**Hewlett Packard Enterprise**

# QiO unlocks speed and scalability for heavy industry with HPE Helion Stackato

## From prototyping to production of Big Data applications



"HPE Helion Stackato is key to our methodology and our delivery. It empowers us to move quicker, it's reliable, and it enables us to scale from 200 assets to 2,000 assets with the comfort of knowing that scale won't be a limiting factor."

– Kevin Malik, QiO Head of Business Development, Americas

## Bringing agility to heavy industry

Companies in capital-intensive industries such as oil and gas exploration, aerospace, shipbuilding, and power generation depend on fleets of large, sophisticated equipment and machinery to pump oil out of the ground, generate electricity for the grid, and precisely assemble satellites and large ships. When heavy equipment like this fails, business processes screech to a halt, causing revenue to plummet fast.

That's why companies monitor this equipment closely, collecting and analyzing

sensor data to understand how equipment is performing, and to spot important manufacturing and production trends. But implementing and maintaining a high-availability compute platform that's capable of continuously collecting, storing, and analyzing all that machine data is a major IT challenge, especially considering the remote locations in which many heavy industrial companies operate. It's an undertaking many prefer to solve through IT partnerships.

## What QiO does for clients

- QiO collects data from a range of different industrial sensors, from legacy pumps to the latest complex power engines.

- QiO cleanses and ingests this sensor data into a cloud environment and combines the data with other information from design, manufacturing, and operating environments, including third-party data sources.

- Data is stored in an off-premises, scalable, secure cloud so QiO clients can use it for global trend analysis and to build new engineering applications.

- The data can also be stored with the asset onsite (in a plant or on a ship or oil rig, for example) via QiO's Edge Cloud solution, which features a powerful optimization engine to help solve real-time complex, unstructured problems, create predictive machine-learning algorithms, and provide insight at the edge.

- QiO builds rapid "as-a-service" applications, teaming with clients to help capture, distill, and generate best-of-breed practices, procedures, and technical insights.

**Providing flexibility, speed, and security**
That's where UK-based **QiO Technologies** comes in. QiO Technologies offers a 100% cloud-native toolkit that enables companies to securely collect and analyze data from industrial equipment, assets, and machines.

For example, QiO helps one of its oil and gas clients monitor remote pumps in the far corners of the earth. The application indexes the performance of each pump, helping the client make better decisions about how aggressively to use the pumps, when they're likely to fail, and how workloads should be managed across its cluster of pumps. Most importantly, QiO's solution enables its client to replace the pump before it fails.

QiO deployed HPE Helion Stackato and open source technologies to create its highly scalable application development platform. This enables QiO's clients to support multicloud environments and accelerate application delivery.

**QiO clients want the capability of the public cloud—but need it to run locally**
The "Industrial Internet" is a term used for the collection and analysis of millions of data points from industrial assets. Processing this data effectively can mean the difference between capitalizing on a market event and watching a competitor take the lead.

QiO found that many of its clients struggled to build critical analytics apps because provisioning for the necessary compute power and networking bandwidth was simply too cumbersome. Looking to the future, QiO's clients also want the company to focus its industrial applications on technology that can support:

- Multicloud/multi-IaaS application deployments

- Cloud neutrality, without vendor lock-in

- Agility, security, and cost/performance for the business

## Delivering multicloud capabilities to heavy industry with HPE Helion Stackato

Using HPE Helion Stackato as its platform to deliver nimble processing in the cloud, QiO is providing new ways for industrial companies to manage and analyze their device data. The Foresight Engine™ enables clients to

### QiO innovative platform
The QiO Foresight Engine™ deploys applications for industrial customers
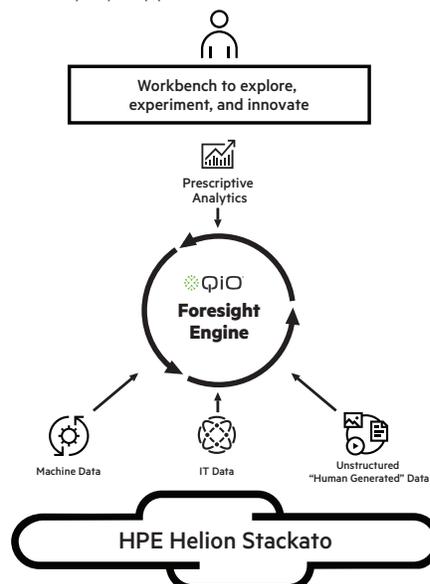


**The QiO Foresight Engine™ equips the engineer with the tools to experiment, explore, and innovate with any data.**

## ↻4x

improvement in data processing times and a cost reduction of 45% in IT.

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gain competitive advantage in the process. With HPE Helion Stackato, the QiO team is empowered to choose the technology that is best suited for the challenge at hand—applications are developed in a variety of programming languages, then deployed to public, private, or hybrid cloud environments.

**Speed and focus for developers and operations**

By using HPE Helion Stackato as the foundation for its Foresight Engine™, QiO liberates engineers from the drag of traditional IT provisioning. As a result, QiO's clients can devote more time to focusing on high-value activities such as analytics.

With its Cloud Foundry® foundation, HPE Helion Stackato can be deployed in any cloud environment. The solution works alongside other open source platforms, while still providing the necessary data sovereignty and security. Application environments—from QA to test to production—are the same, reducing a huge friction point between developers and operations.

HPE Helion Stackato has cut development and data processing times and is on track to help QiO solve another customer challenge.

Industrial assets are often located in remote sites where insufficient bandwidth makes it impossible to send data back to a centralized processing platform quickly.

"QiO Edge Cloud enables us to deploy microclouds closer to the client's data sources," says Scott Taggart, QiO lead security architect. "We can do a lot of the processing there and pass just the aggregated data back to a centralized data lake. There's no porting or translation required. With HPE Helion Stackato, we can run the exact same apps wherever they need to run."

## Built on HPE Helion Stackato

See how your company can find the right mix at **hpe.com/helion/stackato**



**QiO Technologies solves industrial data problems with cloud**
QiO Technologies empowers some of the world's largest industrial companies with a scalable cloud solution based on HPE Helion Stackato.
**Watch Video**

"When you're working with industrials, there are millions of assets, so scalability and reliability are incredibly important to us."

—Kevin Malik, QiO Head of Business Development, Americas

## Objective

Free engineers up for higher-value tasks and reduce the time required to iterate and deploy Big Data apps.

## Approach

Deploy HPE Helion Stackato to create a scalable app development platform, to help QiO customers connect to industrial assets and collect and analyze data.

## IT Matters

• Implement an open source platform that functions across multiple cloud environments

• Ensure ease of use for engineers to iterate quickly

• Create a production-grade environment that is secure and easily scalable

## Business Matters

• Improve customers' agility and cut IT provisioning time and cost

• Support ability to scale and reliably deploy to remote locations for future business development

• Enable rapid iteration and data processing

## Customer at a glance

**HPE Helion Cloud solution**
• HPE Helion Stackato

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