Building capability: what works, what the profession is doing

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Menu

- A bit of context
- The Analysis Function
- Career and learning pathways - Statistics Profession and beyond
- Capability building from the ground up – actions and activities you can do yourself

"I fully expect that, in five years' time, what we will be doing will be **radically different**. More data will be **real-time**; our services will be **digital by default**; the quality of our advice and insight will have earned us a **seat at the table** where the most important decisions are made."

‘Getting data right
is the next phase of
public service reform’

John Manzoni

The Government Data Programme

Better Use of Data:

Open Data

Data Science

Data Literacy & Capability

Data Infrastructure:

Registers

Data Access Tools, APIs

Data Policy:

Legislation

Common Approaches

International Leadership

Creation of the Analysis Function

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“Better Analysis, Better Delivery”

- A new Function? Or an evolution of the Analysis Professions
- Part of the wider Civil Service Functional agenda set out by John Manzoni
- Ambitious aims for Careers, Learning and Impact

Analysis Function Objectives

1. Visibility & Impact

2. Build and coordinate common capabilities

3. Radically improve Civil Service capability in Analysis and Data Science

4. Management models and career pathways for analysts

5. Strengthen talent and diversity for analysts to deliver the Function's mission and Civil Service Leadership Statement

Analysis Career Pathway Principles

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GORS
Government Operational Research Service

1. Achieving impact with analysis
2. Knowledge and application of OR skills and techniques
3. Sustaining and developing OR profession and professionalism

GSR
Government Social Research

1. Technical skills
2. Using and promoting social research

Government Economic Service

1. Application of knowledge
2. Analysis of Data
3. Effective communication

Government Statistician Group
Better Statistics, Better Decisions

1. Acquiring Data / Understanding User Needs
2. Data Analysis
3. Dissemination and Presentation
4. Working with Credibility

Career Pathway Principles

Guidance on entry, progression and development within the profession

Underpinned by learning and development opportunities from formal to informal

Different skills' families (technical and non-technical) that government statisticians should develop

Data Science and data scientists are part of the Statistics Profession

The pathway sets will be applicable across the GSS. Department-specific opportunities and standards will not be included

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Grade Descriptions

Entry to, and progression through, the profession is through assessment of both technical and general skills. The different grades for the statistics profession are set out below. The GSG competency framework covers the specialist knowledge required by the profession, and is structured into three levels of knowledge and experience that align to statistical grade (detailed descriptions of how the GSG competencies map onto the grades are available on the website).

Grade	Description and Responsibilities of grade
Statistical Officer / Trainee Data Scientist GSG competency Level 1	• Supervised by more senior statisticians/ data scientists • Responsible for own work and contributes to statistical or data science production • Gains experience working within a statistical or data science role using formal statistical qualifications gained from previous education • Can expect to develop strong working knowledge of tools and methods.
Higher Statistical Officer / Junior Data Scientist GSG competency Level 2	• Responsible for aspects of statistical production or data science projects • May manage junior grades including non analysts • Able to communicate and champion statistics or data scientists in their own area of work • Continues to develop their technical skills
Senior Statistical Officer / Data Scientist GSG competency Level 2	• Responsible for multiple aspects of statistical production or data science analytical projects • Often manages teams of analysts and non analysts • Can develop expertise in technical skills through further training /qualifications
Principal Statistician G7 / Senior Data Scientist GSG competency Level 3	• Head of statistical/data science teams, responsible for statistical/data science production or areas. • Are often regarded as topic experts and champions for their topic area, and their team's work. • Can develop expertise in technical skills through further training /qualifications
Principal Statistician G6 / Principal Data Scientist GSG competency Level 3	• Head of multiple statistical or data science teams, responsible for whole programs of statistical and data science work • Have an overview of the statistical, data and political environment and are champions for the use of statistics and data science across government.

Consultation with Statistics profession

3 month plan to develop consistency across professions and recognise technical skills

Gss.career.strategy@ons.gov.uk

Linking Careers to Learning

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1. Career and Learning needs to be outward facing to meet the needs of Better Statistics, Better Decisions, Analysis Function and Civil Service work plan

2. Partnering with Policy, Digital and Leadership Academies

3. Data Science Learning Offer

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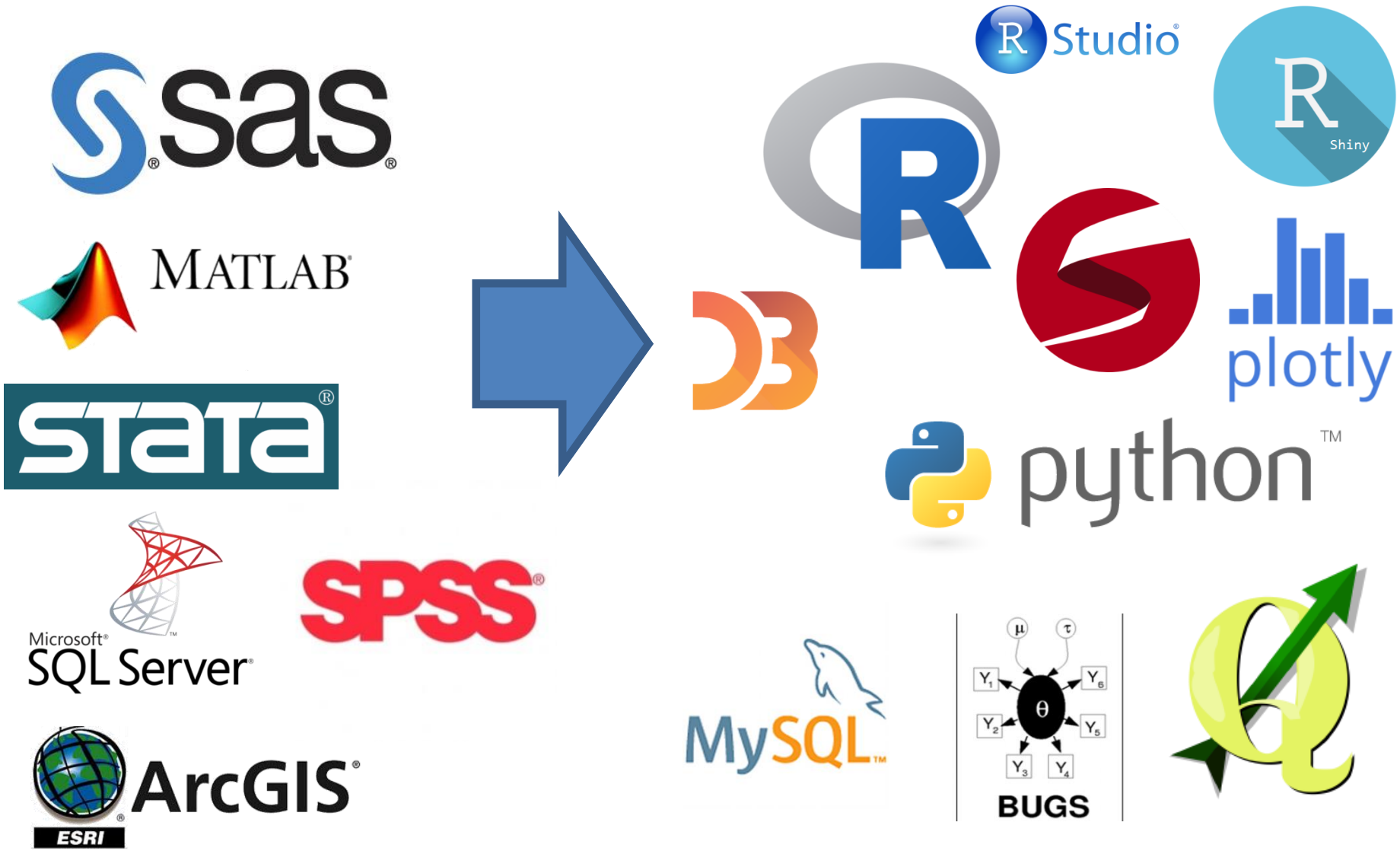
The analyst's toolbox is changing



The ask of analysts is changing

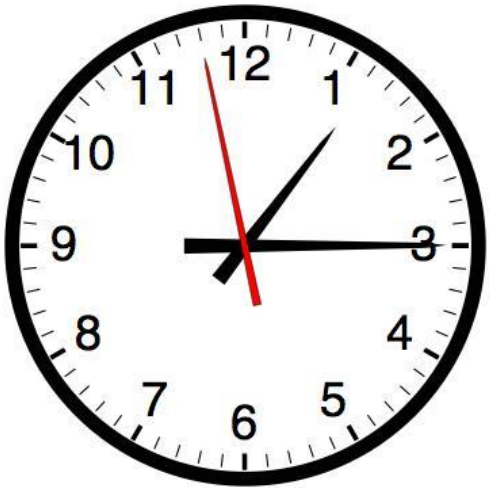
Data driven	Agile and flexible	Focus on the repeatable and transparent	Communicate
Be curious about information and explore it fully	Experiment and innovate, and if it doesn't work move on	Show your workings	Share, discuss and critique
Seek out new ways to add value to your department's data	Use tools and techniques that fit the problem	Design for quality assurance, transparency and repeatability	Find the stories in your data and share them
			Seek challenge to improve processes and outputs

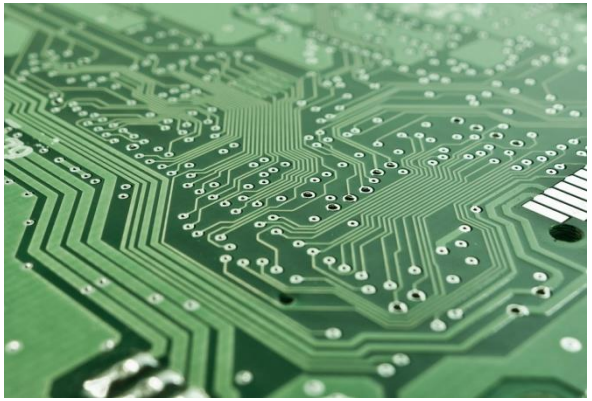
What can you do about this?

- Build from the ground up as well as from the centre
- As a professional community, we need to transform our skills and how we work to meet the future needs of government
- We are already doing this across government – don't wait, get involved!

Government Statistical Service

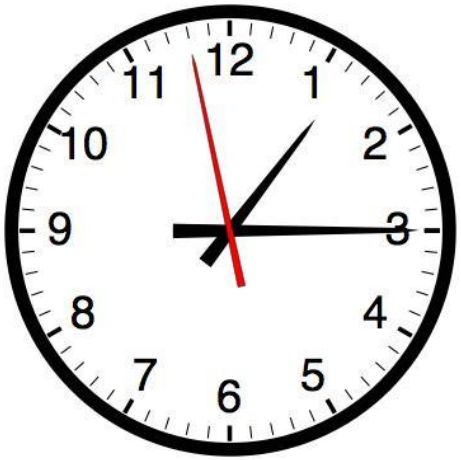
What do we need?





Government Statistical Service

Frame this as “skills to save”



Code clubs, reading groups, lunchtime teach-ins

Use your 5 days a year and CPD time

Try to sell a “free time” pilot. Use demonstrator projects to “show the thing”, raise awareness and demonstrate possibilities – this will generate excitement and interest

Work across the professions to build mentoring and information sharing networks – start an “in house” accelerator?

Build data science learning into your delivery (e.g. RAP)

Use open source tools to improve efficiency of processing and drive down licensing costs

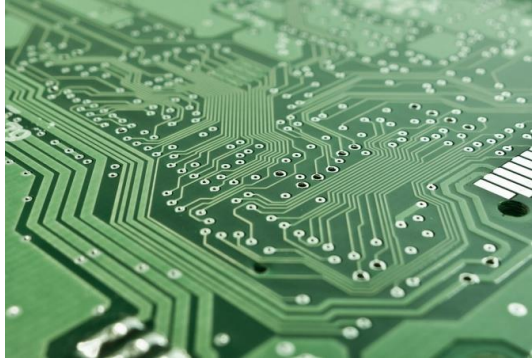
Use success stories from OGDs to demonstrate benefits and savings. Show that others have brought new tools in and realised business benefits

If you can't get the tools you need, **lobby your Head of Profession, Chief Analyst and other senior managers** to get them into your organisation – but they'll need evidence!

Share the good stuff as widely as you can within your organisation

Build alliances with the like minded – invite external speakers to show how they've used these tools in government to deliver meaningful change – GPT and the Data Science Partnership can help you here

Some departments are heading into the cloud



REMEMBER:
You can do a LOT OF DATA SCIENCE on a LAPTOP

At ONS, we built our own private cloud as a proof of concept and used it as the basis for lots of pilot studies – we needed to get the Executive Director for IT on board to let us do that

Having a senior team who can see and support the benefits of open source and are bought into “skills to save” is a huge advantage

Four years later, we’re now transitioning to something bigger, better and properly embedded in our business transformation

If all else fails, get some standalone machines to test things out with. Use them to build support for further progress!