

The background image shows a helicopter on a tarmac at sunset. The sun is low on the horizon, creating a bright orange and yellow glow that reflects on the ground. The sky is filled with soft, white clouds. In the foreground, there is a dark, metallic structure, possibly part of a vehicle or equipment, which is partially obscured by a dark blue diagonal overlay. The overall scene is a mix of warm and cool tones, with the sunset providing a dramatic backdrop.

AURORA

ENGINEERING PARTNERSHIP

QinetiQ | Atkins | BMT

Category Code Structure










Provider Network 2020 Refresh

Aurora Provider Network PN2020 Category Structure

The 'new' Aurora Provider Network Category Structure has been developed inline with learning from experience, extensive technical scenario models based on our working knowledge, current Provider Network questionnaires and Provider Network Advisory Group consultation.

There are nine categories, each has a number of subcategories associated to more specific engineering outputs. Each subcategory has a 'Contingent Labour' based code and an 'Output' based code.

Aurora Provider Network Categories

Systems Engineering	DLoD & Capability Support	Cyber & Security	Safety & Environmental	Performance Optimisation	Technology Management	Legislative & Regulatory Compliance	Engineering Management & Approvals	Future Capability Group
<ul style="list-style-type: none"> Supporting requirements capture and validation, development of architecture and planning of acceptance 	<ul style="list-style-type: none"> Supporting the (non-Equipment) DLoDs contribution to introduction and integration of capabilities 	<ul style="list-style-type: none"> Supporting the identification, understanding and mitigation of Security and Cyber risks or supporting Security and Cyber related investigations and planning 	<ul style="list-style-type: none"> Supporting the generation and maintenance of Safety & Environmental Management Systems including the demonstration of compliance with Safety & Environmental Regulations 	<ul style="list-style-type: none"> Supporting the optimisation of system, platform or equipment performance 	<ul style="list-style-type: none"> Investigation, understanding, integration and exploitation of new technology into capability solutions 	<ul style="list-style-type: none"> Supporting the optimisation of system, platform or equipment performance 	<ul style="list-style-type: none"> Supporting engineering governance and decision making 	<ul style="list-style-type: none"> Providing Strategic Insights; Shaping and Informing Defence Thinking; Assessing Concepts and Operating Models; supporting Pan-DLoD capability decision; and de-risking requirements 



Systems Engineering [01]

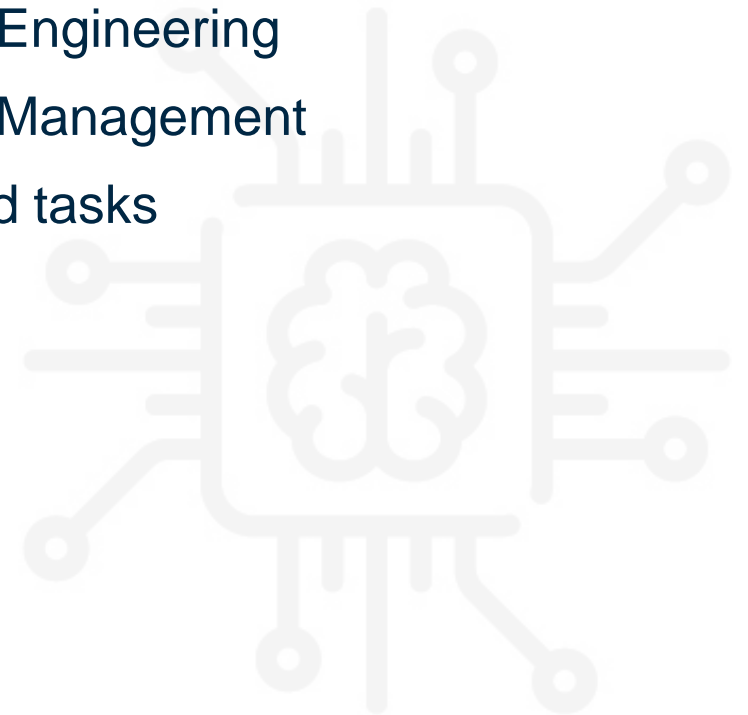
Supporting requirements capture and validation, development of architecture and planning of acceptance

Requirements Engineering [0101]

This category covers domain agnostic tasking, related to Requirements, across the full product life cycle. It covers tasking ranging from the initial analysis of Stakeholder needs and expectations, through elicitation and development of Requirements, to the management of Requirements through life.

Example Task

- Requirements Engineering
- Requirements Management
- MODAF related tasks
- SRD
- Input to URD





Systems Engineering [01]

Supporting requirements capture and validation, development of architecture and planning of acceptance

SOSA & Capability [0102]

This category covers domain agnostic tasking related to Capability engineering and the System Of Systems Approach (SOSA) across the full product life cycle. It includes helping Front Line Commands (FLC) understand their complex capability space, identifying programme interdependencies and cross-project risks through life as well as aligning opportunities for coherence.

Example Task

- Capability Engineering
- Identifying Programme interdependencies
- Cross project harmonisation activity
- DE&S Guide for Engineering Advice and Reviews (GEAR)
- System Of Systems Approach (SOSA)



Systems Engineering [01]

Supporting requirements capture and validation, development of architecture and planning of acceptance

Architecture [0103]

This category covers domain agnostic tasking related to Physical, Systems, Logical Systems, Solution and Enterprise Architecture across the full product life cycle. As well as covering the generation, or update, of Architectural designs it also includes the review of Architectural designs to identify an optimum Architectural solution (from a number of options) and the evaluation and test of existing Architecture.

Example Task

- Architecture design
- Architecture integration
- Architecture evaluation and/or testing
- Physical Architecture
- Systems Architecture
- Logical Systems Architecture
- Solution Architecture
- Enterprise Architecture
- Identification of the (expected and unexpected) emergent properties of the system



Systems Engineering [01]

Supporting requirements capture and validation, development of architecture and planning of acceptance

Platform Systems Integration [0104]

This category covers domain agnostic tasking related to the integration of a system and/or capability into a platform (or equipment or system) across the full product life cycle. It includes the modification of equipment (and platforms) and coordination of all that is associated with a modification or upgrade (such as defining interfaces).

Note: that this category does not cover the integration of weapons (eg carriage and release) onto a platform. This is covered by the Weapons Systems category.

Example Task

- Platform modification or upgrade
- Equipment modification or upgrade
- Coordination of new capability introduction or envelope expansion
- Interface Control Document



DLod & Capability Support [02]

Supporting the (non-Equipment) DLoDs contribution to introduction and integration of capabilities

Operational Analysis [0201]

This category covers domain agnostic tasking related to the analysis of Operations. This includes the research into, modelling of, and analysis of Operational scenarios to allow an assessment of (equipment, system, platform or capability) suitability and effectiveness.

Example Task

- Operational research
- Selecting scenarios for analysis
- Evaluating output measures to quantify effectiveness
- Modelling to directly support operational research
- Operational analytics



DLoD & Capability Support [02]

Supporting the (non-Equipment) DLoDs contribution to introduction and integration of capabilities

Technical Documentation [0202]

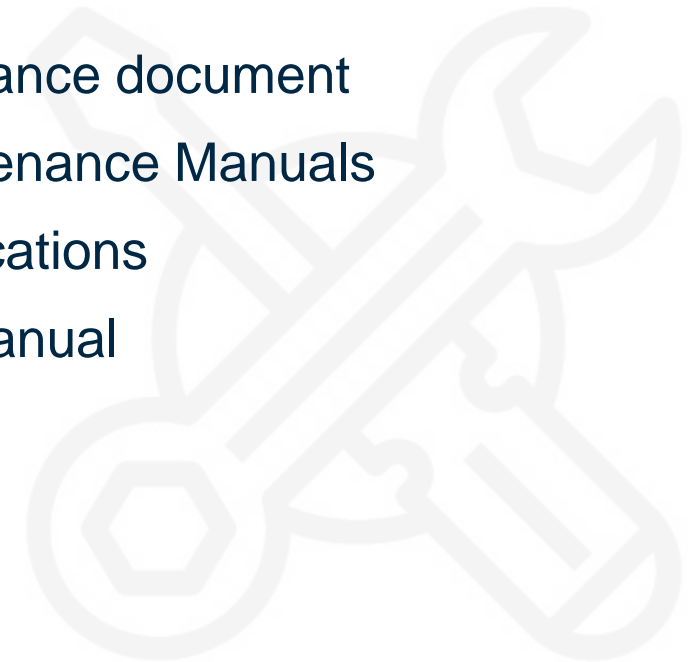
This category covers domain agnostic tasking related to Technical Documentation (Technical Publications). It includes the generation of Technical Documentation the methods and mechanisms for generating, reviewing and/or distributing Technical Documentation.

This category may also include domain agnostic tasking related to Technical Information (that underpins Technical Documentation).

Note that in the case of generating specific technical content/information, it may be necessary to also use a category code that reflects the technical nature of that information.

Example Task

- Writing AESPs
- Reviewing guidance document
- Digitising Maintenance Manuals
- Technical Publications
- Maintenance Manual





DLod & Capability Support [02]

Supporting the (non-Equipment) DLods contribution to introduction and integration of capabilities

Training [0203]

This category covers domain agnostic tasking related to Training in all mediums across the full training cycle, from identifying and understanding training needs to delivery of training.

Note that in the case of training that requires a high degree of specialist (eg subject matter) knowledge, it may be necessary to also use a category code that reflects the technical nature of the training.

Example Task

- Training Needs Analysis (TNA)
- Training review
- Training assurance
- Training design
- Training delivery
- Competency training
- User experience design
- E-Learning packages
- Virtual & Augmented Reality
- Synthetic training



DLod & Capability Support [02]

Supporting the (non-Equipment) DLoDs contribution to introduction and integration of capabilities

Asset Management [0204]

This category covers domain agnostic tasking related to the engineering aspects of Asset Management across the full product life cycle. This includes tasking ranging from initial planning activity to assessment of ongoing support and managing obsolescence. The category also covers the engineering aspects of Supply Chain management activity, including storage, and Integrated Logistic Support (ILS).

Some AM topics such as ARM and Technical Publications have their own categories.

Example Task

- Supply Chain management
- Supply Chain design
- Storage options
- Integrated Logistics Support
- Asset Management systems
- Obsolescence management
- Obsolescence Management Plan
- Configuration management



DLoD & Capability Support [02]

Supporting the (non-Equipment) DLoDs contribution to introduction and integration of capabilities

Availability, Reliability & Maintainability [0205]

This category covers domain agnostic tasking related to the Availability, Reliability and Maintainability of equipment, systems and platforms throughout the full product life cycle. It includes the assessment of the ability of a system, platform or equipment to perform its function satisfactorily, in a given environment, in accordance with a defined maintenance programme as well as defining an optimum maintenance regime for equipment, systems or platforms.

Example Task

- Reliability analysis
- Root Cause Analysis
- Availability, Reliability and Maintainability (ARM)
- Reliability Centred Maintenance
- Reliability and Maintainability (R&M) Case
- Maintenance planning



Cyber & Security [03]

Supporting the identification, understanding and mitigation of Security and Cyber risks or supporting Security and Cyber related investigations and planning

Cryptography [0301]

This category covers domain agnostic tasking related to the development, application and management of Cryptography across the full product life cycle.

Example Task

- Cryptography development
- Cryptography application
- Cryptography management
- Cryptography Plan
- Cryptography report





Cyber & Security [03]

Supporting the identification, understanding and mitigation of Security and Cyber risks or supporting Security and Cyber related investigations and planning

Data Collection, fusion and visualisation [0302]

This category covers domain agnostic tasking related to the collection, fusion and visualisation of data across the full product life cycle. It includes the collection and aggregation of data as well as data distribution and presentation. It includes tasking where multiple data sources must be integrated with the aim of producing more consistent, accurate and/or useful information.

Data analysis tasking that does not necessarily have a Cyber or Security bias may be better covered by the Data Analytics category or a more specific technology focussed category such as Mission Data (or possibly a combination).

Example Task

- Visualisation
- Data fusion
- Network visibility





Cyber & Security [03]

Supporting the identification, understanding and mitigation of Security and Cyber risks or supporting Security and Cyber related investigations and planning

Cyber Security Systems [0303]

This category covers domain agnostic tasking related to Cyber Security development and integration across the full product life cycle. It includes the development and integration Cyber Security into equipment, systems and platforms to protect sensitive data. It also includes the integration of Cyber Security into the wider environment (eg working with ONR, HSE, NCSC and IET).

Example Task

- Cyber security development
- Cyber security integration (eg working with ONR, HSE, NCSC and IET)
- Standard Operating Procedures
- Security Requirements
- Security Grading Guide
- Security Case
- DART Submission



Cyber & Security [03]

Supporting the identification, understanding and mitigation of Security and Cyber risks or supporting Security and Cyber related investigations and planning

Security Assessment [0304]

This category covers domain agnostic tasking related to Security Assessments across the full product life cycle. It includes the assessment of Security, and Cyber Security, for a project, platform, system or equipment. This may be in terms of assessing vulnerability or compliance with applicable regulations.

Example Task

- Cyber Security Plans
- Cyber/Security (Risk) assessments
- Security Assurance Coordinator's deliverables
- Security Accreditation Coordinator's deliverables
- Security Working Group
- Security Health Check
- Risk balance case
- RMADS
- Security Asset Register
- Protective Monitoring Plan



Cyber & Security [03]

Supporting the identification, understanding and mitigation of Security and Cyber risks or supporting Security and Cyber related investigations and planning

Cyber/Security Attack Analysis [0305]

This category covers domain agnostic tasking related to Cyber/Security attacks. It includes physical, as well as cyber, attacks and may cover work ranging from pre-emptive investigations aimed at minimising the probability of an attack through to post-attack investigations looking at understanding the implications.

Example Task

- Behavioural security
- Signature collection
- Attack analysis
- Malware analysis
- Digital forensics
- Threat and Vulnerability model
- Cyber Vulnerability Investigation (CVI)
- Incident Management Report



Cyber & Security [03]

Supporting the identification, understanding and mitigation of Security and Cyber risks or supporting Security and Cyber related investigations and planning

Intelligence [0306]

This category covers domain agnostic tasking related to Intelligence across the full life cycle. It includes gathering and processing information about threats (from various sources) and threat actors with the aim of preventing, or mitigating, harmful events.

Example Task

- Threat intelligence
- Human intelligence
- Signals intelligence
- Communications intelligence
- Geospatial intelligence
- Geospatial mapping





Cyber & Security [03]

Supporting the identification, understanding and mitigation of Security and Cyber risks or supporting Security and Cyber related investigations and planning

Digitisation and Access Management [0307]

This category covers domain agnostic tasking related to the digitisation (of a business, system or product) as well as the control and protection of information within that digitised environment. It includes work required to control/restrict access to data (by policies and technologies). It also includes adoption of new digital technologies or systems to improve ways of working or to solve problems.

Example Task

- Digital rights management
- Business digitisation
- Digital transformation
- Identity and access management
- Cloud computing
- Converting analogue media to digital format



Safety & Environmental [04]

Supporting the generation and maintenance of Safety & Environmental Management Systems including the demonstration of compliance with Safety & Environmental Regulations

Independent Safety and Environmental Audit (ISEA) [0401]

This category covers domain agnostic tasking related to the role of an Independent Safety and Environmental Auditor, be that in the Safety (ISA), Environmental (IEA) or combined roles (ISEA). The category therefore covers audits or other assessments carried out by an independent individual, or organisation, on behalf of MOD to provide assurance that safety activities comply with planned arrangements, are implemented effectively, are suitable to achieve objectives and whether related outputs are correct, valid and fit for purpose.

Note: This category is not to be used for Safety Advisor role or for Nuclear Safety auditor tasking.

- Safety Advisor tasking is to be covered by Safety Assessment category*
- Nuclear Safety Auditor tasking is to be covered by the Nuclear Systems category.*

Example Task

- ISEA Audit Report



Safety & Environmental [04]

Supporting the generation and maintenance of Safety & Environmental Management Systems including the demonstration of compliance with Safety & Environmental Regulations

Independent Technical Evaluation (ITE) [0402]

This category covers domain agnostic tasking related to the independent evaluation of technical aspects of platform, system or equipment design and/or integration/implementation. This includes the specific application of an Independent Technical Evaluation (ITE) in accordance with the applicable RAs (eg RA1220 at time of writing).

Example Task

- ITE Report





Safety & Environmental [04]

Supporting the generation and maintenance of Safety & Environmental Management Systems including the demonstration of compliance with Safety & Environmental Regulations

Risk and Hazard Management [0403]

This category covers domain agnostic tasking related to the identification, analysis, mitigation and where possible the elimination of potential (Safety) risks and hazards.

Example Task

- Hazard Management
- Risk Control Systems
- Loss Models
- Preliminary Hazard Analysis (PHA)
- Functional Hazard Analysis (FHA)
- Hazard Logs
- Hazard Log Management
- Fault Tree Analysis (FTA)
- Event Tree Analysis (ETA)
- Failure Modes and Effects Analysis (FMEA)
- Failure Modes, Effects and Criticality Analysis (FMECA)
- Hazard Checklist
- Hazard and Operability studies (HAZOPS)
- Control of Substances Hazardous to Health (COSHH) risk assessments



Safety & Environmental [04]

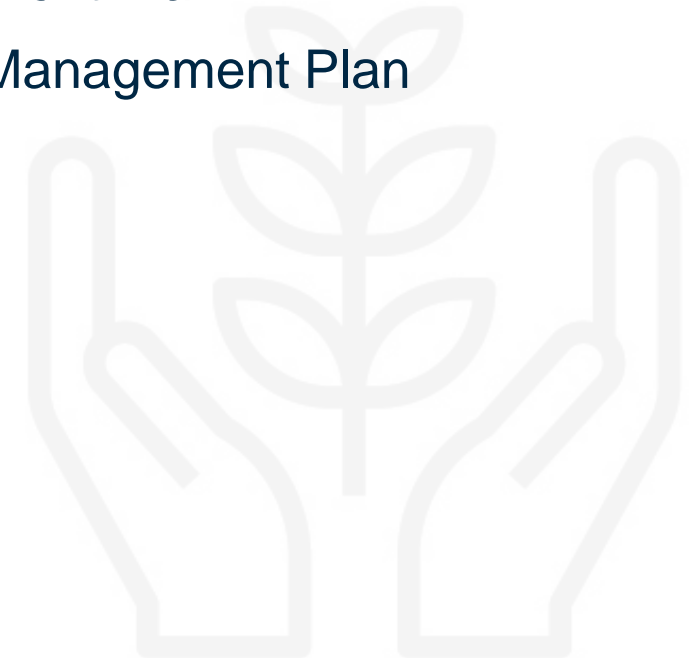
Supporting the generation and maintenance of Safety & Environmental Management Systems including the demonstration of compliance with Safety & Environmental Regulations

Safety and Environmental Management [0404]

This category covers domain agnostic tasking related to safety and environmental policy, planning, management and production of systems that demonstrate appropriate governance for the safety activities under ASEMS.

Example Task

- Safety Management Plan
- Environmental Management Plan
- SEMP
- SEMS
- POEMS
- POSMS





Safety & Environmental [04]

Supporting the generation and maintenance of Safety & Environmental Management Systems including the demonstration of compliance with Safety & Environmental Regulations

Safety and Environmental Assessment [0405]

This category covers domain agnostic tasking related to safety and environmental assessments that produce evidence to support safety and environmental claims in management systems.

Example Task

- Safety and/or Environmental Case
- Safety and/or Environmental assessment
- Equipment Safety and/or Environmental Assessment
- Safety and/or Environmental Case report
- Safety and/or Environmental assessment
- Safety and/or Environmental Working Group report
- Safety and/or Environmental evidence artefact



Safety & Environmental [04]

Supporting the generation and maintenance of Safety & Environmental Management Systems including the demonstration of compliance with Safety & Environmental Regulations

Safety and Environmental compliance [0406]

This category covers domain agnostic tasking related to Safety and Environmental legal and regulatory requirements and compliance with those requirements. Noting that Risk and Hazard management, ISA and ITE activity are covered by different category codes.

Example Task

- Environmental Specification
- Safety Regulatory compliance
- Environmental Regulatory compliance
- Fire Certification
- Safety Certification





Safety & Environmental [04]

Supporting the generation and maintenance of Safety & Environmental Management Systems including the demonstration of compliance with Safety & Environmental Regulations

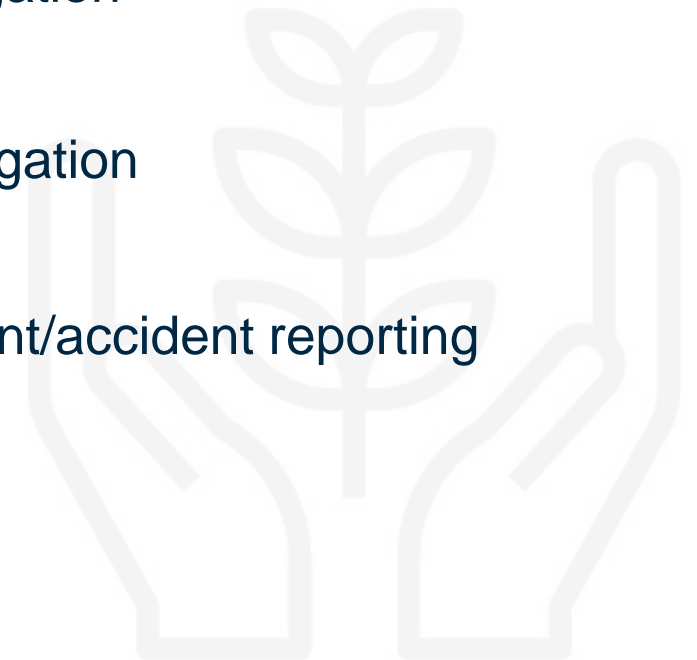
Incident & Accident investigation [0407]

This category covers domain agnostic tasking related to the investigation and reporting of accidents and incidents. Principally includes the generation of, or support to, an investigation but may also include reviewing a third party's report to comment on the implications.

Note that in the case of reviewing a third party's report, it may be necessary to also use a category code that reflects the technical nature of the incident, accident, findings.

Example Task

- Incident investigation
- Incident report
- Accident investigation
- Accident report
- LFE from incident/accident reporting





Safety & Environmental [04]

Supporting the generation and maintenance of Safety & Environmental Management Systems including the demonstration of compliance with Safety & Environmental Regulations

Nuclear Systems [0408]

This category covers tasking related to specialist Nuclear science, technology and engineering. It includes tasking related to nuclear propulsion and their safe handling and storage. Includes both Civil and Naval risk assessments as well as Regulation, Policy, Safety and Training where the overriding requirement is Nuclear focussed.

Example Task

- Civil Nuclear Risk Assessments
- Naval Nuclear Risk Assessments
- Nuclear specific Policy and Regulation





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Human Factors [0501]

This category covers tasking related to Human Factors (HF) knowledge and techniques. HF is considered to be a scientific and engineering discipline that is concerned with the study of human capabilities and limitations, human interactions with technologies and environments. HF tasking could be required for any defence acquisition activity including, but not limited to, technology demonstrators, modifications and capability upgrades, software focussed solutions, covering bespoke as well as Off The Shelf (OTS) equipment, systems and platforms.

Example Task

- Human Factors Integration
- Human Factors Standards
- Human Factors technical guidance
- Human Factors performance & optimisation
- Crew workload
- Extreme environment analysis (incl. deep water operations and aviation medicine)
- Human Factors specific issues related to training



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Flight and Aerodynamic Testing [0502]

This category covers tasking related to the preparation for, carrying out, and analysis of flight testing, as well as complimentary types of testing/analysis such as wind tunnel testing and flight test simulation.

Preparation is considered to include, but is not limited to, the design, installation and validation of instrumentation, test planning, and the training, regulation and ongoing development of flight test crew.

Carrying out flight testing, simulation or wind tunnel testing, includes all aspects of the tests themselves, both in the air and in support on the ground.

Analysis includes the read-out of data as well as the interpretation of results.

Example Task

- Certification Flight Tests/Trials
- Qualification Flight Tests/Trials
- Flight Test planning
- Wind Tunnel Testing and analysis
- Flight Test Simulation (design, execution, results analysis)
- Flight Test crew training
- Flight Test crew regulation
- Flight Test crew development
- Flight Test Instrumentation (design, installation, validation)
- Readout and interpretation of Flight Test Data



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Hydrodynamics [0503]

This category covers tasking related to the preparation for, carrying out, and analysis, of hydrodynamics testing, as well as complimentary types of testing/analysis such as hydrodynamics modelling and simulation.

Preparation is considered to include, but is not limited to, the design, installation and validation of instrumentation, test planning.

Carrying out hydrodynamics testing, modelling or simulation includes all aspects of the tests, modelling or simulation activity.

Analysis includes the read-out of data as well as the interpretation of results.

Example Task

- Hydrodynamics testing
- Hydrodynamics modelling and simulation
- Hydrodynamics analysis





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Tests and Trials - other [0504]

This category covers domain agnostic tasking related to the preparation for, carrying out, and analysis, of tests and trials other than that identified as flight testing or hydrodynamics related (see codes 0502** and 0503**). It does not include other forms of simulation or modelling which are covered at code 0505**.

Preparation is considered to include, but is not limited to, the design, installation and validation of instrumentation, test planning.

Carrying out testing includes all aspects of the tests themselves, including supporting activity.

Analysis includes the read-out of data as well as the interpretation of results.

Example Task

- Environmental testing
- HIRF testing
- Test, evaluation, assessment and support to Acceptance
- Test planning
- Tests (and providing an associated report)
- Instrumentation and measurement
- Reviewing a test
- Test witnessing
- Test data read-out and analysis



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Simulation and Modelling [0505]

This category covers domain agnostic tasking related to the preparation for, carrying out, and analysis, simulation and modelling other than that identified as flight testing or hydrodynamics related (see codes 0502** and 0503**).

Includes the building and use of simulation and modelling tools.

Example Task

- Lethality modelling and assessment
- Modelling
- Agent based modelling
- Simulation
- Virtualised Systems





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Data Analytics [0506]

This category covers domain agnostic tasking related to the process of inspecting, cleansing, transforming and modelling of data with the goal of discovering useful information, informing conclusions and supporting decision making. This category also covers tasks relating to datasets that are too large or complex to be dealt with by traditional means (i.e. Big Data).

Example Task

- Data Analytics
- Mathematics
- Statistical Services
- Big Data





Performance Optimisation [05]

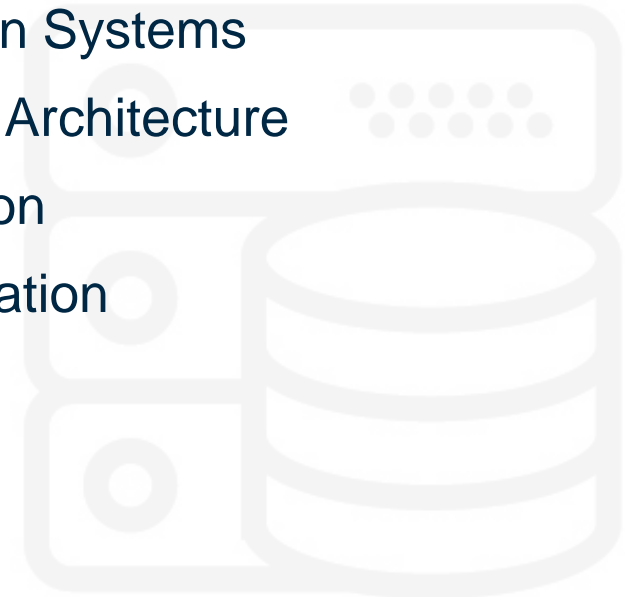
Supporting the optimisation of system, platform or equipment performance

Mission Systems [0507]

This category covers domain agnostic tasking related to integrated mission systems design, specification and support. It includes the collation, management, distribution and processing of data onboard a military platform; and the integration of the mission systems elements: weapons, sensors, comms and C2.

Example Task

- Mission Systems
- Integrated Mission Systems
- Mission Systems Architecture
- Aviation integration
- Navigation integration





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Command and Control [0508]

This category covers domain agnostic tasking related to the design specification and support of combat management systems (CMS) including information management, interface control, interface with other platform management systems, C3, C4, C4I.

Example Task

- Command, Control, Computing and Communication (C4)
- Data protocols
- WAN & LAN
- Interface specification





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Combat Systems and Sensors [0509]

This category covers domain agnostic tasking related to weapons/effectors and sensors and their integration into a combat system and with a military platform. It includes whole life cycle from specification and design through in-service support and upgrade.

Note: see code 0520 for weapons systems and equipment.

Example Task

- Fire Control
- Sensors
- Countermeasures
- Combat System engineering/integration
- Platform System integration
- Combat System configurations.
- Design change management





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Mission Data [0510]

This category covers domain agnostic tasking related to the full Intelligence Mission Data (IMD) and Mission Data (MD) cycle and associated support activities, including managing the required skills base and the management of MD transformation activities in the operational environment. Encompassing all facets of MD development and delivery, this category covers: databases with associated automation and security tools, production tool sets, software-in-the-loop (SWIL) and hardware-in-the-loop (HWIL) testing, MD training, documentation, management tools and services, processes, support services including CIS, project management, strategic development, SQEP provision and the potential for export.

Example Task

- Maintenance of the core database
- Data Correlation
- Toolset development
- Capability development
- Data science and AI/ML support to cap dev
- Intelligence Analysis
- Analysis of emitter intercepts
- Mission Data specification
- Maintenance of emitter specific databases
- Emitter Model Production
- All source threat model production
- Other IMD Model production (for example: comms, P-cubed, antenna, O/IR, RCS)
- IMD Production for exports
- Test Model Production
- SWIL and HWIL testing environments
- Post event/mission analysis
- MD support to Live, Virtual and Constructive training environments
- Data dissemination
- Process improvement
- MD specific training across all SQEP levels
- End to end Governance, Assurance and Strategic Development
- Support Services
- Policy development
- Commercial and contracting support
- CIS services
- Innovation support
- Support to other intelligence disciplines (SIGINT MASINT)



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Networks and Comms Systems [0511]

This category covers domain agnostic tasking related to all types of networks and communication systems and technologies across the full product lifecycle.

Example Task

- Battlefield Communications systems
- Radio Communications systems
- Electronic communications
- Underwater communications
- Networks
- Tactical Data Links
- Multi-Spectral communications





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Operational Environment [0512]

This category covers domain agnostic tasking related to the conditions, circumstances and influences that affect the employment of capability under frontline conditions.

Note: Survivability, Vulnerability, Susceptibility are covered under code 0523.

Example Task

- TEMPEST (Testing, Certification & Hardening)
- Emission Security (EMSEC)
- Electronic Counter Measures (ECM)
- Signature detection





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Radar [0513]

This category covers domain agnostic tasking related to radar and radar sensors. This includes the monitoring and detection of air traffic as well as radar guidance and attack systems.

Example Task

- Radar (Air Traffic, detection, guidance and attack systems)
- Sensor data processing





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Sonar [0514]

This category covers tasking related to Sonar sensors which may be used for navigation, communication or detection purposes. It includes the application of passive sonar and active sonar.

Example Task

- Passive Sonar
- Active Sonar





Performance Optimisation [05]

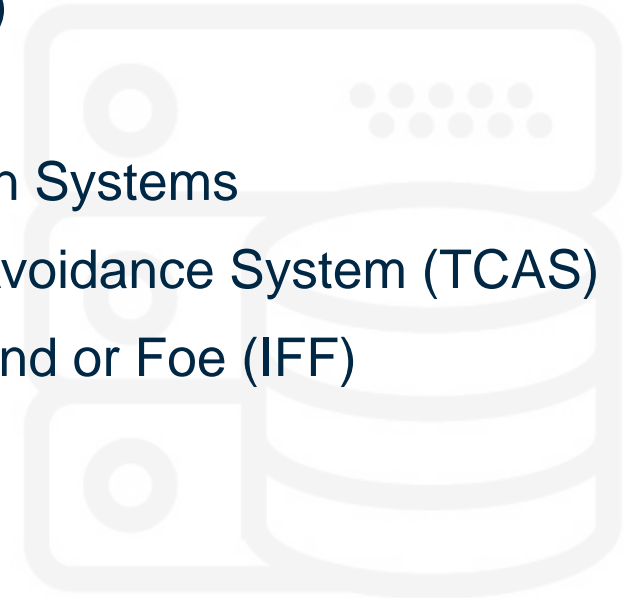
Supporting the optimisation of system, platform or equipment performance

Navigation [0515]

This category covers domain agnostic tasking related to navigation and navigation aids. This includes, but is not limited to, the hardening, spoofing and jamming of Global Navigation Satellite Systems as well as the use of ground independent on-board aids and secure platform identification systems.

Example Task

- Global Navigation Satellite Systems (such as GPS and Galileo)
- Transponders
- Inertial Navigation Systems
- Traffic Collision Avoidance System (TCAS)
- Identification Friend or Foe (IFF)





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Air Systems [0516]

This category covers tasking that is specific to the assessment of Air System platforms and equipment and not covered by one of the other (domain agnostic / specialist) categories. This is largely (although not limited to) tasking that is driven by Air System specific Regulations and Policy.

Example Task

- Ageing Aircraft Audits
- Aircraft inspections
- Fabrication and repair of Air Systems
- Out of Service Date extensions
- Life Extension Programmes
- Service Life Extension Programmes
- System Integrity
- Airworthiness and Continued Airworthiness
- Platform Certification
- Avionics Systems (eg design, certification, assessment)
- Airframe Systems (eg design, certification, assessment)
- Aircrew Equipment (eg design, certification, assessment)
- Aircraft Self-Protection Systems (eg design, certification, assessment)



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Unmanned / Autonomous Systems [0517]

This category covers domain agnostic tasking that is specific to the assessment of unmanned / autonomous systems and not covered by one of the other (domain specific / specialist) categories. This is largely (although not limited to) tasking that is driven by unmanned / autonomous system specific Regulations and Policy.

Example Task

- Unmanned Air System (specification, design, support, certification)
- Robotic vehicles (specification, design, support)
- Autonomous Systems integration
- Autonomous Systems interoperability



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Maritime Systems [0518]

This category covers domain agnostic tasking that is specific to the assessment of Maritime Systems and not covered by one of the other (domain agnostic / specialist) categories. This is largely (although not limited to) tasking that is driven by Maritime System specific Regulations and Policy.

Example Task

- Ship/Submarine specification, design and analysis (hull form, structure and arrangement), support, certification and assurance, test and development
- Fabrication and repair of vessels
- Interoperability including Aviation Integration
- Marine Auxiliary/Ancillary Systems



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Land Systems [0519]

This category covers tasking that is specific to the assessment of Land System platforms and equipment and not covered by one of the other (domain agnostic / specialist) categories. This is largely (although not limited to) tasking that is driven by Land System specific Regulations and Policy.

Example Task

- Armoured Vehicle (specification, design, analysis, testing and development, support, certification)
- Land vehicle Stability and Control
- Tie Down Schemes
- Self-Protection Systems (design, integration, evaluation, testing)
- Land based Electronic Countermeasures (design, integration, evaluation, testing)
- Soldier Systems (design, integration, evaluation, testing)
- Composite Armour (design, integration, evaluation, testing)



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Weapons Systems & Equipment [0520]

This category covers domain agnostic tasking that is specific to the assessment of Weapon Systems and equipment not covered by one of the other (domain specific / specialist) categories. This is largely (although not limited to) tasking that is driven by Weapon Systems specific Regulations and Policy.

Note: For lasers systems see code 0530.

Example Task

- Weapon Systems & equipment (missiles, guns, torpedoes, etc)
- Weapon Systems Carriage and Release
- Weapon System self-damage analysis
- Weapon System lifing
- Weapon Systems monitoring, storage, transportation and disposal
- Weapons performance
- Weapons launchers



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Ordnance, Munitions and Explosives [0521]

This category covers domain agnostic tasking that is specific to the assessment of Ordnance, Munitions and Explosives, and not covered by one of the other (domain specific / specialist) categories. This is largely (although not limited to) tasking that is driven by Ordnance, Munitions and Explosives specific Regulations and Policy.

Example Task

- Explosives Policy and Guidance
- Ordnance, Munitions and Explosives specific Safety
- Through Life Management Planning and Road Mapping
- Gun and Rocket internal, external and terminal ballistic assessment
- Energetic and Explosives incident investigation
- Defect investigation and modelling



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Space Systems [0522]

This category covers tasking that is specific to the assessment of Space Systems, and is not covered by one of the other (domain agnostic / specialist) categories. This is largely (although not limited to) tasking that is driven by Space specific Regulations and Policy.

Example Task

- Space Vehicle Propulsion Systems
- Communications
- Surveillance
- Space Port Technologies





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Survivability [0523]

This category covers domain agnostic tasking that is specific to the assessment of survivability, and is not covered by one of the other (domain agnostic / specialist) categories. This is largely (although not limited to) tasking that is driven by survivability specific Regulations and Policy.

Example Task

- Survivability design and analysis
- Susceptibility & Vulnerability
- Escape and evacuation





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Batteries [0524]

This category covers domain agnostic tasking that is specific to the study, storage, performance and use of batteries and their associated technologies. Tasking may include primary and reserve (thermal and chemical) batteries as well as tasking related to battery abuse. It also includes Regulation, Policy, Survivability, Safety and Training where the overriding requirement is battery focussed.

Example Task

- Abuse testing
- Battery survivability





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Structures [0525]

This category covers domain agnostic tasking related to Structures and Structural analysis. It includes the independent Structural review of platforms as well as Regulation, Policy, Safety and Training where the overriding requirement is Structures or Structurally focussed.

Example Task

- Dynamic analysis of Structures
- Static analysis of Structures
- Assessing the thermal impact on Structure
- Analysis of composites
- Damage tolerance
- Structural Integrity
- Independent Structural Reviews for platforms
- Independent Structural Airworthiness Advisor (ISAA)



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Structures [0526]

This category covers domain agnostic tasking related to the development or analysis of materials including novel materials. It includes Regulation, Policy, Safety and Training where the overriding requirement is material (or novel material) focussed.

Example Task

- Novel Material development
- Material Science
- Material Analysis





Performance Optimisation [05]

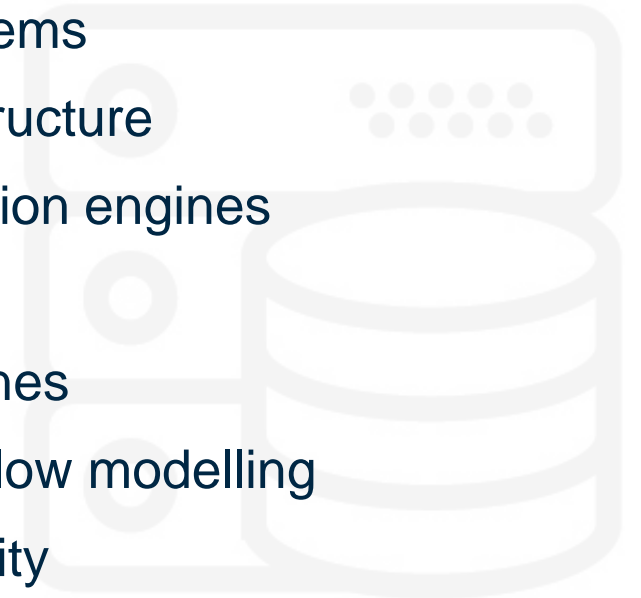
Supporting the optimisation of system, platform or equipment performance

Powerplant Systems [0527]

This category covers domain agnostic tasking related to the generation and distribution of electrical or propulsive power (excluding Nuclear). Electrical systems included range from High Voltage (HV) propulsion systems used in warships, to Battlefield Infrastructure as well as low voltage control and instrumentation systems. That includes the generation and control of propulsive power by other means, such as internal combustion engines and gas turbines. It includes Regulation, Policy, Safety and Training where the overriding requirement is Powerplant focussed.

Example Task

- High voltage systems
- Low voltage systems
- Battlefield infrastructure
- Internal Combustion engines
- Prime Movers
- Gas turbine engines
- Power and load flow modelling
- Propulsion Integrity





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Software and Complex Electronic Hardware [0528]

This category covers domain agnostic tasking related to software and Complex Electronic Hardware (CEH). That includes Software Development and Engineering as well as the specification and evaluation of CEH. It also includes Regulation, Policy, Safety and Training where the overriding requirement is software (or CEH) focussed.

Example Task

- Software Development
- Software Engineering
- Safety Critical Software (design, evaluation, testing and independent evaluation)
- Complex Electronic Hardware (design, evaluation, testing and independent evaluation)
- Automation and Controls



Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Machine Learning and Artificial Intelligence [0529]

This category covers domain agnostic outputs related to the use of Artificial Intelligence (AI) including Machine Learning (ML). That includes introducing ways to take advantage of a computer's ability to learn from examples, data and experience and therefore undertake complex processes without following pre-programmed rules. It also includes Regulation, Policy, Safety and Training where the overriding requirement is AI or ML focussed.

Example Task

- Artificial Intelligence
- Machine Learning
- Image recognition applications
- Voice recognition applications





Performance Optimisation [05]

Supporting the optimisation of system, platform or equipment performance

Electro-Optical [0530]

This category covers domain agnostic tasking related to the use of electro-optical technology, such as Lasers and Infra-Red, in all their potential uses either directly in service or as part of testing and support activity. It also includes Regulation, Policy, Safety and Training where the overriding requirement is electro-optical technology focussed.

Example Task

- Laser & Directed Energy Weapon Systems
- Laser Defensive Systems
- Infra-Red (eg thermal) imaging
- Laser measurement
- Laser scanning
- Communications and detection systems (eg LIDAR)
- Night Vision
- Data transmission (by Electro-optical means)



Technology Management [06]

Investigation, understanding, integration and exploitation of new technology into capability solutions

Research and Technology [0601]

This category covers domain agnostic tasking related to the research (investigation, assessment and validation) of new technology. It includes application of techniques specifically designed to exploit and insert technology as well as how to manage new technology upon integration into wider systems and the confirmation of that technology's maturity level.

Example Task

- Technology exploitation
- Technology integration
- Technology insertion
- Technology upgrade
- Technology management
- Research
- Maturity assessments





Legislative & Regulatory Compliance [07]

Supporting the demonstration of compliance with legislation and regulations or the maintenance and development of legislative and regulatory frameworks

Quality Assurance and Control [0701]

This category covers domain agnostic tasking related to the application of Quality (Assurance or Control) principles to ensure the satisfactory quality of a product, system, process or platform. This includes the investigation or assessment of contractors and the wider supply chain as well as internally focussed investigation/assessment. It may also include the provision of independent assurance in support of acceptance or for the promotion of continual improvement within the supply chain.

Example Task

- ISO9001 audit preparation
- AS9100 audit
- Supply Chain Quality
- Supply Chain Capability assessment
- Independent acceptance assurance
- Supporting the deployment of the Government Quality Assurance (GQA) framework



Legislative & Regulatory Compliance [07]

Supporting the demonstration of compliance with legislation and regulations or the maintenance and development of legislative and regulatory frameworks

Regulations and Policy [0702]

This category covers domain agnostic tasking related to the writing, reviewing, updating and/or advising on Regulation and/or Policy. It includes tasking related to future (potential) regulation/policy.

Example Task

- Drafting Regulation
- Drafting Policy
- Regulatory road mapping





Legislative & Regulatory Compliance [07]

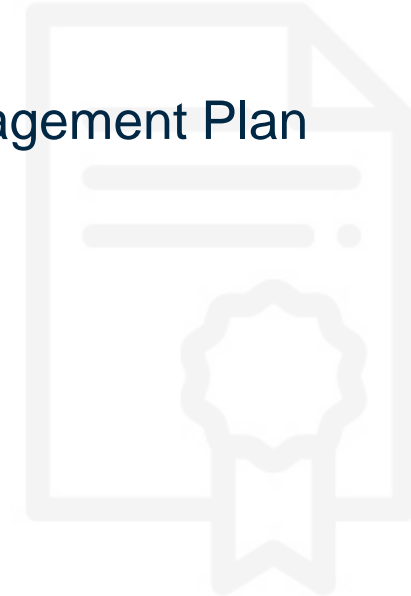
Supporting the demonstration of compliance with legislation and regulations or the maintenance and development of legislative and regulatory frameworks

Standards and Standardisation [0703]

This category covers domain agnostic tasking related to the writing, reviewing, updating and/or advising on Standards, including future Standards. This category also covers tasking related to Standardisation (Standardization) which includes planning, developing strategies and managing risk related to Standards selection as well as assessing the tailoring and/or trading of Standardisation requirements.

Example Task

- Developing Standards
- Drafting Standards
- Standardisation Management Plan





Engineering Management & Approvals Support [08]

Supporting engineering governance and decision making

Decision Support [0801]

This category covers domain agnostic tasking supporting key decisions. This includes the generation, or compilation, of evidence required to justify or underpin key decisions. It includes, but is not limited to, analysis driving business cases such as cost modelling and defining/arguing best value for money propositions.

Example Task

- Producing business cases
- Cost modelling and cost benefit analysis
- Value Engineering
- Input to Capability Management Plan
- Input to CASP
- Outline Engineering Management Plan
- Input to Project Mandate
- Input to COEIA



Engineering Management & Approvals Support [08]

Supporting engineering governance and decision making

Enterprise Risk Management [0802]

This category covers domain agnostic tasking related to risk profiling as well as the assessment and management of risk once identified.

Note that in the case of generating specific technical content/information, it may be necessary to also use a category code that reflects the technical nature of that risk.

Example Task

- Risk strategy
- Risk profiling (is there a better example rather than just the title?)
- Risk assessment
- Risk management plan



Future Capability Group (FCG) [09]

Providing Strategic Insights; Shaping and Informing Defence Thinking; Assessing Concepts and Operating Models; supporting Pan-DLOD capability decision; and de-risking requirements

Future Capability Group [0901]

This category covers domain agnostic tasking requiring the ability to deliver analysis of existing MOD assumptions, concepts, models and architectures.

The design and delivery of concept demonstrators or pan-industry advice into wider concept demonstrator activities in Defence. The ability to design improvements and validate them through simulation and testing

Defence requires mechanisms through which high-level strategic trends can be identified, issues explored and recommendations for change communicated.

These should deliver strategic insights into how the MOD may be able to make innovative improvements to address systemic issues.

Show how work undertaken Improved Defence and Security thinking through an understanding of wider issues and better operating models/concepts/systems resulting in enhanced capability, delivered more rapidly, and at reduced cost.

The ability to identify and work with new suppliers and Subject Matter Experts. How the provider will:

- Create more effective concept, capability and warfare development choices, reducing operational risk and increasing efficiency.
- Provided better understanding of the military utility of a future concept across the DLODs.
- Reduced risk in the Equipment Programme.
- Worked with innovative providers to challenge or disrupt traditional thinking
- Identified systemic issues which warranted investigation in a task and used prior knowledge to inform and report.
- Where evidence and experience is from outside Defence & Security it should make clear how a similar approach could apply and bring benefits within Defence and Security.



Future Capability Group (FCG) [09]

Providing Strategic Insights; Shaping and Informing Defence Thinking; Assessing Concepts and Operating Models; supporting Pan-DLOD capability decision; and de-risking requirements

Future Capability Group [0901] *Continued*

Example Task

- Analysis of existing MOD assumptions, concepts, models and architectures.
 - Design and deliver concept demonstrators.
 - Provide pan-industry advice into wider concept demonstrator activities in Defence.
 - Design improvements and validate them through simulation and testing.
 - Better understanding of the military utility of a future concept across the DLODs.
 - Reduced risk in the Equipment Programme and Equipment Support.
- Evidence based analysis to support a range of pan-DLOD decisions across Defence.
 - Develop standards and apply best practice, support the development of a Whole Force Approach, assess capability coherence and integration from an industry perspective or provide acquisition options, cost impact and performance factor analysis for capability procurement.
 - Other techniques to generate understanding and evidence, including empirical studies, tests, trials and war-games.
 - Support the de-risking of future requirements by providing broad industrial perspectives and analysis of developing requirement sets and FLC generated artefacts.
 - Deliver strategic insights into how the MOD may be able to make innovative improvements to address systemic issues.

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