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AE MicroMacro - Japan

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JAXA's European expedition

What happened? [On Jun 14th 2019 Japanese Aerospace Exploration Agency \(JAXA\) and The European Space Agency \(ESA\) signed a cooperation agreement on the X-Ray Imaging and Spectroscopy Mission \(XRISM\).](#) This is [the first contract signed between JAXA and an European partner since 2015](#), and it's one out of total three signed in June 2019. [The second one was signed with the German Aerospace Center \(DLR\) and the last \(but not least\) with the French organization Centre National d'Etudes Spatiales \(CNES\).](#) European Union hasn't been an outer space for JAXA so far, but with those agreements the Japanese have recently significantly extended their presence on the European soil.

Who is who? JAXA was established in 2003 and [has an operational budget of 1.4bln USD.](#) It is one of the most influential space organizations in Asia, competing with [Indian Space Research Organization \(ISRO\)](#) and [China National Space Administration \(CNSA\)](#) with [budgets respectively 1.4 bln USD and 2.0 bln USD \(data for 2017\).](#) Two previously mentioned European space agencies DLR and CNES are associated with ESA (through partnerships concluded by their mother countries). ESA manages the second world's biggest space budget of 6.1bln USD ([the richest NASA had 19 bln USD in 2017](#)) and has 22 member states. [Poland became an ESA member in 2012](#) and [contributes 30 mln EUR annually.](#)

Why it matters? Poland is the third youngest member of ESA, and has little experience in the institutionalized space sector. [The Polish Space Agency \(POLSA\) was founded in 2014 and was equipped with a modest budget of 2.5mln USD in 2015.](#) Three years later the organization prepared [The National Space Program worth more than 72 mln USD.](#) Since it's establishment [JAXA has entered into the cooperation with Swedish Space Corporation \(SSC\), Russian Space Agency \(FSA\), Swedish National Space Agency \(SNSA\) – at the time of signing the agreement Swedish National Space Board \(SNSB\) – Italian Space](#)



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Agency (ASI), Norwegian Space Agency (NSA), and Netherlands Space Office (NSO). [Polish authorities would like to transform POLSA to more expert and mature agency](#) - the question is if JAXA could play any role in this process.

Bigger picture. There are several key factors shaping the current situation in the space industry. One of them is ["space race" among previously mentioned nations](#) (in various configurations), but with the leading role of NASA, and growing position of CNSA - especially after [Change 4 \(Chinese probe\) landing on the dark side of the moon](#). There are also several smaller and bigger (in terms of international scale) projects such as [The Martian Moons eXploration \(MMX\)](#) bounding JAXA with CNES and DLR, where both agencies provide [equipment \(CNES part\) or conduct studies of the rover for the future MMX mission \(DLR's part\)](#). Those and other multiple projects are driven by correlation between ambitions of the states and a private capital strategic goals. Global space industry market grows - [it's value is forecasted to increase from 360bln USD in 2018 to 558bln USD by 2026](#).

Why it matters for Poland?

POLSA is a young agency in comparison to the European counterparts. Due to insufficient funding, the agency should mainly focus on selected areas such as monitoring ongoing international projects and projecting the future shape and size of the Polish market. [Poland also was granted a special treatment by ESA](#). The question is about using this advantage in practice. POLSA doesn't have (so far) closer relations with JAXA but several factors could create a suitable ground for future backstage contacts and could become driver of the stronger cooperation: - 1) growing market combined with newly announced JAXA's projects, 2) availability of the excellent Polish engineers, ([who already won several international competitions](#) related to space engineering and designed infrared detectors [applied in the NASA's Curiosity rover](#)). Especially worth attention is that Polish engineers might successfully compete with the DLR's specialists working on a part of the MMX project.