Gas Turbine Engine Diagnostics
The Smart Way to Monitor Gas Turbine Engine Health

Synopsis
An innovative sustainment approach for condition monitoring of a gas turbine engine using performance measurements recorded during take-off.

The methodology aims to detect degradation of the aerodynamic condition of the compressor and turbine blades, as well as detect sensor failures and ad-hoc faults such as fuel leaks. Knowledge of the condition of the engine can aid maintenance decisions about whether particular modules of the engine may soon require refurbishment, and so aid scheduling. In particular, early detection of sensor faults and fuel leaks can avoid extra costs associated with secondary damage, or consuming hot section life at a higher than intended rate.

Advantages
- Aids in maintenance decisions and scheduling
- Avoids trial and error maintenance
- Detects faults earlier to prevent secondary damage

Partnering Opportunities
DST welcomes any enquiries for the application of this innovative technology in other areas.

Stage of Development
TRL 7 (operational/beta tested)