

The objective of CARES (Certification Assessment Requirements for ESA Software) is to produce a generic scheme for the software related aspects of certification of space systems.

This is achieved by collecting and analyzing information about existing certification bodies and standards, plus a detailed analysis of the possible contribution to certification of different RAMS techniques. Based on this a generic scheme is defined through 3 outputs:

1. Development requirements consisting of software engineering requirements for the development of software as part of a space system to be certified, and certification requirements that the project or system must comply with to allow the system to be certified. These requirements have been defined as a tailoring of ECSS-E-40B and ECSS-Q-80B with extensions to cover two other key standards, DO-178B and IEC 61508.
2. A generic certification plan describing the processes to be followed, and its inputs and outputs, for the software related aspects of the certification of a space system.
3. Requirements for the accreditation of organisations or personnel supporting the certification process.