

Simulation Environments

Service Category: Cloud Migration Planning, Cloud Support Services

About Our Service

Bespoke simulation environment development to rapidly develop and evaluate technical concepts and integrate hardware, software and human systems. Integration with existing models. Networked play for multiple actors. Development of AI gyms to train and test artificial intelligence using synthetic data and scenarios. Deliveries using COTS game engine technologies.



Service Features

Bespoke simulation environments to design, develop and integrate concepts

Rapid capability demonstration and evaluation in a controlled environment

Highly visual and interactive 3D environments

Hardware-in-the-loop, software-in-the-loop and human-in-the-loop

High quality synthetic data generation

Controlled training environments for AI

Synthetic environments of real-world locations (e.g. LiDAR scans)

Virtual Reality (VR), Augmented Reality (AR) and Mixed Reality (MR)

Commercial game engine technology to solve engineering and business problems

Unity, AirSim, Gazebo, Robot Operating System (ROS)

Service Benefits

Rapidly test,
evaluate and iterate
designs in a virtual
world

Test and evaluate
future technical
concepts, ConOps
and ConEmps

Develop and test AI
models within
controllable
environmental
conditions

Run across a wide
spectrum of
scenarios and
conditions

Test and develop
human machine
interfaces

Reduce risk within a
virtual world

Identify integration
issues early

Reduce reliance on
live trials to
integrate and prove
ideas

Wow stakeholders
with high-quality
interactive visuals

Detailed Service Definition

We leverage the power of technologies such as commercial game engines to solve complex and varied engineering and business problems quickly and cost effectively. Simulation environments allow you the flexibility to control all aspects of your virtual world, giving you a dynamic and consequence free environment to test, train and develop. Highly interactive 3D environments and high-quality visuals win over stakeholders. We leverage existing technologies where possible, focusing project effort on the application of these capable tools to your specific challenge.

Detailed Service Definition (continued)

We apply these techniques to rapidly iterate designs, investigate technical concepts and concepts of operations, and to prove the integration of hardware, software and people. We can generate environments from representative procedurally generated environments up to real-world laser scanned locations. Our approach increases speed of development, reduces risk and reduces reliance on live trials.

Simulation environments are also an effective means of generating high quality synthetic data, which we have applied to the training of image recognition and tracking AI models. Fine control of environmental conditions, situations and objects provides a wealth of exposure for training machine learning models.

Why Frazer-Nash Consultancy?

Frazer-Nash Consultancy is an independent engineering and technology consultancy with over 35 years' experience delivering high-quality digital and cloud-enabled solutions. We support organisations operating in complex and regulated environments through our collaborative approach and deep expertise in digital engineering, software development and systems integration.

We are **solution and technology-agnostic**. We assess our clients' requirements and provide impartial advice and design solutions based solely on their needs. This independence enables us to select the most appropriate cloud technologies and architectures to deliver secure, resilient and value-for-money outcomes.

Our cloud solutions are informed by experience gained across multiple platforms, sectors and use cases. We combine proven engineering discipline with a strong understanding of integration and whole-system design to support and enable cloud adoption while managing risk and ensuring long-term sustainability.

Our Commitment to Quality

Frazer-Nash is committed to delivering consistently high-quality services and outputs that **often exceed customer expectations**. Quality is embedded throughout our ways of working, from engagement and communication through to delivery and assurance.

We actively monitor progress using our robust, proportionate controls, ensuring key decisions are subject to appropriate challenge. Each project is allocated a dedicated Project Manager, a Project Supervisor who independently reviews and approves monthly reports, and a Project Auditor for ongoing quality assurance.

We ensure accuracy and suitability for purpose of all deliverables, with independent verification by two reviewers. Our Quality Management System is certified to **ISO 9001 and TickITplus** (for software development), providing customers with confidence that our quality standards are externally assured and continuously maintained.

Our Security

Frazer-Nash operates robust security processes and controls suitable for handling sensitive and classified information **above OFFICIAL** up to and including **Top Secret**. Security is embedded across our people, processes and systems, ensuring information is protected throughout delivery.

We support sensitive and critical programmes across government and national infrastructure by applying strict information-segregation controls, including team separation to address security, or conflict-of-interest considerations

All 1500 staff hold **BPSS clearance as a minimum**, with the majority cleared to **SC** and over 225 consultants holding **DV clearance**.

Our IT systems are certified to **ISO 27001** and **Cyber Essentials Plus**, providing assurance that information security risks are proactively managed in line with recognised industry standards.

Our Approach to Subcontracting

Frazer-Nash primarily delivers services through our large base of permanent staff, supplementing this capability where required with trusted partner organisations to provide additional flexibility, specialist expertise and scale while retaining full delivery control.

We are experienced in engaging and managing subcontractors across the full project lifecycle, ranging from sole traders to large multinational organisations. Our structured approach ensures the right supplier is selected for each requirement and integrated effectively into the delivery team.

Our subcontracting processes focus on robust supplier identification and assessment, clear definition of scope, appropriate flow-down of contractual terms and conditions, and proactive risk management. All subcontractors are subject to proportionate commercial and technical due diligence to ensure they meet our standards for security, quality and delivery, enabling us to deliver outcomes on time, within budget and to the required quality.



Resourcing

Frazer-Nash employs over **1,500 technical specialists** across all grades, from **Follow to Set Strategy**, providing depth, continuity and scalability across a wide range of disciplines, backgrounds and experience levels.

To support agile and flexible delivery, our people are organised into defined **technical delivery areas** (including Information Systems, Cyber, Modelling and Software), which are deployed across multiple sectors such as central and local government, policing, health and energy. This structure, combined with strong portfolio, programme and project management (P3M), enables us to actively monitor demand and adapt resourcing throughout the project lifecycle.

We deliver complex requirements efficiently, consistently and at pace by forming tailored, multi-disciplinary teams led by a single accountable Project Manager.

Our consultants regularly work across different sectors, enabling us to cross-pollinate ideas, tools and best practice between domains. Drawing on in-house expertise, such as information security and human factors, we ensure effective and responsive delivery for every client.



Our Commercial Approach

Frazer-Nash adopts a flexible and transparent commercial approach to ensure best value and a model that aligns to each client's specific requirements. We collaborate with customers to clearly define the scope of services and agree a commercial structure that is predictable, proportionate and aligned to your required outcomes and effective delivery.

Depending on the requirement, this may include a **fixed-price model for clearly defined scopes**, or **time and materials using agreed day rates** where flexibility is required to accommodate evolving needs.

For longer-term or ongoing service requirements, and where we have control over resource flexibility, we can also offer a **single blended day rate** covering a range of grades. This provides simplicity, transparency and ease of management while maintaining access to the appropriate skills at the right time.

Next Steps

To discuss your requirements in more detail or request an order for services, please contact ccs@fnc.co.uk

