# Make Possible, The Impossible in Agriculture

Unlocking Al's true potential in the agriculture sector for the greater good.



### Why **Quantum**?

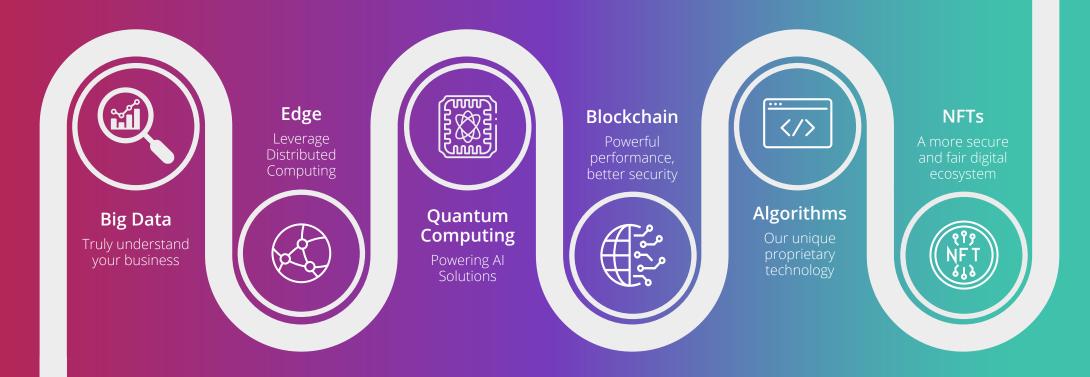
Data is the last frontier when it comes to competitive advantage. Being able to identify, collate, mine, and interpret your business data – and act on it – provides new avenues for innovation, automation, and growth, irrespective of the market you operate in.

With a full intelligent solution suite, powered by the latest developments in Al and machine learning, Quantum Al can help your organisation unlock business intelligence with Al, spot trends and patterns in big data with deep learning, and remain secure.

Trusted in the industry, we have created a secure AI platform on the basis of next-generation methods, including future concepts of Quantum Computing, for the modern organisation. We provide business insights, pattern & trend learning, and self-learning. Quantum helps organisations across sectors achieve leaps forward by providing tailor-made Al-driven solutions that apply Deep Learning, Machine Learning and Artificial Intelligence to rapidly resolve business challenges and unlock intelligence. And we're committed to doing this in an ethical manner.

Our mission is to help businesses apply the best aspects of Al to their business through innovative technology, services and solutions that automate mundane, repetitive tasks, create a competitive edge or improve security. And our objective is always to do so in a manner that augments and informs the activity of your human workforce. Al to assist - not to replace.

## Our Technologies





## Our Solutions: Tomorrow's Technology Today

### Intelligence that drives innovation, security and growth

Quantum AI deliver a powerful suite of ground-breaking technologies that help organisations across sectors overcome critical business challenges through the very best in Deep Learning and Machine Learning applications. These applications are underpinned and accelerated by harnessing the power of quantum and edge technologies, and combined with our unique algorithms, deliver faster, deeper and more accurate intelligence for your business.

### **Quantum Computing**

We build intelligent software for organisations of varying operations; creating the opportunity for individuals to do great things with a dynamic Al engine growing with you and your organisation to make better-informed decisions.

The Quantum platform is a real-time, Al-centric product that works intelligently with self-governance. Once calibrated for your requirements, it's then able to self-learn, self-heal, and adapt to deliver insights and performance or security improvements you didn't know were possible.

#### **Machine Learning**

Machine Learning can be a powerful tool across multiple parts of your organisation, with a breadth of capabilities that simply make work more efficient. At Quantum, we see Machine Learning as a powerful ally of your human workforce – Not a threat to them: By leveraging the power of Machine learning tools in the right way, you can free your teams from mundane, low value tasks, and enable them to concentrate on higher-value projects, while getting more of those mundane tasks done faster.

But the Power of Al goes far beyond this: its ability to constantly learn and adapt means it can help human workers find faster, more efficient ways of working themselves, as well as uncover new insights from data that inform more confident human decision making. In any industry where responsiveness counts, this can lead to significant advantage.



### **Deep Learning**

Deep Learning takes the capabilities of Machine Learning to another level. This is particularly powerful in environments with "Big Data" challenges - large quantities of unstructured data, which simpler ML algorithms might struggle to fully understand, and where therefore, commercial or security insights may be missed.

DL therefore incorporates a significant training stage during which it compares data characteristics and teaches itself how to behave when it encounters similar data the next occasion. And the benefits of this can be felt across almost any business unit, from manufacturing and logistics, through to Human Resources and Payroll. Deep learning helps to disentangle any number of abstract data sets and select which features improve performance, continually providing better insights as a result.

#### **DDNA**

Cybersecurity is a constant technological battle between security and IT professionals seeking to secure their businesses and threat actors looking to compromise it. Increasingly, artificial intelligence has a powerful role to play in keeping intruders out, whilst allowing verified users easy access to the tools and data they need to fulfil their jobs.

Being able to strike the balance between high security and ease of use is critical, and it's where Quantum's Digital DNA platform really comes into its own.

By applying AI to existing security products – whether at the end-user level (such as Single Sign-On Identity Access Management) through to far-reaching SOAR and SASE applications, Quantum DDNA levels up every aspect of your security perimeter. User behaviours are tracked and mapped against 'known' behaviours, with any changes flagged, while deep learning can be leveraged to inform – and automate better network and application design with a SASE framework.



## Applying Quantum AI to the Agriculture Sector

### How does AI fit into Agriculture?

Agriculture is an industry in flux. As the world continues to come to terms with a rapidly growing population, wide-ranging effects of climate change and political pressures on global supply chains, new thinking needs to be applied to where, and how we grow and process our food.

Technology is, of course increasingly playing a part in modernising and transforming the traditional farming and food production methods and have enabled more crops to be grown more quickly at lower cost, but efficiency alone will not solve agriculture's – and the world's food production challenges.

### Adding Intelligence and Insight

Al takes this adoption of technology to the next level: where to date we've often relied on engineers to build bigger and better machinery, or scientists to develop drought-resistant crops, Al is capable of applying a level of deep intelligence across the entire food production chain to uncover hidden data insights and enhance every element.

Al-based equipment and machines are already working on the world's largest farms, and throughout the supply chains to identify ways of improving yield, reducing water consumption, and predicting food shortages before they happen.

### **Transformative Forward Thinking**

Global food shortages are ever more prevalent in today's world. Without new concepts and radical innovation, they are not going away any time soon. We believe that AI may be the answer. By leveraging the right data and working with the correct experts to iron out supply chains, combat waste, and make trading routes more effective, AI is the future of agriculture.



# Bringing artificial intelligence and data analysis to food production and farming



Mapping growing population demand with food production needs



Optimising land use



Optimisation and identification of ever-scarce water resource



Market acceptance of new food types



Prediction and mitigation of cost increases or food shortages



Traceability and compliance of chemicals used



Optimisation of transportation routes and supply chains



Soil quality and degradation if over utilised



Reducing time and resource waste



### Take the **Next Step**

Whatever your data or security challenge, we possess the expertise, technology and mindset to make a transformative difference to your business.

To arrange a demonstration, schedule a detailed briefing, or simply to talk about your challenges, please get in touch on:

Tel: 0207 630 96833 Or email: info@QuantumAlplc.com

### Bristol, UK

3, Portland Place Pritchard St Bristol BS2 8RH

### London, UK

Victoria Place,
111 Buckingham Palace Road
London SW1W 0SR

### Colorado, USA

400, N.Park Avenue Breckenridge Colorado 80424

