

System Design

Frazer-Nash Consultancy has been involved in the design and specification of complex systems for over 30 years. In that time we have helped companies both large and small to develop their products and solutions. We employ a systems approach to design whether carrying out turnkey projects or supporting some of the world's largest engineering projects.

SYSTEMS DESIGN APPROACH

We bring together all of the technical and project support activities that constitute a rigorous through-life systems based approach to design. The strength of our approach has been developed over 30 years of working within the aerospace and defence sectors.

The company's engineering skills can be applied to any level of system complexity and at any stage in the engineering process, whether supporting concept development and evaluation programmes, system and technology integration, through-life maintainability, or end-of-life activities.

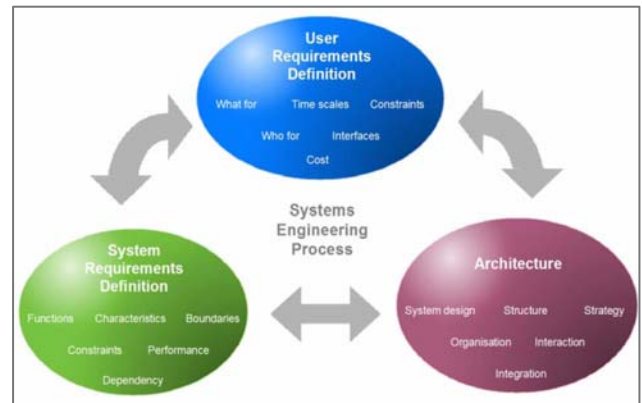
REQUIREMENTS MANAGEMENT

The key feature of our approach involves structured iteration around the Systems Engineering triad of User Requirements Definition, System Requirements Definition, and Architecture Design Documentation.

The mutually competing factors of whole life cost, system integrity, and maintenance of safety are optimised by capturing a robust set of User and System Requirements and identifying the mutual interaction of these with various potential concepts for system structure and behaviour. By continually iterating this process in a structured way, complex design activities are effectively managed, and project cost and risk are minimised.

BENEFITS

The strength of our project teams, coupled with our systems-based approach to servicing present and future project requirements, provides our clients with demonstrable competitive advantage. We always aim for our contribution to be instrumental in raising our clients design projects to a world leading level. By combining a structured approach with proper documentation, it is possible to design systems that can be clearly demonstrated to satisfy the diverse range of requirements placed upon them, including technical performance, implementation cost and timescales, seamless integration, safety, and through-life maintainability.



APPLICATIONS

Our portfolio of applications and clients extends across a wide range of market sectors and project scenarios. This diversity provides our staff with exposure to design practices across the whole of industry, and the transfer of experience provides us with considerable benefit in delivering projects:

- ▶ Aero Engine Mechanical Handling Systems
- ▶ Future Naval Platform Requirements
- ▶ Gas Turbine Test Bed Facilities
- ▶ Military Transport and Logistic Systems
- ▶ Remotely-Operated Test Rigs for Radioactive Materials
- ▶ Operational Clothing Systems for Military Applications
- ▶ Munitions Deployment Systems
- ▶ Optimisation of Traffic Control Systems

SPECIALIST DESIGN SUPPORT

We have developed a large range of specialist expertise, which is deployed within design projects to provide effective solutions to technically demanding system functions:

- ▶ Requirements Capture
- ▶ Technology Survey
- ▶ Through-life Support
- ▶ Safety Management
- ▶ Reliability and Maintainability Management
- ▶ Structural Integrity
- ▶ Fluid Flow Management
- ▶ Thermal Management
- ▶ Noise and Vibration
- ▶ Sustainability
- ▶ Vulnerability
- ▶ Product Development
- ▶ Novel Sensor Applications
- ▶ Software Development

This extensive capability enables us to keep the majority of system design functions in-house, which reduces project risk and improves project performance.

For more information please contact **Peter Entwistle** on **01306 885050** or email p.entwistle@fnc.co.uk

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