

Healthcare Strategic and Operational Modelling

Service Category: Cloud Migration Planning, Cloud Support Services

About Our Service

We embed cloud-based, system-wide demand and supply simulations tailored for health and social care to optimise operations, accelerate transformation, and generate compelling evidence for robust business cases.

Our advanced analytics and validated data science methodologies deliver sustainable, high-impact decision-making, improving outcomes and supporting integrated care across NHS and social care.



Service Features

Cloud-based fast
running healthcare
simulations and
digital twins

Quality approved
data engineering
and software
development

Green, Aqua,
Magenta Book
economic analysis
and evaluation

Evidence-based
analytics, machine
learning and AI
methodology

Scenario planning,
scenario modelling
and uncertainty
modelling

Evidence business
cases, scenario
evaluation and
decision
optimisation

Demand and supply
modelling

Care pathway
modelling and
predictive analytics
for transformation

Health and social
care system benefits
modelling

Systems modelling
and evaluation

Service Benefits

Improved resource allocation to improve outcomes

Improved demand forecasting to better meet future needs

Evidence generation for major investment decisions and business cases

Identification of opportunities for transformation to improve care

Improve understanding of wider care system and impact of change

Capture clinician, patient and management input to decision-making

Increased DDaT staff capacity with new skills and tools

Improved planning and response to uncertain events

Plan changes to meet local and national performance targets

Influence wider determinants of health to mitigate demand

Detailed Service Definition

Frazer-Nash's healthcare strategic and operational modelling service delivers evidence-based solutions to help NHS and social care organisations plan, optimise, and transform services. Using advanced analytics and predictive modelling, we enable policy makers, Integrated Care Systems (ICSs), NHS Trusts, and local authorities to make informed decisions, improve patient flow, and meet mandated performance targets. Our approach combines strategic planning with operational execution, supporting elective recovery, urgent and emergency care improvements, and integrated care delivery across health and social care settings.

Detailed Service Definition (continued)

We work with you to navigate complex systems, address challenges confidently, and build sustainable capabilities. Our service includes:

- **Problem structuring:** we collaborate with your teams to define the problem clearly, using data-driven insights to identify root causes and prioritise opportunities for early success. This ensures alignment with organisational objectives and stakeholder needs.
- **Solution design:** we co-develop solutions using proven, evidence-based methods and tools. Our team evaluates existing data, identifies gaps, and creates proof-of-concepts that demonstrate practical, impactful options for change.
- **Solution embedding:** we build lasting capability within your organisation. Through training and knowledge transfer, we ensure your teams can sustain and evolve solutions, supporting future decision-making and continuous improvement.
- **Evidence-based decision-making:** we help you identify and generate the evidence required to support robust business cases and stakeholder engagement. Our solutions comply with UK best practice, including HM Treasury Green Book and NHS England guidance.

Detailed Service Definition (continued)

Why Frazer-Nash?

- **Expertise and scale:** over 130 data scientists, modellers, and software developers with deep experience in strategic and operational modelling for health and social care.
- **Advanced techniques:** we adopt the latest academic research and develop bespoke approaches to deliver fast-running, validated models for critical environments.
- **Assured AI and software development:** we build assured fast-running digital models tailored to customer needs using up-to-date technology.
- **Compliance and assurance:** our solutions meet relevant legislation and standards, including UK data governance standards (UK GDPR, NHS DSP Toolkit), and withstand external scrutiny.

Detailed Service Definition (continued)

Benefits for health and social care providers

- **Accelerated deployment:** cloud-based solutions reduce time to implement new capabilities.
- **Improved forecasting:** anticipate demand and resource pressures to act proactively.
- **Stronger business cases:** transparent, persuasive cases aligned with Government Rainbow Books and NHS policy.
- **Integrated planning:** support ICS-wide collaboration and whole-system modelling.
- **Workforce optimisation:** model staffing requirements, rota planning, and skill mix to address shortages.
- **Performance improvement:** evidence-based interventions to meet elective recovery and urgent care targets.

Detailed Service Definition (continued)

Case study:

NHS Acute Trust Transformation: A busy NHS Acute Trust needed to meet mandated targets for elective surgery backlog and ambulance handover times. Frazer-Nash partnered with the Chief Operating Officer and BI team to create a digital simulation of elective and emergency care pathways using EMPATH, our microsimulation tool. The model incorporated patient flows, resource constraints, and staff rotas, enabling scenario testing and performance forecasting.

Impact:

- Identified changes required to meet NHS England targets.
- Supported a successful business case for additional theatre and ward capacity.
- Secured funding for expansion and improved patient flow.
- Embedded modelling capability within the Trust for ongoing use.

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

