

## Challenging Obsolescence

Oxley has many years' experience of working within the military market, this includes working in partnership with customers to protect them from the impact of obsolescence.

Oxley had a requirement for filters as part of the system for locating hostile artillery fire through sound ranging arrays which use microphone clusters to precisely mark enemy positions. The required filters were no longer manufactured, and the original materials were no longer available. Oxley re-engineered the filter - developing, testing and qualifying the solution to restore stability to the supply chain and guarantee the operational integrity of the system.

The Oxley team frequently has requirement to source and qualify new materials as supplier product development and legislation bring materials to the end of their life cycle – undertaking the lengthy process of development, qualification and testing required for a high reliability product in the intensely demanding military sector. A typical timescale for completing this process is around 26 weeks – but that can be an acceptable supply window compared to the time, expense and complexity of requalifying the host equipment.

**Quality Assured:** Oxley's experience and expertise in materials engineering is a vital asset in dealing with obsolescence issues which are often technically very challenging. For example, when substituting a ceramic material for an existing component – Oxley must ensure that characteristics such as thermal shrinkage and expansion rates match the original, and are sympathetic to metals, solder and other materials used in the manufacturing process. Even a minor change in expansion rates can create microscopic cracking which passes immediate tests but may emerge as a fault years later through vibration and other operational conditions. An intimate knowledge of materials and their characteristics ensures that Oxley's reliability is built into the platform lifecycle for up to 15 or 20 years.

