

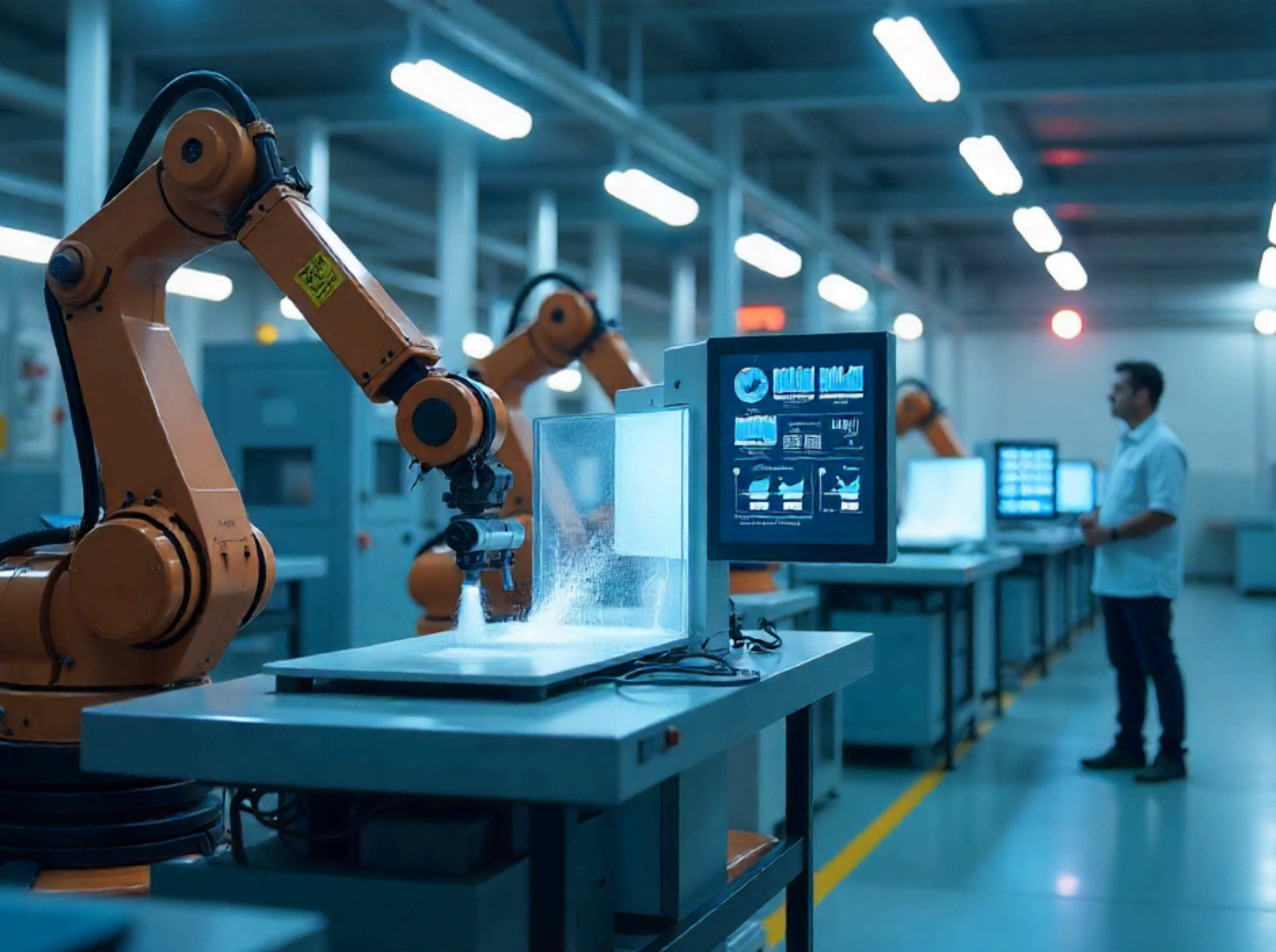


# PRODUCTION MONITORING

## in Automotive Injection Molding







## Industry Context: OEM-driven supply pressures

A Tier-1 automotive plastics manufacturer producing interior parts for leading OEMs in India faced rising demands for precision, compliance, and uninterrupted delivery. With robotic injection molding lines at scale, any downtime or traceability gap could directly impact OEM supply commitments.

## Key Challenges: Blind spots in monitoring

The client struggled with four recurring pain points:

- **Fragmented Monitoring** – OEM systems were costly and rigid, leaving cycle data and idle time incomplete.
- **Manual Dependencies** – Shift counts and downtime were logged by operators manually, often with inaccuracies.
- **Robot-Machine Gap** – Lack of synchronized visibility created blind spots between injection machines and robots.
- **Delivery Risk** – Traceability and downtime gaps threatened on-time OEM supply schedules.

# Why S2R2:

## Chosen for domain expertise

The client selected S2R2 Technologies because of:

- **Automotive Expertise** – Extensive work in injection molding and high-compliance manufacturing sectors.
- **Custom Dashboards** – Proven ability to design tailored monitoring solutions across legacy and modern equipment.
- **Industry Trust** – Presence in 200+ Indian factories, including automotive, foundry, and pharma sectors.



## Our Approach: Step-by-step deployment

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## Delivered Solution:

### End-to-end visibility

S2R2 provided a Production Monitoring System configured for injection molding operations:

- **Cycle Time Tracking** – Real-time monitoring of uptime, downtime, idle time, and OEE by combining multiple machine signals.
- **Traceable Counts** – Batch-wise and shift-wise production count with operator-level dashboards.
- **Robot Integration** – Synchronization between machines and robots for accurate cycle reporting.
- **Cloud Access** – Dashboards viewable on any device for plant-wide visibility.



# Measurable Benefits:

## Clear improvements

The client achieved measurable outcomes:

- **Cycle Capture Accuracy** – 100% visibility across robotic injection molding lines.
- **Idle-Time Accuracy** – 90% reduction in idle-time reporting gaps.
- **Paperless Reporting** – Manual logbooks eliminated, saving time and reducing errors. We could save around one minute per cycle for an operator and 15 to 20 minutes per shift for the supervisor.
- **Supply Assurance** – OEM delivery schedules stabilized, reducing penalties and delays.
- **Cost-Effective Alternative** – A custom monitoring solution at a fraction of OEM tool cost.

# Extended Value:

## Repeatable across industries

The solution can be scaled to consumer goods, packaging, defense, rubber molding, and die-casting sectors, where synchronized machine-robot monitoring is critical.





# Conclusion

## Proven reliability at scale

By implementing Production Monitoring and Robot Integration Systems, S2R2 enabled the client to close monitoring blind spots, reduce risk of missed OEM schedules, and eliminate manual reporting.

Our solutions are industry-ready and are already trusted in 200+ factories across India—delivering measurable improvements in uptime, traceability, and process control.

