

# INNOVATION AND MANUFACTURING EXCELLENCE

## KEY MATERIAL TOPICS

- Climate Change
- Occupational Health, Safety and Well-Being
- End-of-Life Management of Products and Packaging
- Product Stewardship
- Technology, Innovation and Digitisation

## ESG STRATEGY

Energy conservation

Water neutrality

Product stewardship

Nature positive

Safe workplace

Sustainable supply chain

## STAKEHOLDERS IMPACTED



Customers



Vendors



Employees



Communities

At Asian Paints, we believe innovation and manufacturing excellence are the twin engines propelling our growth. With a strong focus on operational resilience, quality and cost efficiency, we continue to enhance performance across our facilities. Through strategic Research and Development (R&D) and technology integration, we not only raise industry benchmarks but also deliver value-driven, future-ready solutions tailored to dynamic customer needs.



# INNOVATION

At Asian Paints, innovation is embedded in our DNA. We leverage cutting-edge research and emerging technologies to enhance existing solutions while continuously introducing differentiated offerings tailored to evolving customer needs. To strengthen strategic self-reliance, we have accelerated backward integration in critical input areas such as Vinyl Acetate Monomer ('VAM'), Vinyl Acetate Ethylene Emulsion ('VAE'), cement and speciality additives, enhancing both quality control and cost optimisation.

## Research & Development (R&D)

Our research journey follows a structured and collaborative framework beginning with opportunity identification through cross-functional dialogue. This progresses to ideation, concept development, design inputs, prototyping, validation, and seamless scale-up into manufacturing, culminating in successful product launches.

R&D lies at the heart of this cycle. It drives technological advancement, establishing robust testing protocols, and translating fresh ideas into differentiated market offerings. This disciplined yet creative approach ensures that every breakthrough not only meets performance expectations but elevates them.

During the year, our Research & Technology (R&T) teams made significant contributions to national standards. Our scientists actively participated in sectional committees of the Bureau of Indian Standards (BIS) and the Research Designs and Standards Organisation (RDSO). Their efforts led to the review and upgrade of six Indian Standards, and one of our scientist, serving as convener of the scientist panel on test methods and resins/binders,

was instrumental in developing over ten new test protocols, reinforcing our leadership in setting quality and safety benchmarks in the coatings industry.

**159**

Patents filed till date  
**17 additional filed in  
FY 2024-25**

**85**

Patents granted till date  
**13 added in FY 2024-25**

**3**

International research papers  
published in FY 2024-25

**258**

Scientists

**27**

New products developed in  
Decorative Paints

**45**

New products developed in  
Industrial Paints

**4**

Breakthrough projects  
implemented

**₹ 125.7 Crores**

Spent on R&D

### Fostering bottom-up innovation

During the year, we hosted two editions of the 'Idea Canvas' programme - a platform for employees to brainstorm, learn collaboratively and shape ideas into actionable business outcomes. We received 206 idea submissions, from which 11 were shortlisted as business proposals. Through structured mentorship, this programme cultivates a culture of creativity and enterprise, strengthening our innovation pipeline from within.



# INNOVATION AND MANUFACTURING EXCELLENCE

## Fuelling innovation and excellence through UDAAN

Creative rigour and bold imagination defined the 10<sup>th</sup> edition of UDAAN – The Never-ending Quest for Excellence, our flagship innovation platform in FY 2024–25. This milestone edition focused on pioneering solutions that delivered distinctive product advantages, reinforcing our competitive edge in a dynamic market. A standout outcome was the development of Neo Bharat Exterior which is a high-performance offering for the bottom-of-the-pyramid segment, combining value pricing with superior protection, and demonstrating how innovation can be inclusive and impactful.



## Strengthening our position through new offerings

We continue to strengthen profitability and product superiority through a range of innovative, high-performance offerings. For instance, Royale Glitz Reserve, our premium soft sheen interior paint, offers unmatched stain repellency and a luxurious finish, comes with 8 years of comprehensive warranties. While Nilaya Arc, inspired by heritage craftsmanship, brings artisanal elegance to contemporary spaces with over 100 shades, dual finishes, and low VOC credentials. Our pioneering SmartCare Barrier X 2K delivers exceptional waterproofing with remarkable tensile and adhesion strength, ideal for high-moisture areas, including basements and ceilings.



## Driving innovation forward

Under our 'Nexpedition' Breakthrough Projects initiative, the R&T team led 15 high-impact cross-functional projects aimed at tackling complex product and technology challenges across a diverse spectrum—from waterproofing and floor coatings to powder coatings, automotive refinishes, and high-durability exterior paints.

Through agile execution and focused collaboration, 10 projects were successfully launched during FY 2024–25.

### Key innovations

- SmartCare BarrierX 2K – Advanced basement waterproofing system
- SmartCare Grout GP2 – Precision grout for structural integrity
- Apcoflor Hi Tech PU – High-performance polyurethane floor coating
- ASPA Red Oxide Primer – Auto refinish
- ASPA Knifing Paste Filler Grey – Seamless surface repair for automotive refinishing



## Samarthya Project

In its third year, our 'Samarthya' project saw six critical raw materials, emulsifiers, dispersants, biocides, speciality monomers and defoamers commercialised.

Our economically developed functional raw materials have unlocked new opportunities to enhance product properties at highly competitive price points. Beyond improving performance, these initiatives have deepened our knowledge of structure-property relationships and process engineering. This strengthened understanding is not only enriching our innovation pipeline but also reinforcing our ability to deliver superior products with enhanced value to customers.

## Backward integration

We achieved significant milestones in our backward integration journey this year, marking strong progress across key projects. Notably, we advanced the development of VAE based polymers, with prototypes under evaluation for seamless product integration. The upcoming cement clinker project and progress on in-house cement integration have unlocked avenues for creating value-driven, differentiated products.

Construction of the VAM plant is underway while VAE emulsion prototypes have moved from lab to pilot stage. High-solid re-dispersible powder production has reached a major milestone, enhancing cost efficiency in products like putties and improving spray drying and colloidal stabilisation capabilities.

## Sustainability

In our continued pursuit of sustainability, we successfully reduced CO<sub>2</sub> emissions by 39,085 MT through initiatives such as rutile reduction, biocide optimisation, solvent minimisation and replacing Portland cement with RMs having lower carbon footprint.

This year, 32 more products received GreenPro certification, bringing the total to 290, while four hold GS-11 certification, with four additional applications submitted. We also introduced Air-o-Clean, a breakthrough product designed to reduce harmful NO<sub>x</sub> and SO<sub>x</sub> gases from the environment.

→ Pg- 86

## Sikshalaya – Asian Paints' Training Academy

Sikshalaya, our in-house technical learning academy, remains committed to advance technical competencies across our Company. During the year, we conducted six training sessions with both internal and external subject matter experts. A standout initiative was the Paints & Polymers Certification course, delivered in collaboration with SK Somaiya College, a respected institution known for its specialisation in polymer science. The programme offered 100 hours of learning which included 70 hours of theory and 30 hours of practical sessions with 24 participants successfully completing the course, earning an outstanding recommendation rating of 9.16/10.



The certification course provided a concise yet comprehensive overview of key subjects—polymers, paint formulation, colourants, application techniques, defect analysis, scale-up processes, raw material functionalities, and analytical instrumentation. This well-rounded exposure has enhanced my ability to design polymers, characterise them effectively and prepare paint formulations for performance testing.

### Participant



# INNOVATION AND MANUFACTURING EXCELLENCE

## CASE STUDY

### SETTING NEW BENCHMARKS AT THE ASIAN PAINTS ALCHEMY

Building on the momentum of its inaugural edition, Alchemy 2025 launched on 14<sup>th</sup> September, 2024, with an inspiring keynote by Dr. James Beacham from CERN. This year's edition expanded its scope with four diverse and forward-looking case study themes:

- Artificial Intelligence & Machine Learning for Coating Design
- Polymer-Nanomaterial Hybrids
- Sustainable Architectural Coatings
- Smart Coatings

The response was exceptional, with over 6,800 participants, including 200+ PhD scholars and 30 global entries from 16 countries. A total of 432 Phase I submissions were received—more than double the previous year across most parameters.

The finale of the case presentations was graced by an esteemed panel of external jury members, including Dr. Swaminathan Sivaram, Dr. Asha Syamakumari (NCL Pune), and Dr. Abhishek Singh (IISc Bangalore). We were also privileged to host a guest talk by Dr. Abhishek Singh, who shared valuable insights on the framework for AI in Material Science.

Alchemy was truly a one-of-a-kind experience that provided me with invaluable knowledge and insight into the new field of photovoltaic coatings.

#### Participant



The winning case study at Alchemy, presented by students from Tata Institute of Fundamental Research, Mumbai, showcased innovative use of plasmonic metals in coatings, offering aesthetic appeal alongside energy regulation and self-cleaning. Participants hailed from diverse academic backgrounds, including B.Tech, MSc, M.Tech and PhD programmes in material science, polymers, paint technology and chemical science.

Attending the Alchemy Conclave was an incredible experience! Traveling from Stockholm to Mumbai, I wasn't sure what to expect, but the event exceeded all my expectations. Alchemy, as a forum, brought together brilliant minds from across the globe, and the discussions on cutting-edge innovations in coatings and material science were truly inspiring.

#### Participant

## Awards

Throughout the year, we were honoured to receive 3 prestigious accolades under 'FICCI Chemicals and Petrochemicals Awards 2024'

### Sustainability Leader of the Year

### Best Green Product (Chemicals Segment)

### Make in India Champion of the Year





# MANUFACTURING EXCELLENCE

At Asian Paints, manufacturing excellence is a strategic imperative - powering productivity, elevating quality, enhancing safety, and reinforcing our environmental and cost efficiency.



In FY 2024–25, our decorative plants executed over 220 high-impact projects, doubling our cost savings year-on-year. These gains stemmed from a focused approach to continuous improvement, stronger Reliability Centred Maintenance (RCM) practices, and precision-driven asset care, ensuring high uptime and operational resilience across our facilities.

Our manufacturing teams actively embraced a culture of excellence.

**13,000+**  
Ideas were logged, with 6,500 successfully implemented

**4,500+**  
Problem-solving exercises were undertaken

**3,500+**  
Contamination sources were eliminated

Enhanced 5S workplace practices have further refined factory aesthetics, improved safety protocols and boosted frontline productivity.

This relentless pursuit of excellence earned us over 30 awards from institutions such as CII, in addition to global recognition at the CCI Operational Excellence Summit 2024 in Belgium, where we received The Transformational Impact Award and The Project Excellence Award.

**30+**  
Awards received by manufacturing sites across various categories

**220**  
High impact projects executed

## CASE STUDY

### ACCELERATING PERFORMANCE EXCELLENCE

During the year, we sharpened our focus on performance improvement through the adoption of sustained best practices. A rapid deployment plan was rolled out across three sites, targeting critical Key Performance Indicators (KPIs) selected by our teams. At our Vizag plant, retail machine output surged by 50% within just two months. Through intensive training, 5S principles, and autonomous maintenance practices, we eliminated setting variations, minor breakdowns and mixer unavailability, while maintaining area cleanliness and optimal resource use. This success has created a blueprint for agile, scalable performance improvements, which we now aim to replicate across our other plant sites.

# INNOVATION AND MANUFACTURING EXCELLENCE

## Decorative coatings

### Major expansions during the year

#### Mysuru Expansion Project

Asian Paints has doubled the Mysuru Plant's annual production capacity from 300,000 KL to 600,000 KL, making it the world's largest single-site facility for water-based paints. This milestone reflects our Company's commitment to innovation, efficiency, and sustainability.

The expansion integrates advanced technology and intelligent automation, ensuring seamless production flow through real-time monitoring of transportation and material movement. State-of-the-art material handling systems and data-driven insights have redefined

operations, enhancing precision and efficiency. Notably, the plant operates with the lowest operational costs across all Asian Paints facilities.

Strategically located to address the increasing demand in southern India, the Mysuru Plant strengthens Asian Paints' position in the market.



Expansion inauguration of world's largest water-based paint facility at Mysuru

#### Ankleshwar Expansion Project

Since its inception in 1981, the Ankleshwar manufacturing plant has been a cornerstone of operational excellence. With a capacity expansion from 130,000 KL to 250,000 KL per annum, the facility now stands as a testament to Asian Paints' strategic growth and innovation. The seamless integration of state-of-the-art automation, cutting-edge technologies, and flexi-auto configurations ensures enhanced efficiency while retaining the plant's legacy as a hub for launching new and niche products.

The plant's design maximises vertical space, creating the largest SKU hub with over 800 SKUs, capable of catering to a diverse product portfolio with best-in-class service levels. Its infrastructure embodies flexibility, enabling it to adapt to

evolving market demands while maintaining operational resilience. Sustainability is central to the plant's operations, powered by renewable

energy sources such as solar and wind. This eco-conscious approach reinforces its role as a model for responsible manufacturing.



Ankleshwar facility



## White cement

We are expanding our footprint beyond paints by establishing our first white cement manufacturing facility in Fujairah, UAE. This strategic move towards backward integration will enhance operational continuity, optimise long-term costs and strengthen quality control by reducing reliance on external suppliers. In collaboration with globally acclaimed consultants and equipment providers, we are developing a world-class facility across 17.5 acres, with a design capacity of 800 tonnes per day of clinker production.



⬆ White cement plant, Fujairah

## DATA ANALYTICS AT ASIAN PAINTS

During the year, we sharpened our focus on business intelligence, promoting data-informed decision-making and accelerating data collation through advanced analytics. We enhanced our data analytics capabilities and upgraded our manufacturing data platform with cutting-edge technologies, driving greater efficiency and elevating the quality of our operational processes.

### Data analytics and business intelligence tools

We are undergoing a dynamic transformation, evolving from isolated insights to a robust ecosystem of analytical solutions by creating seamless data flows from nearly 60% of connectable sources. This shift empowers our workforce to make autonomous, data-driven decisions, unlocking new efficiencies across our Company. Championing data democratisation, we have enabled our teams to extract significant value, embedding analytics at the core of our strategy.

### Tech-enabled supply chain

We integrated built-in algorithms with our RM Procurement Optimiser to automate sourcing and select cost-effective alternatives without compromising quality. A cloud-based optimiser now enables agile supply chain responses. We partnered with multiple vehicle tracking providers to offer dealers real-time order tracking, significantly enhancing their satisfaction and experience.

Additionally, we implemented a robust packing automation system powered by Apriso at the Vizag plant. The system streamlines the various steps in the packing process, integrating with production and the warehouse systems and the label printers to orchestrate reliable and consistent packing and labeling across all the lines at the plant.





# INNOVATION AND MANUFACTURING EXCELLENCE

## Advancing self-serving analytical solutions

This year, we have made great progress in developing self-serving analytical solutions through Business Intelligence platforms. These solutions have been rolled out across Manufacturing, Quality, Engineering, Safety and Governance, empowering employees to generate insights independently, reducing reliance on IT support.

**100+**

Employees have been trained in Business Intelligence tools, database management and programming languages

These initiatives have sparked a culture of continuous learning, enabling teams to troubleshoot challenges independently and drive analytical excellence.

Our commitment was recognised at the UBS Forums, where our Sriperumbudur plant's Video Analytics project earned the Excellence in Manufacturing Process Award. We continue to celebrate employee-led innovations, inspiring a new era of performance enhancement across our operations.

## Delivering tangible business impact

Over the last five years, our data analytics efforts have delivered considerable savings in areas such as material addition accuracy and power consumption. This reinforces our role in driving cost efficiency, while also enabling benchmarking across plants based on Manufacturing Efficiency, Cost Efficiency and Quality Control & Assurance.

## Prescriptive analytics

We have strengthened our monitoring capabilities to mitigate temperature-related risks in monomer handling, ensuring safe and efficient operations. Our in-house machine learning model optimises tanker unloading and recirculation, preventing temperature breaches while providing valuable insights into equipment performance.

## Driving complex manufacturing insights

We have advanced our analytical capabilities to uncover complex relationships between manufacturing equipment and material variance, offering deeper insights. This allows us to optimise processes, improve predictive maintenance, and reduce downtime, leading to enhanced operational excellence.



## TECHNOLOGY AT ASIAN PAINTS

### Brand management

We ran cost-efficient customer acquisition campaigns across multiple channels, leveraging our sophisticated digital marketing platform to achieve industry-leading conversion rates. To deepen brand engagement, we introduced dedicated digital portals tailored to the needs of brand managers and design professionals. In parallel, our call centre infrastructure was strengthened to maintain an exceptional 99.9% uptime. We also implemented a robust Product Information Management (PIM) system, streamlining the management of all digital assets.

### Customers and channel partners

We deployed a next-generation outbound calling solution and intelligent web bots, which increased agentless query resolution from 33% to 66%, significantly enhancing call centre responsiveness. Further enhancing service integration, we launched a Common Sales Tool for Beautiful Homes Painting Services in India to facilitate seamless lead tracking.

We rolled out an immersive 3D Home Visualisation platform which includes a robust library of over 24000+ assets across Sleek, BHS, Bath Fittings, home décor, empowering the designers and customers to visualise design outcomes in real time. This has significantly contributed in seamlessly integrating advanced Design-to-Manufacturing capabilities to optimise workflows and drive operational excellence. The SmartTint app now enables remote operation of all Colour World machines, including catalogue sync, boosting speed and consistency across dealer networks.

For our international units, the Skyhawk Salesforce automation system was deployed across eight countries, improving project visibility and execution.

### Employee enablement

We champion employee empowerment by offering intuitive self-service systems globally. By integrating effortlessly with travel partners, we create a seamless travel and expense claim experience that prioritises ease and satisfaction. Our metadata-driven integrity checks ensure transparency, while analytics-powered insights strengthen controls and speed up approvals.

### Influencer engagement

Implemented next-generation loyalty management cloud to manage all loyalty programmes across regions from a single platform averaging 2,50,000 successful transactions per day. The platform enabled self-onboarding of and instant payments to influencer.

### Cyber security

We strengthened cyber security posture by embedding rigorous information security protocols within our Software Development Life Cycle (SDLC), using Static and Dynamic Application Security Testing (SAST and DAST) powered by a hybrid model of open-source and enterprise tools. We introduced data classification and leakage prevention tools to safeguard sensitive information and mitigate accidental disclosures. In addition to antivirus and endpoint protection, we now conduct ransomware simulation drills to test and enhance organisational readiness.

Our Information Security Management System is certified to ISO 27001:2013 and was successfully upgraded to ISO 27001:2022 in March 2025. Based on an independent assessment of our cybersecurity framework, we received a 4 out of 5 maturity rating, reflecting alignment with industry-leading benchmarks across key domains.

### Strengthening digital defences

We operate a best-in-class Security Information and Event Management (SIEM) system with 24x7 monitoring, supported by threat intelligence from global security agencies to pre-empt evolving cyber threats. Regular Vulnerability Assessment and Penetration Testing (VAPT) and Red Team simulations ensure continuous evaluation and strengthening of our security perimeter.

### Transition to SAP RISE

#### 99.9% Availability achieved with SAP RISE transition

We successfully migrated our ERP system - the S/4HANA ERP system - along with several other core applications to SAP RISE on Google Cloud in India. This strategic transition ensures 99.9% system availability, enhanced scalability, and a robust foundation for AI-driven innovation, positioning our Company for future growth and technological advancements.