

Demand and Capacity

G-Cloud 15

About CF

CF is a leading consultancy with a purpose to **make an enduring impact on health and healthcare**. We work with leaders and frontline teams to improve health, transform healthcare, drive adoption of innovation and create value through investment.

Our mission is to **be invaluable to our clients, supporting them to innovate and make lasting improvements and to build an exceptional company that attracts, develops, and retains a trusted and uniquely talented team.**

Our consultancy serves the entire healthcare sector, from payors and providers of care, to life science companies, health tech and sector suppliers. We provide **end-to-end services**, spanning strategy to implementation, accelerated by data, digital and AI. We shape opinion through evidence-based thought leadership on the key issues affecting health. With **unmatched ability to access health data**, our consultants are a driving force for delivering positive and meaningful change.

We help systems and organisations realise transformative change, to drive improvements in quality of care and performance. We inspire clients to innovate and sustain change, through a trusted, talented, and dedicated team. Our partners lead all our work and bring decades of experience from within the NHS.

Our work with health systems includes partnering with public and private providers of all kinds of care, as well as their commissioners and regulators. We **work at every level** — national, regional, and local — **supporting health systems to improve** from a strategic, performance and organisational perspective.

We are passionate about healthcare, **improving outcomes** and **reducing health inequalities** through consultancy and the application of data and tools. CF is proud to have **won multiple awards** recognising our ability to partner with the NHS (including throughout the Covid pandemic), support the transformation of care, enable action with data and set the agenda through thought leadership.

Some of the awards we have been recognised with include:

- Gold in Healthcare and Silver in both Pharma & Life Sciences and Management categories Consultancy.ME 2025)
- Highly Commended in Change and Transformation in the Public Sector & Best Use of Thought Leadership categories - finalist across five categories (MCA 2025)
- Top UK Healthcare, Pharma and LS consultancy (consultancy.uk 2023)



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- Finalists across five categories (MCA 2023)
 - Finalists across three categories (HSJ 2023)
 - Project of the Year, Performance Improvement in the Public Sector and Strategy (MCA 2022)
 - Best Healthcare Analytics Project for the NHS (HSJ 2021)
 - Best Consultancy Partnership with the NHS (HSJ 2020)
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 - Best Healthcare Analytics Project for the NHS (HSJ 2020)
 - System and Data Integration (HSJ 2020)
 - Change and Transformation in the Public Sector (MCA 2020)
 - Best use of Strategy (MCA 2020)
 - Thought Leadership (MCA 2019)

Our data and cloud capabilities

We believe that we are uniquely positioned to support you in this work for several reasons:

- **Award winning analytics.** Our Data Innovation team have won Best Healthcare Analytics Projects and the Best Provider for Healthcare Analytics in multiple HSJ Awards.
- **Unparalleled data access.** We have access to more healthcare data in the UK than any other consulting company
- **Best in class security. We conduct regular penetration testing via trusted security experts.** Privacy is enhanced through our Amazon Virtual Private Cloud (VPC) in a logically isolated virtual network where all our services are controlled using best in class two factor authentication providers
- **We subscribe to an “infrastructure as code” philosophy** where all our software and service infrastructure is documented and controlled through auditable and shareable code allowing rapid deployment, reduced management costs and increased efficiency
- **All our software is comprehensively logged and auditable** to ensure any issues with service provision are identified, communicated, and ameliorated as quickly as possible



Demand and Capacity

Service overview

It can be hard to accurately predict future demand within a system, meaning that manually created capacity plans, which can be time-consuming to develop, often produce bottlenecks within the care pathway.

The Demand and Capacity (D&C) tool supports a strategic approach to managing demand and capacity across a system. This tool enables system planning of workforce and bedded demand against capacity for acutes, community, social care and primary care. This is an interactive tool where users can modify assumptions and test a variety of activity and workforce change scenarios in real time, to support operational decision making. The D&C tool allows a user to see current and future demand and make accurate plans before performance is impacted. This tool can be used by a single organisation or across a health and care system to enable strategic planning.

By integrating data from across health and social care into a ‘single version of the truth’, it reflects interdependencies, supports prevention, early intervention, and integrated care, helping systems to deliver on the 10 Year Plan’s goals for improved outcomes and efficiency using joined-up planning. The D&C tool aligns with the ambitions of Chapter 1 in the NHS Long Term Plan, supporting systems to deliver sustainable improvements over the next decade. By enabling advanced pathway modelling, the tool empowers organisations to implement a ‘left shift’—moving care upstream, optimising patient flow, and reducing reliance on acute settings.

Using a cloud platform, users can predict demand, test different assumptions and scenarios, and see the impact on system performance.

The tool covers demand and capacity modelling across several modules:

- Urgent and Emergency Care
- Elective Recovery
- Elective
- Outpatients
- Discharges
- Out of Hospital (Community and Social Care)
- Primary Care

Modules can be purchased individually or as a package of two or more depending on your needs.

Module requirements will then be reflected in the pricing. This service is intended to help you develop and deliver benefits to your organisation. CF works together with clients to understand



their specific requirements to help tailor the best approach. Please contact us on contracts@carnallfarrar.com to discuss your needs further.

Who the tool is for

The D&C tool can be used by different groups across your organisation. Examples of potential user groups are shown below:

1. Operational management
2. Senior management
3. Clinical leadership
4. Clinical safety
5. Business Intelligence
6. Finance and contracting
7. Elective care programme
8. Commissioning

What the tool does

The CF D&C tool is simple-to-use but sophisticated and supports collective planning and management of services. The tool takes a whole system view and utilises advanced analytics. The tool is based on our extensive experience supporting systems to resolve demand and capacity issues. The tool is an easy-to-use, online platform that gives a provider and commissioning perspective and allows forward planning.

Some of the key features of the tool are listed below:

- Demonstrates current demand and inequalities through statistical modelling
- Forecast demand and bottlenecks (A&E attendances, admissions, acute bed occupancy, community care pathway etc.)
- Predicts future demand (including covid demand) using machine learning
- Develops a dynamic system model that simulates future waiting lists and simulates impact of interventions targeting waiting list performance
- Includes beds, workforce, diagnostics, and theatres required by non-elective demand
- Compares expected demand to capacity across multiple providers
- Applies interventions at high granularity (e.g., specialty) and view of impact on forecast
- Illustrates future hospital environments, including elective activity by speciality
- Manual scenario planning (set demand, capacity, alt pathway, length of stay, V2+ target waiting times, timeframes, beds, clinics parameters etc)
- Export action plans
- Ability to select scope (pathway, geography)
- Map pathway to show flow across system
- Show variation in access/activity, waiting, outcomes, etc.
- Account for impact of Covid and backlog

The D&C tool is based on a secure cloud platform and can be accessed by multiple users for



multiple locations. The information that supports understanding of capacity vs. demand can be visualised on a dashboard that charts key indicators based on user selection. Aggregated data can also be downloaded as a .CSV file.

Benefits

- Simple, data-driven development of capacity plans by user at site, trust, or system level
- Prevention of bottlenecks in system using capacity predictions.
- Proactive capacity and demand management
- Identify pressure points and opportunities to transform pathway
- Enables pathway redesign (e.g., outpatients), to streamline processes, reduce unnecessary appointments, and improve patient experience via scenario modelling
- Understand capability and capacity for transformation of community care within the system

How we set up the tool

The D&C tool is populated by CF with source data and assumptions. We are platform agnostic with regards to data infrastructure. We have our own infrastructure for national data but have in depth experience developing on top of AWS, Azure, Google cloud platform and Foundry ecosystem.

We generally set up tools using a simple 3-step process:

1. **Receive, load, and validate historical data from relevant organisations** for example acute providers, ambulance trust, 111, CCGs (historic), GP practices. It is also possible to use nationally available data sources such as HES, ONS and KH03 to produce a 'lite' version of the tool in a much shorter timeframe; this can later be updated with local provider data, if required.
2. **Agree a set of change levers** such as improving the delivery of integrated care, improving the acute discharge process and increasing capacity, the impact these levers will have (such as a reduction in NEL LOS or a reduction in staffing requirements) and enter these into the tool. The impact can be generated locally, or we can access an extensive evidence base to produce a proposed impact, which is then agreed with local organisations.
3. **View impact of change levers and generate prediction of future demand and capacity** on metrics such as NEL vs. elective bed requirement, predicted daily contact hours required by pathway and staff type.

Onboarding and support packages

CF provides the full range of services needed to support deployment, integration, and ongoing usage of the tool. We provide a core analytical support package with the option for additional consultancy support depending on your organisation's requirements. The packages we offer are detailed below. We would be happy to discuss your specific requirements to tailor the best support we can offer. The three levels of support we offer are detailed below:

1. The analytical support package (core)

The core package includes analytical support for:



- Mobilisation:
 - Agree project goals with a lead organisation (to be nominated locally)
 - Issue a data request to each provider within scope
 - Ensure information governance is in place, working with local organisations to complete data privacy assessments and implement data sharing agreements
- The initial setup of the tool, which usually requires around 12 days of support from our Data Innovation Lead. This involves:
 - Three **“train the trainer” sessions** provided onsite
 - The **ongoing licence fee**, which covers data hosting, processes and regular (e.g. monthly or weekly) refresh. We work with each data provider to set up data feeds into the tool – via a secure FTP – at an agreed time interval (likely weekly or monthly), so that the data is automatically loaded into the tool on an ongoing basis)

2. The consultancy support package (optional)

We offer three different optional consultancy support packages to choose from in year 1 and beyond:

- **Bronze: Two weeks** of initial consultancy support to build an example plan from the data based on best practice; this support is led by senior leadership (Associate Partner), supported by a full-time Consultant and full-time Analyst
- **Silver: Four to six weeks** of consultancy support to understand the key drivers and align key stakeholders around strategic priorities to address; this support is led by senior leadership (Partner), supported by full-time team (Manager, Consultant, Analyst)
- **Gold:** As Silver, but with **additional quarterly reviews** over a year to agree priorities; this includes four weeks of additional support (spread over four quarters), led by senior leadership (Partner), supported by a full-time Consultant and full-time Analyst

Our consultancy support is also discounted to reflect economies of scale (e.g., through joint system workshops).

3. Further bespoke consultancy support (optional)

We can also provide additional consultancy support to deploy the tool. The scope and cost will be agreed on a bespoke basis but might include:

- Further product development (such as including other data sources or metrics)
- Support to build an integrated dataset with data warehouse
- Support to develop information governance solutions
- Support to understand existing plans and facilitate agreement to a plan across different providers and commissioners
- Facilitate workshops with clinicians and other colleagues
- Organisational development to support local organisations to deliver the plans

Security and Information Governance



The Demand and Capacity tool is based on a secure cloud platform and can be accessed by multiple users for multiple locations.

Collective planning is often difficult because of issues around sharing data and information governance. As part of our support, CF will go through a robust information governance process which includes:

- Understanding the information governance requirements of each organisation
- Supporting organisations to complete data privacy assessments, where required
- Co-developing and implementing data sharing agreements
- Ensuring compliance with NHSE requirements

