
Assuring safety-critical software for mission-critical applications



Software has become a critical element of our day-to-day life and it will continue to play an ever larger part in our future as we look to life-changing initiatives such as smart cities, autonomous vehicles, and connected healthcare.

But how can we trust this software to behave as intended, in a reliable, safe and secure way, every time – particularly where mission-critical applications are involved?

Your trusted partner

tpgroup has provided independent assurance of safety-critical software for almost 30-years.

This has included the independent assurance of the tactical processor software used on the Wildcat, Merlin and Super Lynx helicopters for Leonardo for over the last 10-years.

Recently, Leonardo further awarded **tpgroup** with two packages of independent software assurance work to support the upgrades to the tactical processor for the Super Lynx and Wildcat helicopters.

Features of our approach

All airborne systems are required to demonstrate compliance with airworthiness regulations, before they are certified to fly.

In providing an outsourced capability for independent software assurance, such as the tactical processor to Leonardo, **tpgroup** delivers the following approach:

- Planning and implementing progressive verification and validation in terms of software levels (unit, system & integration) and methods (demonstration, test, analysis, inspection and special qualification methods)
- Developing test-cases based upon requirements and use-cases
- Assessing software requirements, architectures and standards to determine whether they are fully defined and implementable
- Assuring software functionality, performance and interoperability against architecture, requirements and standards in a series of iterative stages (either manual or automatic)
- Using automated testing to reduce resource burden, and increase detection, coverage and speed.
- Implementing tailored reviews to assess progress and quality across the lifecycle
- Maintaining records and trace, analysing results and non-conformances

tpgroup within the Defence sector

Defence is at the heart of our operations.

tpgroup has designed, built and supported mission and safety critical systems in the Defence sector over 60-years.

We draw upon our unique heritage to provide through-life services to Defence, and other similarly highly-regulated programmes, to enable them to transform their enterprise and evolve their own systems and services.

For further information

If you would like to find out about our capabilities across the markets we serve, please go to www.tpgroupglobal.com