



Service Definition Document

Custom Cloud Application Support
and Development

A Liquidlogic team; part of the
System C Group





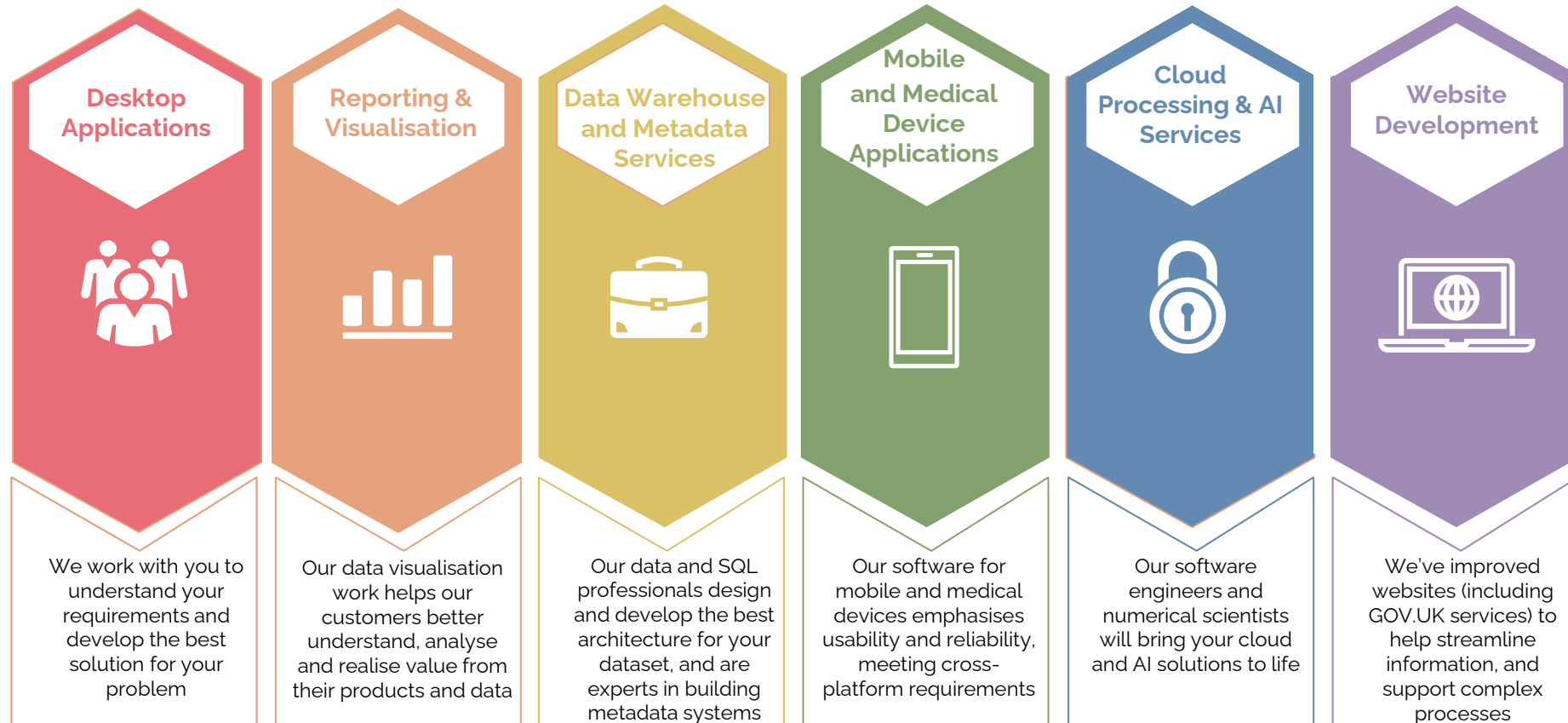
Custom Cloud Application Support and Development

Who are we?

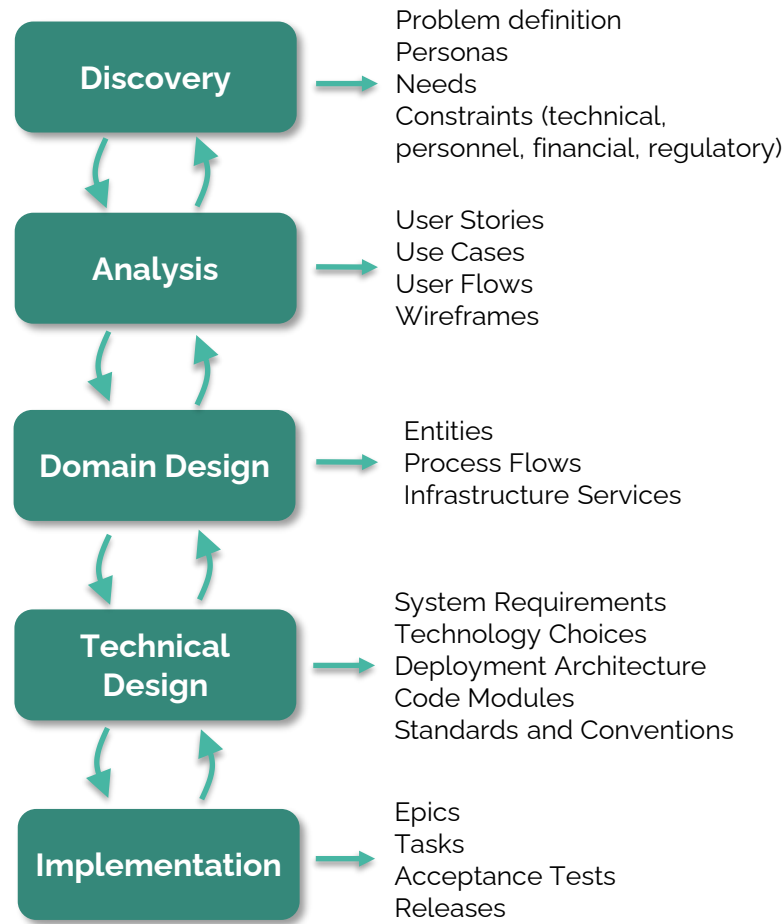
- Liquidlogic's Custom Cloud Application Support and Development team has many years of experience in delivering cutting-edge software solutions that meet the unique needs of our clients.
- We work with a wide range of clients in the energy, scientific, healthcare, and engineering sectors, including Liquidlogic's own social and health care customers, universities, local and central government, private enterprises, and catapults.
- With a focus on innovation and excellence, we are proud to have helped create *numerous, impactful* applications, including the QCovid Risk Calculator, Microbira's MAAP-IR software, and Sport England's Active Lives Online website.
- We particularly specialise in AI machine learning, numerical modelling, data services, and visualisations, and are committed to *pushing the boundaries* of technology to drive positive change, helping solve complex, real-world problems.
- Our talented software engineers hail from STEM backgrounds, making them *uniquely placed* to understand the complex, often scientific, domains of our clients.

Our Core Services

We will join you on your journey - whether that is turning an early-stage custom cloud product into a prototype, turning a prototype into a market-ready solution, or enabling you to scale-up your existing cloud application.



Our Approach



Agile Delivery

- Working together on innovative projects relies on communication, learning, flexibility, and trust.
- We use agile methodologies, mapping these to the software lifecycle of discovery, analysis, design, and implementation, and integrating best practices for quality assurance and control
- We regularly deliver and demonstrate code so that you know where the project is and can make informed decisions.
- We work together so you are in control.

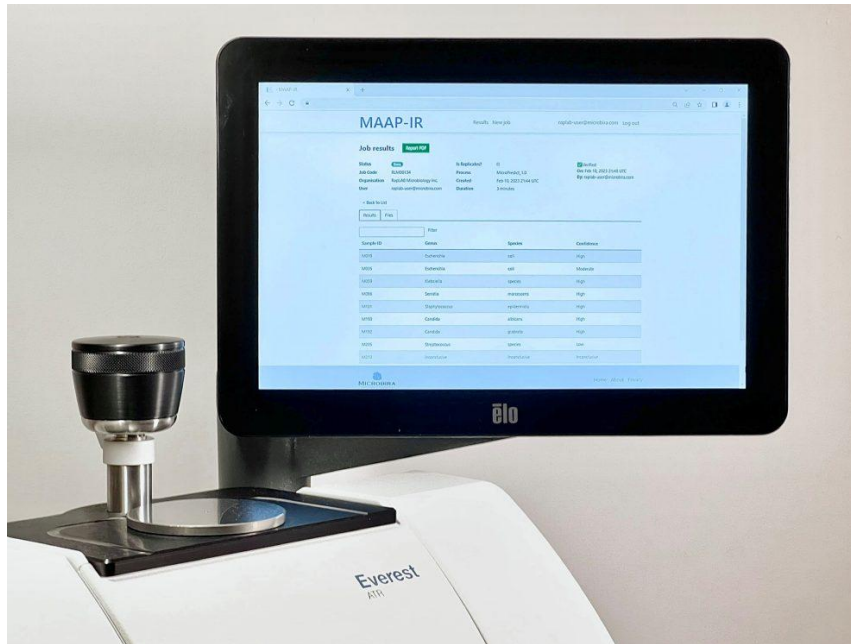


Why Choose Us?

- Knowledgeable, experienced and approachable software engineers with strong academic and STEM backgrounds.
- Flexible Team Sizes: We can increase/decrease our teams quickly and flexibly, ensuring that we meet your needs.
- You Own the Product: You keep all the IPR, equity and revenue.
- Transparent Costs: We work for a simple transparent day rate, providing quality services you can afford.
- Long-Term Relationships: We stay on-call after the project, ensuring we provide you with all the support and consultancy you need.

Case Study: Microbira MAAP-IR

Improving the efficiency of healthcare delivery through AI innovation



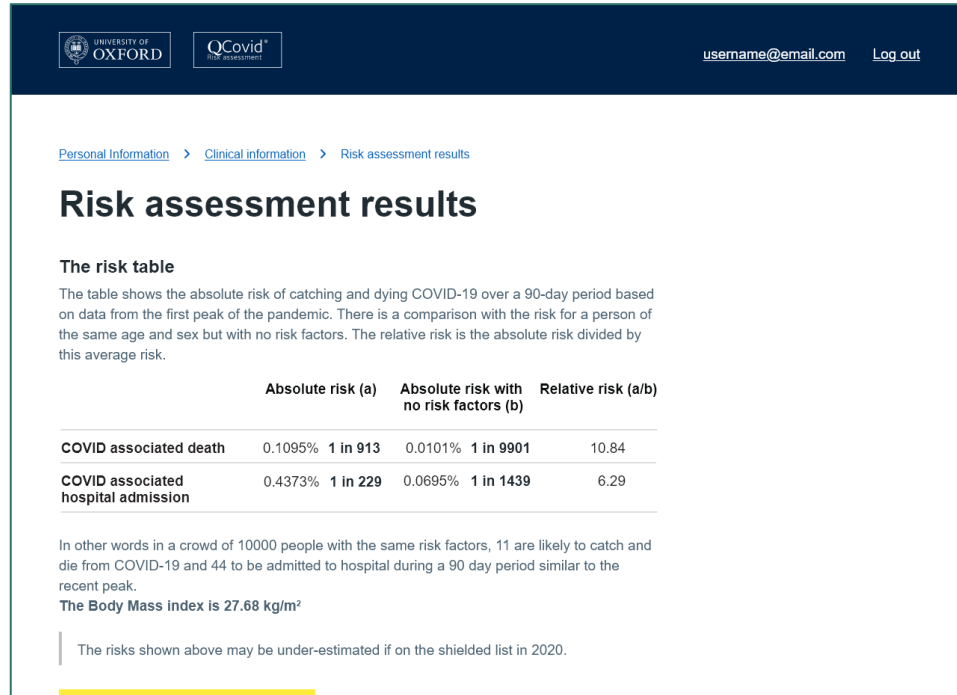
- We developed the *Microbira Advanced Analytical Platform – Infrared* (MAAP-IR) software.
- This multi-user, cloud, and AI-based application processes data captured from Fourier Transform Infrared (FTIR) spectroscopy.
- Users submit FTIR-based samples into the MAAP-IR application, which uses Microbira's AI model to identify and classify microorganisms.
- Allows clinicians to identify disease-causing organisms quickly without use of complex reagents.
- Registered as medical device software within the UK.

"[The team] has been a tremendous asset in the development of our microorganism identification software. We felt they were partners in the whole process and we are already planning to use their expertise in the next part of our expansion."

Marianne Ismail, Chief Executive Officer, Microbira

Case Study: QCovid Risk Calculator

Supporting the NHS through the COVID pandemic



The screenshot shows the QCovid Risk Calculator interface. At the top, there are logos for the University of Oxford and QCovid, along with a user login field and a 'Log out' button. The main content area is titled 'Risk assessment results' and includes a section for 'The risk table'. This table compares absolute and relative risks for COVID-associated death and hospital admission. Below the table, there is a note about the data source and a disclaimer regarding the risk estimates.

	Absolute risk (a)	Absolute risk with no risk factors (b)	Relative risk (a/b)
COVID associated death	0.1095% 1 in 913	0.0101% 1 in 9901	10.84
COVID associated hospital admission	0.4373% 1 in 229	0.0695% 1 in 1439	6.29

In other words in a crowd of 10000 people with the same risk factors, 11 are likely to catch and die from COVID-19 and 44 to be admitted to hospital during a 90 day period similar to the recent peak.

The Body Mass index is 27.68 kg/m²

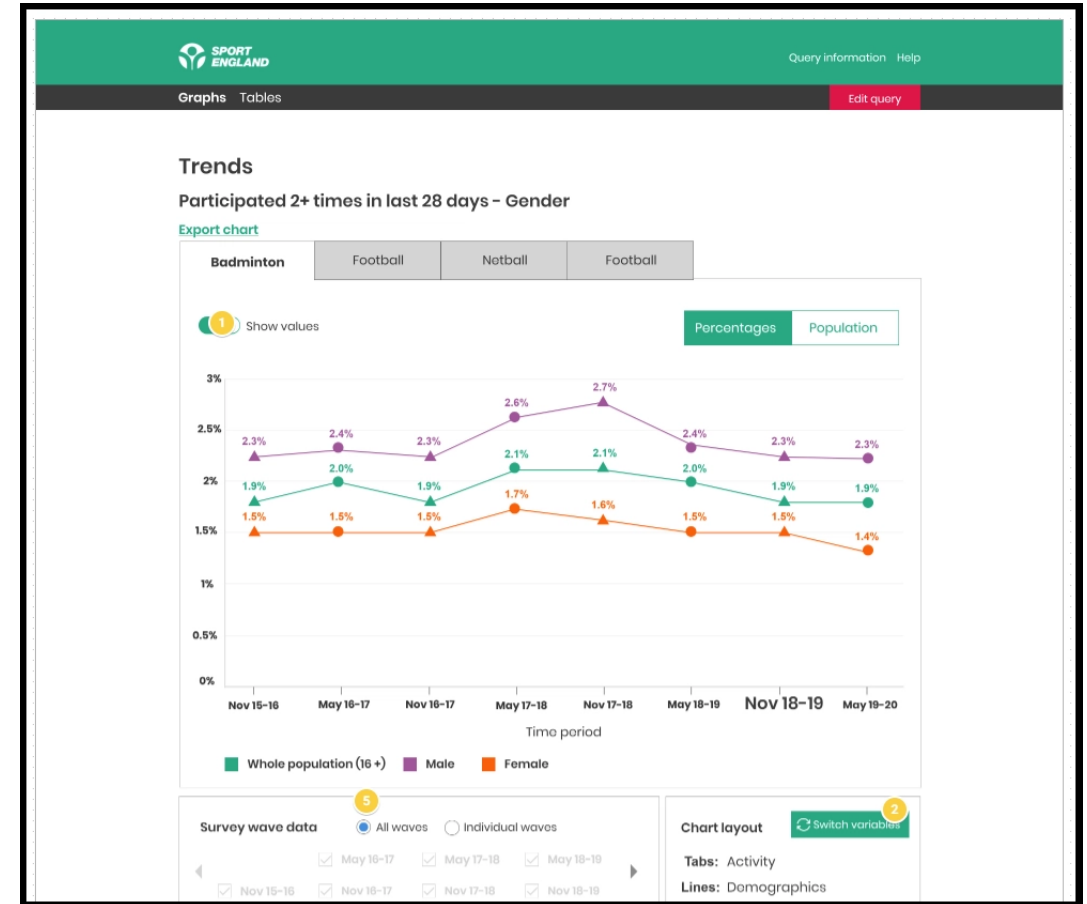
The risks shown above may be under-estimated if on the shielded list in 2020.

- A collaboration between The University of Oxford, NHS Digital and our Custom Cloud Application Support and Development team to build a Class 1 medical device.
- The QCovid Risk Calculator determines an individual's risk of hospitalisation and death from Covid-19.
- To build the Calculator, we transformed Oxford University's research code into a high-performing algorithm, capable of processing 45 million medical records in 90 minutes.
- NHSD then used the algorithm to develop both the Covid-19 Population Risk Assessment and Clinical Risk Assessment Tool.
- This helped add 1.4 million people to the COVID-19 shielding list, enabling people to be prioritised for vaccines.
- We also built QCovid.org, a cloud-based website demonstrating how to implement the Calculator, which had a million users in three months.

Case Study: Sport England

Helping users make sense of big data

- We redesigned, rebuilt, and currently maintain Sport England's Active Lives Online site.
- This provides an interactive service for local authorities, sports groups, and the public to analyse Sport England's sports participation data – collected in twice-yearly surveys.
- Each survey dataset contains up to 200,000 individualised responses, making the website capable of returning tens of millions of results.
- We rebuilt the site so that users can perform multi-layered, sophisticated queries of the data, with results displayed in the form of tables, charts, and colour-coded maps.
- Our cloud-based architectural design also enables the site to remain performant in response to ever-increasing data volumes.
- This all enables users to easily self-serve information, reducing direct email enquiries to Sport England's staff.





Next Steps

To discuss your requirements for Custom
Cloud Application Support and
Development please contact:
sales@systemc.com

