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Dr Bijal Sanghvi, Managing Director, Axis Solutions Limited
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- Edge Controller for Mobile Manipulator Robots
- Advancing From Reactive Safety to Integrated Safety



'Today's industries expect more than automation – they expect actionable intelligence'



Dr Bijal Sanghvi
Managing Director,
Axis Solutions Limited.

Axis Solutions has evolved from an industrial automation and analytical systems company into a diversified technology enterprise. What has been the key strategy behind this transformation, and what differentiates Axis Solutions in an increasingly competitive automation market?

Over the last 27 years, our journey has been

driven by a simple philosophy – continuously solving evolving industrial challenges through engineering innovation. We began with analytical, instrumentation and industrial automation, but as industries embraced digitalisation, sustainability and energy transition, we expanded into integrated process analytics, environmental monitoring, smart manufacturing, industrial IoT, new energy like hydrogen technologies, battery energy storage systems with AI/ML-enabled industrial intelligence.

What differentiates Axis Solutions is our ability to deliver complete integrated solutions rather than standalone products. Our customers receive everything from system design and manufacturing to integration, commissioning and lifecycle support under one roof. Supported by our DSIR-approved R&D Centre, Calibration & Testing facility, in-house manufacturing capabilities and strong engineering and after sales expertise, we combine innovation with reliability, enabling industries to improve productivity, safety, compliance and sustainability simultaneously.

At Automation Expo 2026, Axis Solutions introduced the Hydrogen storage and Fuel Cell demo System. What inspired the development of this platform, and how do you see it contributing to India's hydrogen ecosystem by bridging the gap between academia, research and industry?

India's National Green Hydrogen Mission is creating enormous opportunities, but one of the biggest challenges remains developing skilled professionals who understand hydrogen technologies beyond theoretical concepts. We recognised the need for a practical learning platform that enables students, researchers and professional engineers to gain real-world experience with the hydrogen ecosystem.

Our Hydrogen Storage and Fuel Cell Demo System has been designed as a comprehensive laboratory platform that simulates actual hydrogen processes in a safe and controlled environment. It allows educational institutions, research organisations and industrial training centres to conduct hands-on experiments while understanding the complete hydrogen value chain.

We believe this platform will play an important role in creating industry-ready talent,

accelerating research and supporting innovation as India builds a globally competitive hydrogen economy.

Your newly launched Smart Battery Energy Storage System addresses one of the most dynamic segments in the clean energy sector. What are its key technological innovations, and which industries or applications do you believe will benefit the most from this solution?

Conventional Battery Energy Storage Systems typically provide 2-4 hours of backup, but industries increasingly require longer-duration energy resilience. Our Resilient BESS addresses this need by integrating advanced battery technology with hydrogen-based energy storage, enabling 8+ hours of reliable backup while improving grid stability and renewable energy utilisation.

The system features intelligent battery management, advanced thermal management, real-time energy monitoring, AI-enabled predictive diagnostics and a scalable architecture to maximise safety, efficiency and performance. It is ideally suited for renewable energy projects, utilities, manufacturing, data centres, microgrids, EV charging infrastructure and other critical industries where uninterrupted power is essential.

We believe long-duration energy storage will be a key enabler of industrial decarbonisation, and our Resilient BESS provides a future-ready solution that combines energy reliability, sustainability and operational efficiency.

Hydrogen, battery storage and industrial automation are increasingly converging as industries pursue decarbonisation. How does Axis Solutions plan to integrate these technologies into comprehensive solutions for future smart factories, utilities and process industries?

The convergence of environmental regulations, digitalisation in analytical systems, smart infrastructure and new energy solutions creates the biggest opportunity where Axis can deliver integrated solutions and standalone products. Our strategy is to combine industrial automation, process analytics, hydrogen



Dr Bijal Sanghvi (right) at Automation Expo 2026, explaining the Hydrogen System to VIP visitors.

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systems, battery storage, industrial IoT and AI-driven software platforms into a unified digital platform for seamless integration.

Imagine a smart manufacturing facility where renewable energy generation, hydrogen production, battery storage, process automation and predictive analytics operate as one interconnected system. Our expertise across these domains uniquely positions us to deliver such end-to-end solutions under one roof.

Going forward, we will continue developing integrated platforms that optimise energy consumption, provide demand side management (DSM), improve operational efficiency, reduce emissions and enhance decision-making through real-time industrial intelligence.

Axis Solutions has a DSIR-approved R&D Centre and an expanding intellectual property portfolio. Could you share some of the major research areas currently receiving priority and how your innovation pipeline is expected to evolve over the next few years?

Innovation remains the foundation of our long-term strategy. Our R&D activities currently focus on AI-enabled industrial analytics, advanced process instrumentation, hydrogen measurement technologies, battery energy storage systems, environmental monitoring, industrial IoT platforms, smart sensors, photonics-based sensing technologies and intelligent automation solutions.

We are also investing significantly in software-driven industrial intelligence platforms that transform raw operational data into predictable and actionable insights. Alongside product development, we continue strengthening our intellectual property portfolio through patents and proprietary technologies and selective Joint Ventures.

Our objective is not merely to develop new products but to build complete technology platforms that help industries become more intelligent, sustainable and globally competitive.

The company has steadily expanded its presence across Europe, the Middle East, Africa and other international markets. What has driven your export success, and which overseas markets offer the greatest opportunities for Axis Solutions' next phase of growth?

Our international growth has been driven by engineering quality, application expertise and our ability to customise complex solutions for industrial environments. Customers across global markets value reliable technology partners who can deliver complete systems while meeting international standards and stringent project timelines.

We continue strengthening our presence across the Middle East, Europe, Southeast Asia and Africa through our regional operations and strategic partnerships. These regions present strong opportunities in energy transition, oil & gas, chemicals, water infrastructure, power generation and industrial automation.

As governments increase investments in hydrogen, clean energy, environmental compliance and smart manufacturing, we believe our diversified technology portfolio positions us strongly for sustained international expansion.

Digitalisation, AI-enabled analytics, IIoT and predictive monitoring are reshaping industrial operations. How is Axis Solutions embedding these capabilities across its product portfolio to help customers improve reliability, sustainability and operational efficiency?

Today's industries expect more than automation – they expect actionable intelligence. We are embedding digital capabilities across our product portfolio through industrial IoT connectivity, AI-powered analytics, cloud-based monitoring, predictive diagnostics, remote asset management and advanced data visualisation.

These technologies enable customers to monitor critical assets in real time, predict equipment failures before they occur, optimise maintenance schedules, improve process efficiency, reduce energy consumption and



The manufacturing facilities of Axis Solutions at Ahmedabad, Gujarat.

By converting operational data into meaningful business intelligence, we help customers make faster, smarter and more informed decisions

maintain regulatory compliance using edge to enterprise green automation solutions.

By converting operational data into meaningful business intelligence, we help customers make faster, smarter and more informed decisions while improving overall operational resilience.

Looking ahead five years, what is your vision for Axis Solutions? Which emerging technologies, new product categories or strategic initiatives do you believe will define the company's next chapter of growth and innovation?

Our vision is to position Axis Solutions as a global engineering technology company delivering intelligent, sustainable and future-ready industrial solutions. Over the next five years, we will strengthen our leadership in industrial automation, hydrogen technologies, long-duration energy storage, environmental

monitoring, AI/ML-driven industrial intelligence and digital engineering.

A key pillar of our growth strategy is collaboration through Co-Innovation, Co-Build, Co-Manufacturing and Co-Sell partnerships. By working closely with technology providers, OEMs, research institutions and industry partners, we aim to accelerate innovation, expand manufacturing capabilities and deliver integrated solutions to customers across global markets.

As industries embrace digitalisation and decarbonisation, the future will belong to connected ecosystems that seamlessly integrate automation, clean energy and intelligent technologies. Our mission is to lead this transformation by developing solutions that enable industries to operate smarter, cleaner and more efficiently while creating sustainable value for our customers, partners and stakeholders .

Dr Bijal Sanghvi is the Managing Director of Axis Solutions Limited, a distinguished first-generation company having a Domestic as well as Global Presence, which has achieved remarkable milestones. His role spans across various verticals ranging from managing the overall development and operations of the firm with leadership roles across business strategy, business development and management of various business functions such as Production, Engineering, Manufacturing and R&D.