

Fact sheet



Independent Software Verification and Validation (ISVV)

Overview

Independent Software Verification and Validation (ISVV) is an engineering practice intended to reduce the risk of problems/failures being propagated through the software life cycle and reaching the final product. This risk reduction is achieved by having an organization, independent from the software developer, performing verification and validation of critical artefacts – from a risk point of view – that compose the software product.

Learning from the past

Critical examples from the past – such as Ariane 5 rocket failure in 1996, caused by a software bug leading to loss of over 370 million USD in satellites and hardware – led to a hard-earned understanding of the importance of independent verification and validation.

ISVV market in Europe

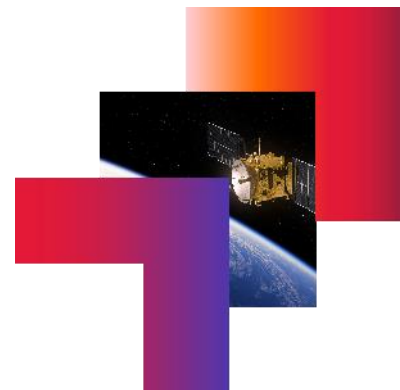
There are quite a few established ISVV providers in the European market, however space industry's demand for these trusted ISVV suppliers is already higher than their availability – and the demand for ISVV, especially for category A software, is steadily growing. There is lack of flexibility in service provision related to timing and smaller or early-stage projects of ESA or primes.

Our expertise and experience

In December 2025 CGI Estonia kicked off competence development project in the ISVV domain with partnership of **Huld**, **N7Space** and **Sener Aerospace**. The project is financed and strongly supported by European Space Agency.

By the end of the project CGI Estonia objective is to become credible ISVV provider in the space market having strong in-house competence in performing ISVV for Category A, B and C software.

Well-known software developer in Space and Defence domain with over 35 years of experience, **Huld (GoFore)**, having ISVV as one of their key expertise areas, provides consulting during the whole project and runs a lightweight training exercise for CGI Estonia to assess the readiness of CGI team to perform ISVV.



CGI Estonia

CGI Estonia has **more than 15 years of solid track record and experience working in space domain** by focusing on mission-critical software and systems, cyber security of ground and space assets and developing, deploying and maintaining platforms to handle large mission-related datasets. Through tight cooperation with ESA and other actors in space domain CGI Estonia has obtained a good understanding of software criticality in space sector and space-industry specific knowhow that strongly supports our ISVV service quality.



Polish software engineering company **N7Space** who has focused on the development of on-board software with ECSS criticality B, provides its CANopen library (Cat B) that will be ISVV-d by CGI Estonia.



Sener Aerospace company will use CANSW in their ASTRIS project, the outcome of which is used in the Ariane 6 launcher. Sener role in the project is to give the feedback to CGI's Verification and Validation findings from the perspective of their project.



In the last part of the project, CGI will perform a **delta ISVV for libmCS** – this mathematical library for critical systems shall undergo the changes that would make it relevant for category A software ISVV experience for CGI Estonia ISVV team.

Building in-house onboard software ISVV process and maturing the company's competence is a significant investment that needs a systematic, standards-driven and strongly technical approach. CGI Estonia with its solid space industry-specific knowledge has a strong will and a concrete plan in the form of this proposal to become a credible player in ISVV domain

Get in touch for an introductory session and more information:



Sille Kraam

Director Consulting Services in Space and Earth Observation, CGI Estonia

sille.kraam@cgi.com

[LinkedIn](#)

About CGI

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