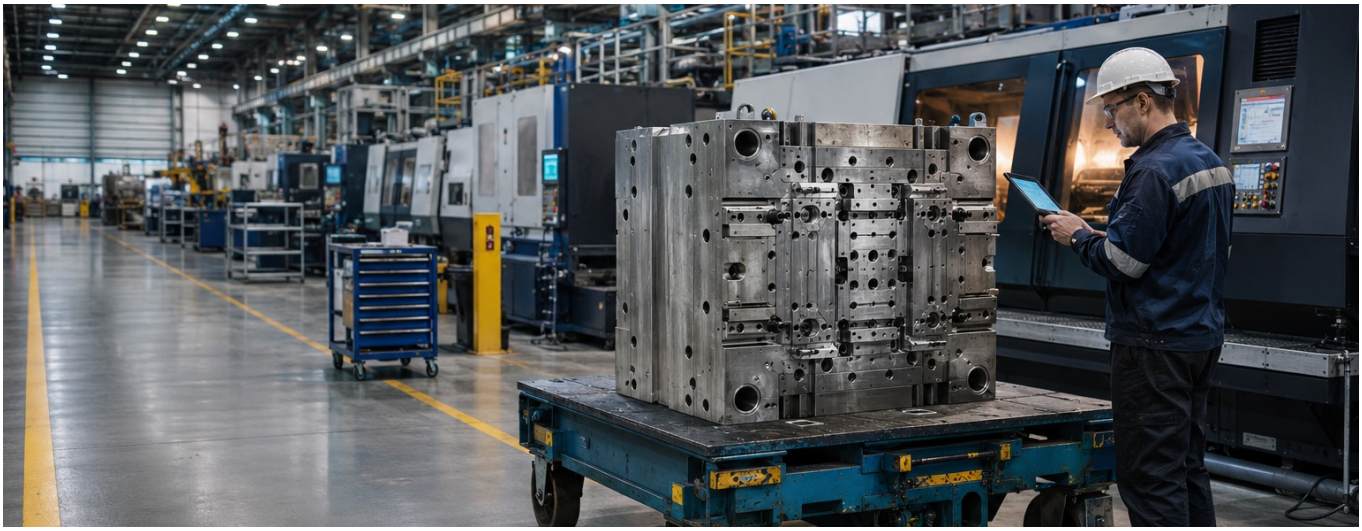


TRACK EVERY MOULD - ACROSS EVERY FACILITY

Location precision matched to each facility - with a foundation for future robotic automation.

HIGH TEMPERATURE	PRECISION	MULTI-FACILITY	FUTURE-PROOF
70°C required 100°C-rated tracker supplied	3 m plant accuracy 30 m warehouse visibility	one system across 650,000 combined sq. ft.	Bluetooth location plus RFID-enabled automation

THE CHALLENGE

Large manufacturers manage tools, parts, racks, work-in-progress and finished goods across production plants, warehouses and customer locations. When critical assets cannot be located quickly, employees lose time searching, production can be delayed and additional equipment may be purchased unnecessarily.

This manufacturer needed to track 250 injection moulds across two facilities with different location requirements and very different operating environments.

A DEMANDING ENVIRONMENT

The 500,000-square-foot injection-moulding plant contains extensive metal, densely positioned machinery and electrical activity - conditions that can disrupt wireless performance. The customer required a device capable of withstanding mould temperatures of approximately 70°C / 158°F while delivering long battery life and limited maintenance. SPARQ supplied a tracker rated to 100°C / 212°F.

> Not every facility requires the same precision - but every critical asset must remain visible.

ONE SYSTEM. TWO FACILITIES. THE RIGHT PRECISION IN EACH.

MANUFACTURING PLANT	STORAGE FACILITY
500,000 sq. ft. Approximately 3 m / 10 ft precision for locating a specific mould in a dense production environment.	150,000 sq. ft. Approximately 30 m / 100 ft visibility - sufficient for finding the correct mould without unnecessary infrastructure.

VISIBILITY TODAY. AUTOMATION TOMORROW.

SPARQ combines flexible location precision, high-temperature hardware and embedded RFID identification in one scalable manufacturing solution.

BLUETOOTH ACTIVELY LOCATES THE MOULD.	RFID PASSIVELY IDENTIFIES THE MOULD AT THE MACHINE.	TOGETHER, AUTOMATED SETUP IS ENABLED.

THE SPARQ SOLUTION

SPARQ configured infrastructure density according to the decisions required at each site: precise plant-floor location in the manufacturing facility and economical general-area visibility in the warehouse.

No new wiring was required, and the solution placed no requirement on the facility's existing IT network. The network was easily installed and supported the difficult metal-dense manufacturing environment. SPARQ also sourced a specialized high-temperature Bluetooth device capable of supporting SPARQ's proprietary firmware, long battery life and limited maintenance.

PRECISION MATCHED TO VALUE

- 3 m / 10 ft precision where exact location matters
- 30 m / 100 ft visibility where broader location is sufficient
- One protocol across both facilities
- Infrastructure cost aligned with operational need

RFID-ENABLED AUTOMATION

To meet the customer's requirements, SPARQ worked with the device manufacturer to install an embedded RFID tag inside the Bluetooth tracker. Bluetooth actively provides each mould's real-time location and movement history across both facilities. RFID provides close-range identification when the mould reaches the injection-moulding machine.

In a future automated workflow, a robot or handling system could verify the exact mould and load the appropriate machine program automatically. The customer can therefore solve today's search problem without limiting tomorrow's automation strategy.

> Location visibility now. Automated identification when the operation is ready.

ONE INFRASTRUCTURE. MULTIPLE MANUFACTURING APPLICATIONS.

RACKS	TOOLS	INVENTORY	GOODS
Production and shipping racks	Specialized tools and equipment	Parts and work-in-progress	Returnables and finished goods

WORKS NOW. INTEGRATES LATER.

The customer can begin with SPARQ dashboards, location history and reporting without delaying deployment for a lengthy enterprise integration. Approved location data and events can later be delivered through APIs into the customer's own systems.

WHY SPARQ WAS SELECTED

Adjustable precision, temperature-tolerant hardware, embedded RFID, infrastructure-light installation, long battery life, an operational platform and a clear path to additional assets and automation.

SPARQ DELIVERS THE VISIBILITY MANUFACTURERS NEED TODAY - WITH THE FLEXIBILITY TO SUPPORT WHAT COMES NEXT.

Operational Visibility Assessment | info@sparqiot.com | sparqiot.com

Performance and battery life depend on device selection, mounting, radio environment, message interval and infrastructure density. Location specifications should be validated under representative operating conditions.