

Robotics & autonomy

We help you identify how the integration of robotic and autonomous systems can deliver improvements in efficiency, safety and productivity to your business.



By automating key systems and processes, your organisation can achieve improvements in efficiency, safety, and productivity that deliver both cost savings and additional income.

Our expertise helps you to identify the business activities that will benefit from the integration of robotic and autonomous systems, and provides tailored solutions that meet your company's specific needs.

Whether you're looking to maximise the value of your digital assets, reduce risk, or introduce the automation of complex, expensive or repetitive tasks, recent advances in technology have provided the platforms that allow you to do this. The benefits of robotics and autonomous systems to your business, and to your workforce, include:

- **Improved safety** – using automated/remotely operated tools in hazardous environments limits the dangers faced by your workforce, and avoids the high costs of accidents.
- **Increased performance** – automated robotic systems can work quickly and accurately for long periods, increasing productivity and boosting profits - sometimes providing complete new ways of performing activities.
- **Improved information** – tools such as unmanned aerial systems (UAS) (aka 'drones') can help you to collect more and richer data on your assets. Robotic and autonomous systems also provide detailed feedback on their own performance: from component failure rates, to energy and material usage.
- **Reduced costs** – automation can enable you to introduce efficiencies that reduce a variety of costs; and may help in those industries where skills gaps are difficult to fill.

- **Enhanced staff development** – by automating the repetitive tasks your staff undertake, you can use the time saved to develop their expertise in areas where the human element can add more value. Employees' wellbeing and engagement is increased, as they get to take on more interesting work and have the opportunity to reach their full potential.

At Frazer-Nash, our engineers' expertise in robotic hardware, embedded software, automation, machine learning and artificial intelligence (AI) will help you to overcome the technical challenges of implementing autonomous and robotic systems. We add value across the whole life cycle – from requirements, design and simulation, through to holistic whole-system support – and provide advice that allows you to identify if investment in robotics and autonomy is right for your business.

Industry 4.0

We understand the challenges you're facing to cost-effectively make the most of the benefits that Industry 4.0 can offer your business, while best meeting the needs of your customers.

Our expertise and insight will enable you to develop, enhance and protect your critical assets, systems and processes. We can help you overcome your manufacturing challenges, by delivering smart solutions that cost less than you might think.

How can the smart technologies of Industry 4.0 help your business? You can:

- Reduce your overheads and improve your resource efficiency
- Optimise your maintenance, using real-time data on equipment and processes

- Customise products to meet your customers' requirements, and access new markets and supply chains
- Ensure your design, production and information systems are integrated, and share data across sites and organisations
- Create virtual models that mirror your physical systems, helping to optimise processes and to test out decisions and activities before implementation
- Leverage machine learning, sensors and networks to inform your analytics - and your responses to real-time issues
- Protect your systems from cyber-attack.

Uncrewed autonomous systems

Fast-changing autonomous technologies go beyond the simple automation of tasks: they can help deliver your business goals.

The automation of complex, expensive or repetitive tasks can deliver a range of benefits to your business – from increasing efficiency and reducing costs; to enabling you to collect better, more useful information; to improving safety. But newer autonomous technologies are evolving beyond the simple automation of tasks: using sensors, artificial intelligence and machine learning, they are able to operate dynamically and respond to changing environments. We can help you to understand how these fast-changing technologies can help your organisation.

With the ongoing trials of connected and autonomous vehicles, and research into the potential uses for autonomous technologies in industries including freight, logistics, shipping and passenger transport, the future ways in which people travel and businesses move their goods will be transformed. At Frazer-Nash, we're helping organisations to identify the ways in which autonomous technologies can support their work, and the benefits and integration challenges they can bring.

In the defence sector, for example, our experts are working with the developers of uncrewed ground vehicles (UGVs), which can be remotely operated or autonomous, to be used for activities including logistics resupply and replenishment, security, and soldier support. Our expertise covers:

- Robotic hardware
- Embedded software
- Automation
- Machine learning
- Artificial intelligence (AI)

Digital transformation

Providing transformation services that help you use digital technologies to deliver solutions to your business needs.

The rate of technology change, and speed of technology uptake, are continually increasing. No organisation can afford to stand still. The success stories of the coming months and years will be from those organisations that achieve their full digital potential across all facets of their organisation – optimising asset performance, improving productivity, and increasing sustainability.

Digital Transformation enables you to make a step change in your business culture and capabilities, supported by advances in digital technology such as high-speed communications, cloud platforms, Big Data and new analysis and visualisation methods.

In the public sector, digital is transforming how services are delivered, making them simpler, faster and more accessible. In the private sector, digital is helping businesses innovate, collaborate and exceed client expectations, offering a competitive advantage.

Why talk to us?

- We provide transformation services that help you use digital technologies to deliver solutions to your business needs: from optimising your processes and enhancing targeted capabilities, through to organisational and business change
- Working across multiple industries, the breadth of our experience means we can transfer the skills, experience and best practice from one area to benefit your sector
- We are not tied to any vendor, hardware or software and specialise in the design of open systems
- Our values are at the heart of everything we do: we work with openness and collaborate effectively; we deliver success by delivering value; we want to do things that matter.

