changed to a major degree. Most of the command and control elements that are used in the contemporary Patriot systems would be decommissioned. ECS control station is going to be the sole element that is to remain in service, as an interface for the Patriot-standard radars. The future 360-degrees coverage radars that are desired by Poland too (Wisła Phase II) are going to be plugged directly into the IBCS network. However, the Americans have not selected the new radar type yet. On the other hand, radars and launchers will become a part of the IBCS network which would utilize unified and homogeneous Engagement Operations Centres in three variants: Current Operations EOC, Engagement Operations EOC and Future Operations EOC. Thus, no requirements will emerge to maintain a rigid battalion structure.

IBCS use will make it possible to use data from external sources even with a small Patriot unit deployed in field (for instance, radar and 4 launchers, as in case of the Polish fire units). Thus, the fielded unit will be autonomous and it may work together with other air defence assets, including the SHORAD system, provided that the aforesaid external elements are plugged into the network.

Poland has been willing to procure Patriots integrated with IBCS since the very beginning. The FMS request included 14 EOC components: six Engagement Operations EOC, six Current Operations EOC and two Future Operations EOC. The available information suggests that a single EOC is required as a bare minimum for a single fire unit. At least two EOC units are required at the higher (above all - battalion) level. The Polish structure is going to include two “current operations” and two “engagement operations” centres per unit (8 in total), according to the FMS request. Another two packages of this kind are also placed at the battery level. Poland is going to procure additional two “future operations EOC” components, destined to be used for operational planning. The Polish structure, even if shaped differently than described above, will still be more expansive than the American solution.

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