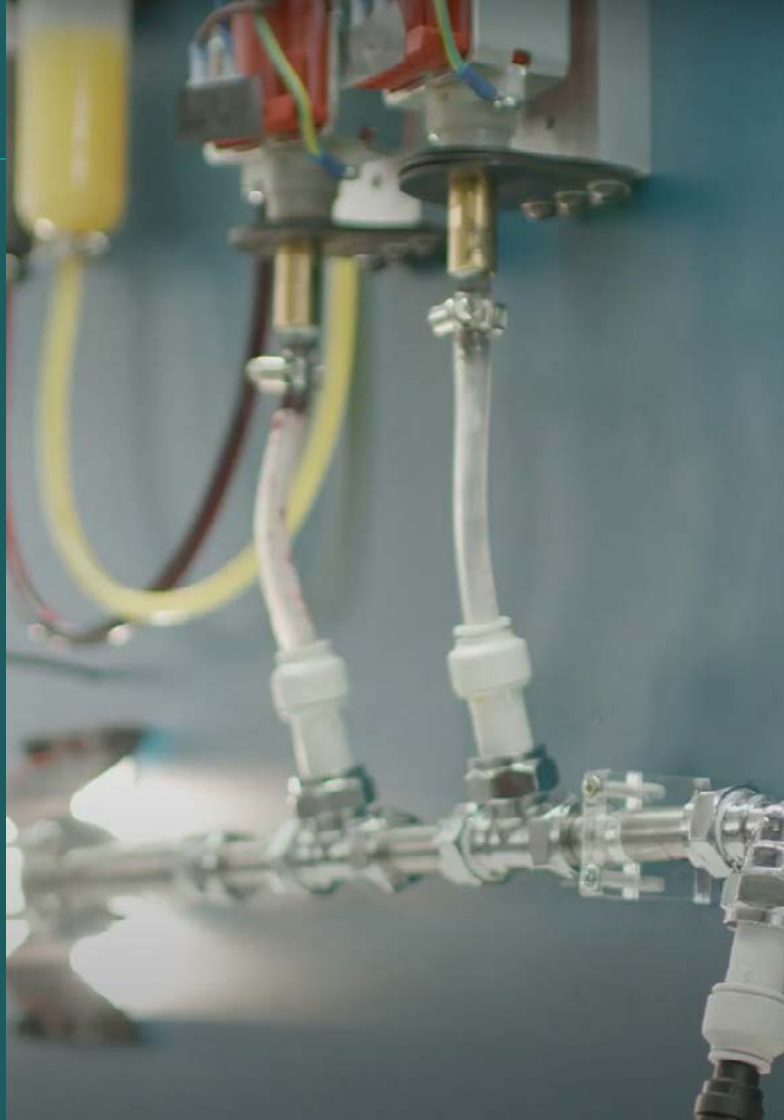
sagentia
innovation

Harnessing low-cost edge-based IIoT to deliver process efficiencies and reduce costs

Expertise and domain knowledge

- Industrial internet of things (IIoT)
- Sensors
- Fluid flow and handling
- Edge devices
- Image analysis



Our clients ask:

Sagentia Innovation works with leading businesses across the industrial, food & beverage, consumer and medical sectors. They ask how the Industrial Internet of Things (IIoT) can offer ways to improve efficiency, productivity, quality in manufacturing and processes and reduce operational costs.

The project story:

Sagentia Innovation sought to address the challenges of cost-effective scale-up of an IIoT-based sensing solution by developing a demonstrator which incorporated the following elements:

- A flow rig with low-cost camera modules configured as edge devices, measuring multiple flow and fluid properties
- Clear sight glasses embedded within the pipework featuring camera modules that capture footage of liquid flow
- A remote virtual control panel that can adjust variables such as flow rate, introduce air to create bubbles, and add coloured "contaminants". The images produced by the camera modules are processed locally on edge devices to determine factors such as gas percentage or contaminant distribution.
- Data derived from image analysis that can be sent via cloud services to a central dashboard that updates in real-time as the liquid properties change; if requested, the camera images can be uploaded to the cloud for human review.
- Updates to the firmware which drives the camera modules can be delivered remotely Over The Air (OTA) so that algorithms can be improved, security patches applied, and different flow characteristics measured

Contact us

info@sagentiainnovation.com
+44 1223 875200
www.sagentiainnovation.com

Results: deliverables and outcomes

Low-cost, multi-purpose edge devices are a principal enabling technology of IIoT. Traditionally, they provide connectivity between disparate networks, but they're also capable of playing a more advanced role. Over time, using intelligent edge devices in IIoT deployments can aid the adoption of advanced practices like prognostics and preventative maintenance. It's a transformative way of working that allows greater production control, whether managing a beverage production line or an oil refinery.