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Executive Summary

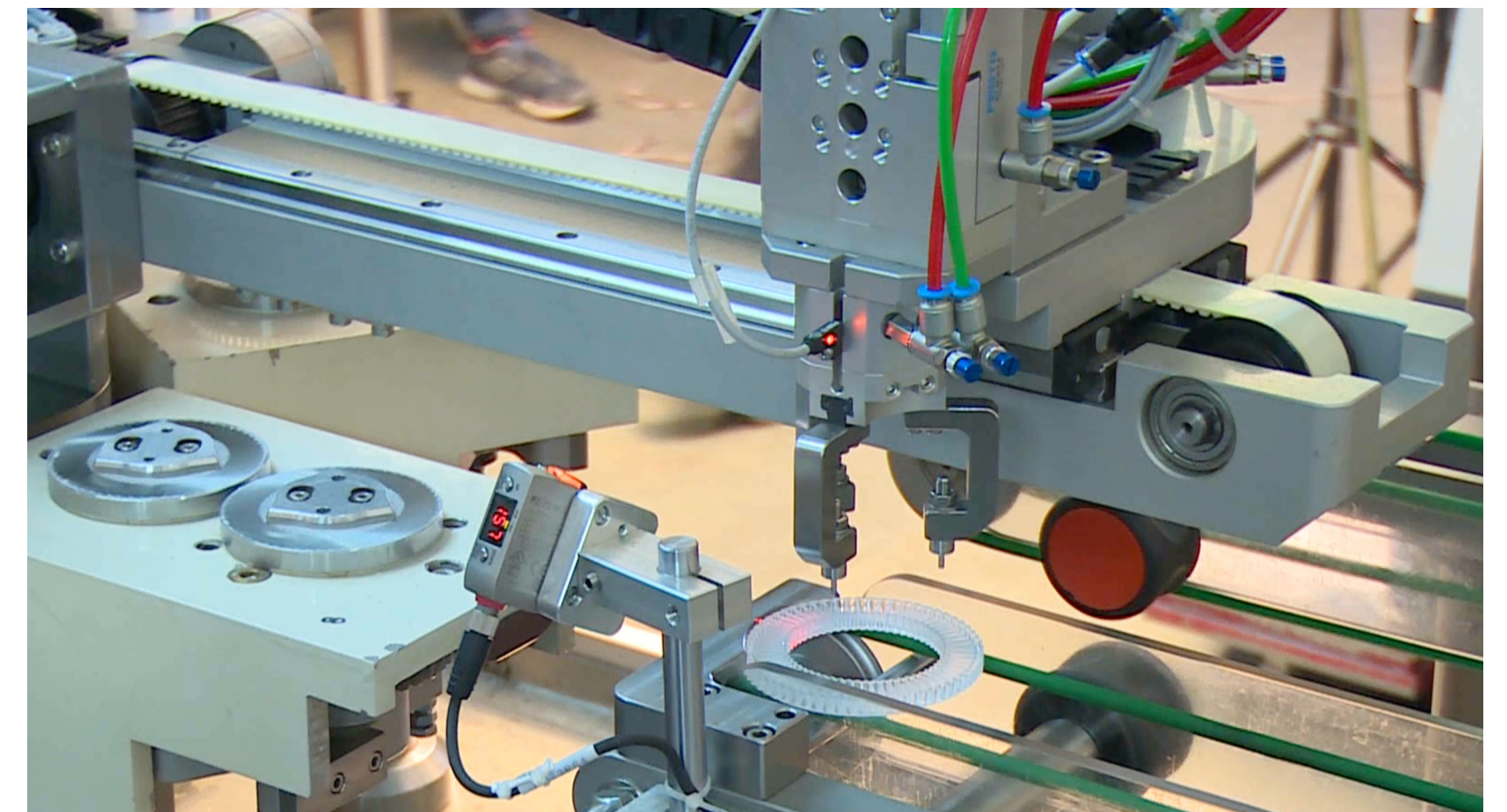
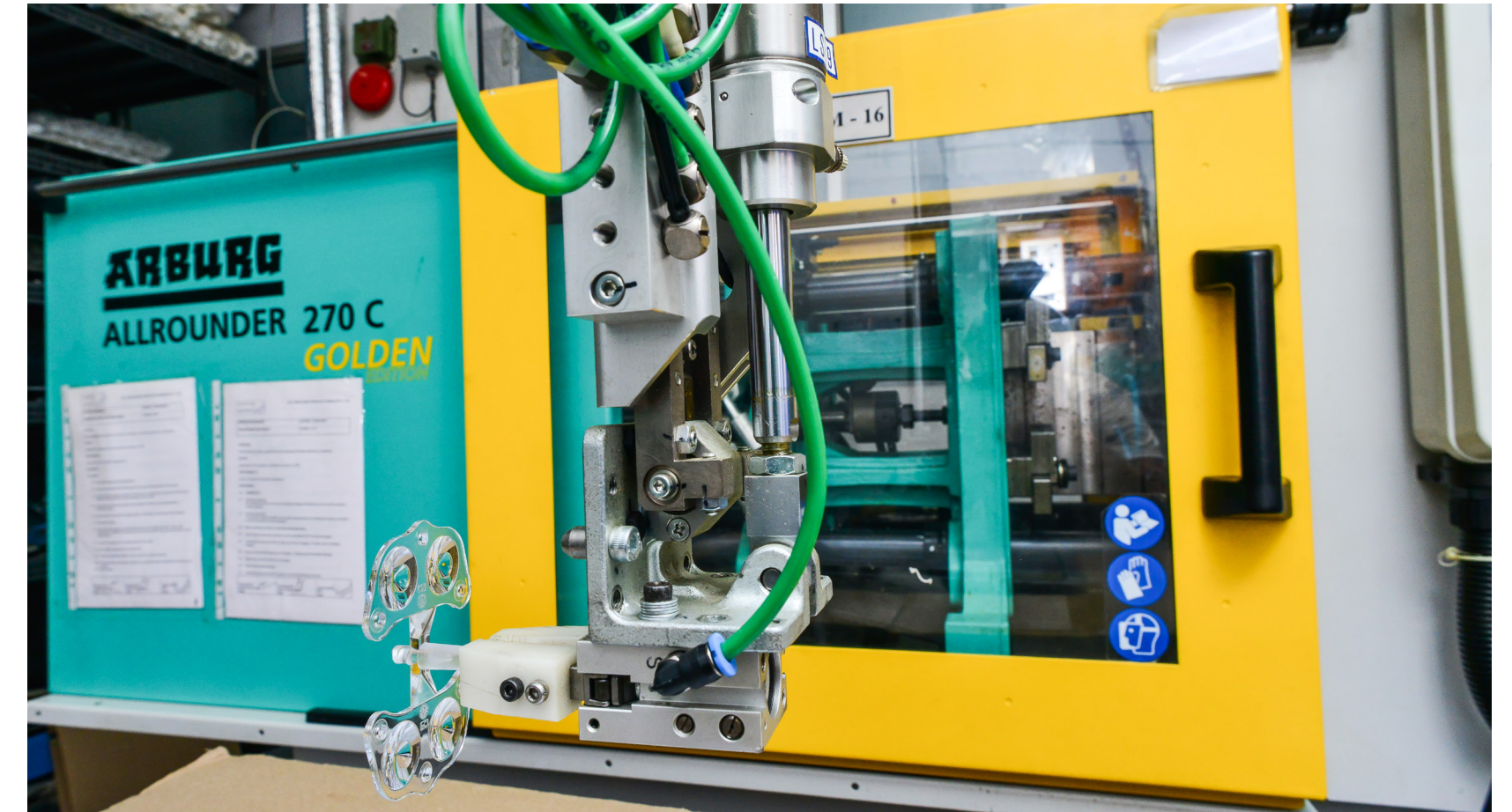
Jay Precision is one of the few manufacturing companies that can provide end to end solutions for a variety of market sectors. With over 30 years of manufacturing experience within the pharmaceutical sector, we have further diversified into toy manufacturing, electronics, special purpose machines and much more.

We are a family owned business and have been supporting international clients through commercial manufacturing by providing complete turnkey solutions. We have a dedicated UK based product support team that is able to manage the needs of our international clients. Our offshore engineering and manufacturing team consists of over 3000 employees, most of whom have been with our company for more than 20 years. This experience and loyalty is key to all that we do at Jay Precision.

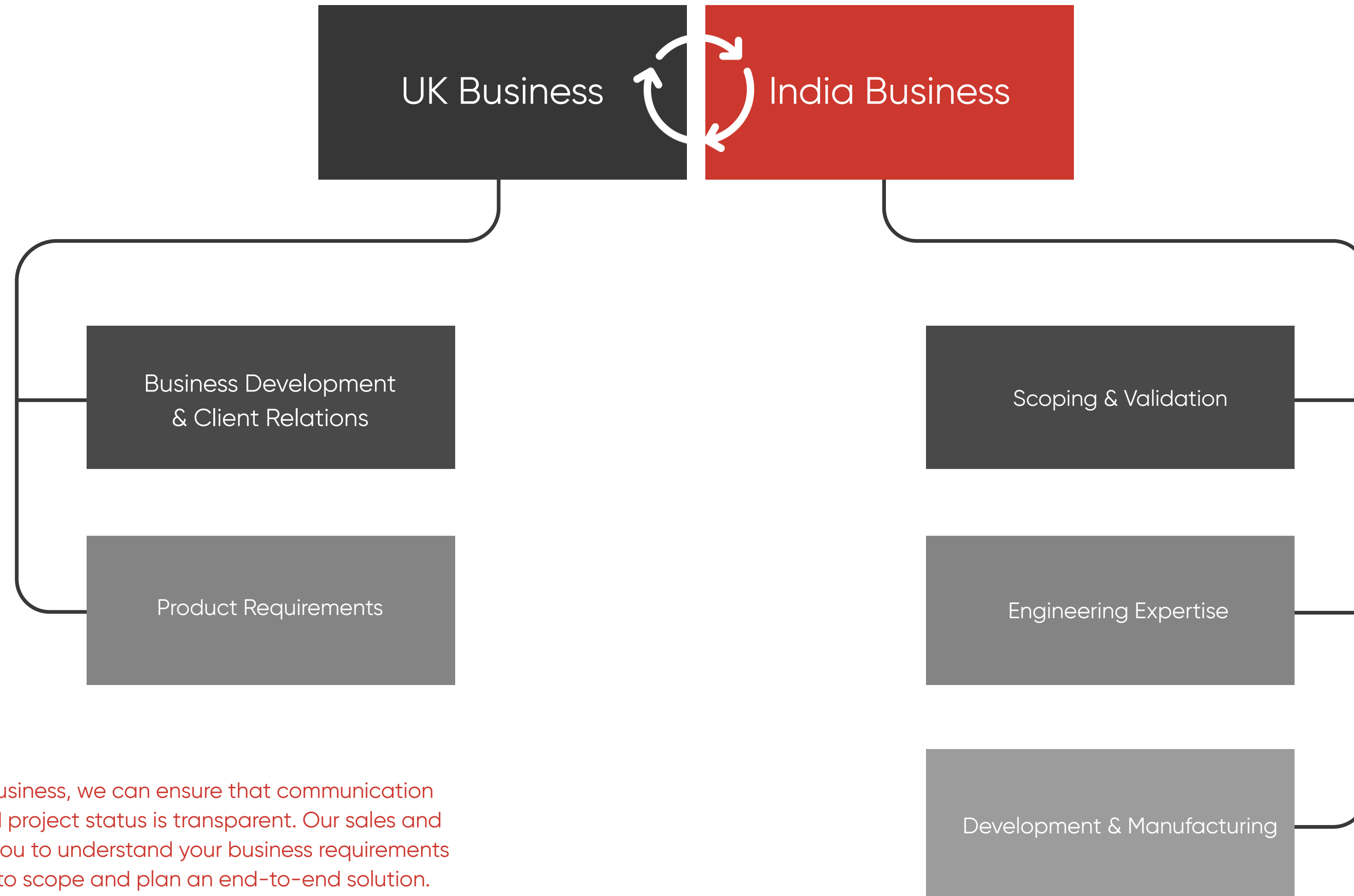
Jay Precision has maintained its highly regarded reputation in the industry, because we offer high value products at a low cost without compromising on quality. This has always been a motto of the founders of our company.

Offshore capability and benefits:

-  Unmatched costs under strict timelines for product development
-  Integrated SAP for streamlined internal processes
-  Onshore team support for daily operations and communication
-  EOU for contract manufacturing thereby reducing costs of goods and overall operational concerns
-  Our end to end development partnership can translate your concept from an R&D stage to a commercial product

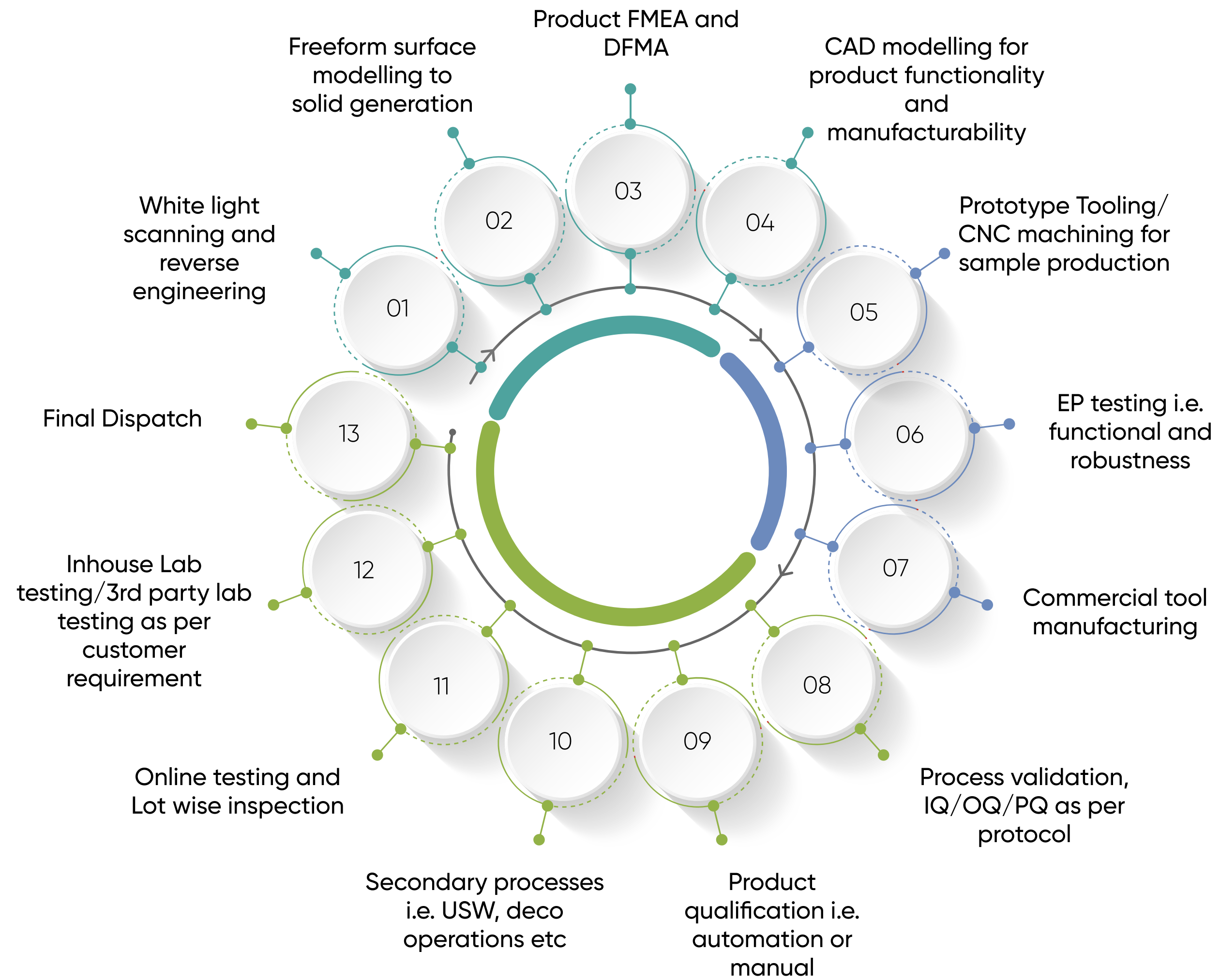





Business Structure



Working hand in hand with our India business, we can ensure that communication is clear, time zones are convenient and project status is transparent. Our sales and product team in the UK will work with you to understand your business requirements and work with our in-house engineers to scope and plan an end-to-end solution.

Product Lifecycle



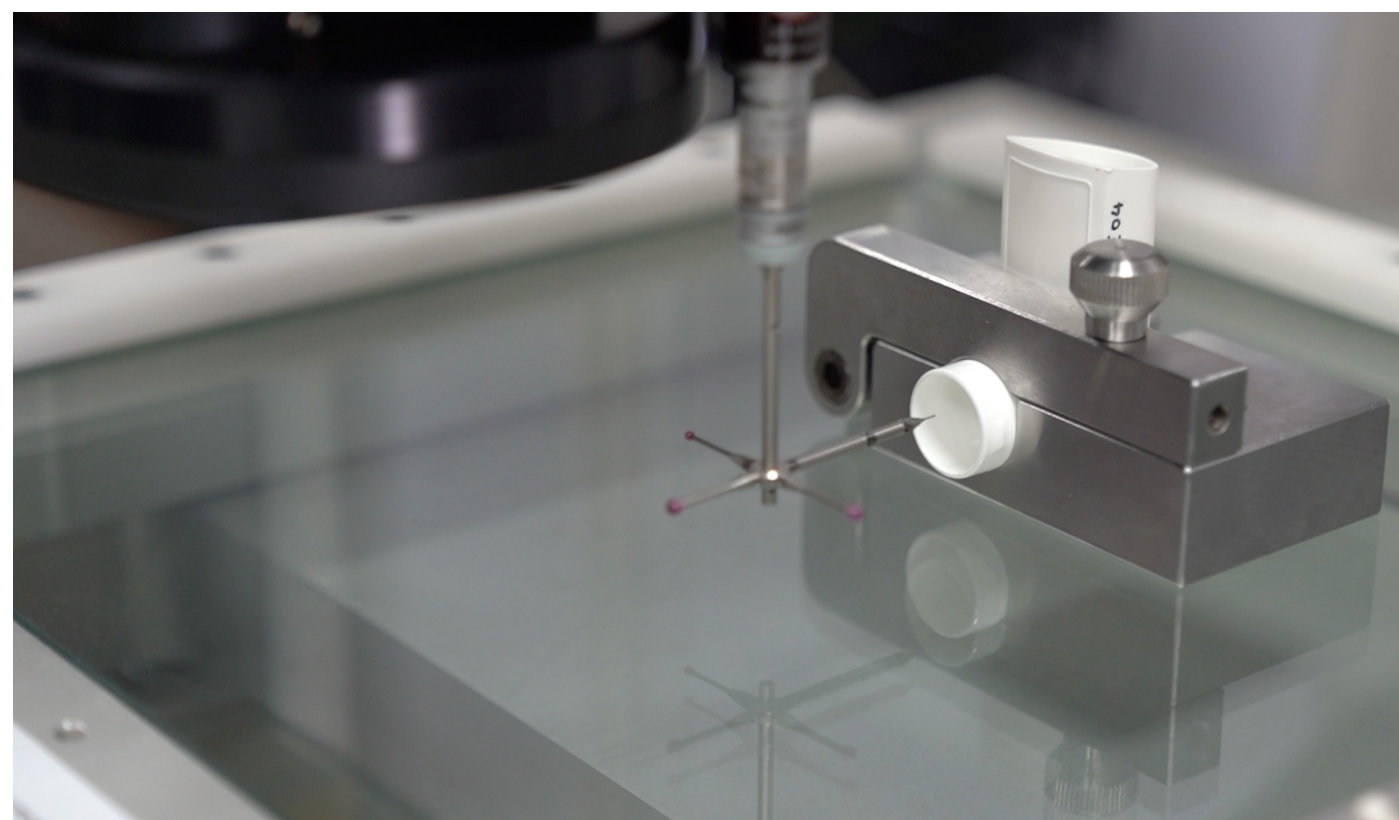
-  R& D Engineering
-  Tool Development
-  Manufacturing

R&D Engineering

What we do

As the UK market wavers on uncertainty, it seeks manufacturing expertise, and Jay Precision can confidently service this sector. Leveraging our extensive experience, we capitalise on the flourishing trade agreements between the UK and India. Our UK entity, established in 2021, caters specifically to these manufacturing needs.

We have a proven track record in R&D and engineering, with long-term clients ranging from pharma giant Cipla to toy manufacturer Hasbro.



SPC (Statistical Process Control) being carried out on a medical device.

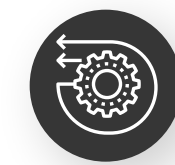
Services

Our services encapsulate a vast range of R&D and engineering capabilities:



Concept Design and Product Development:

With a team of expert CAD professionals, we excel in product development across sectors, including med-tech, pharma, and toys. Our design infrastructure allows tooling engineers to maximise capabilities using software like Creo, Siemens NX, and Autocad, while manufacturing engineers optimise toolpaths and surface finishes using software like Hypermill, Powermill, and MasterCAM.



Reverse Engineering: Utilizing precision scanners, such as CMMs (Co-ordinate Measuring Machines), laser scanning, digital height gauge, and vision measuring systems, we redesign, modify, and produce the desired product to suit your applications.



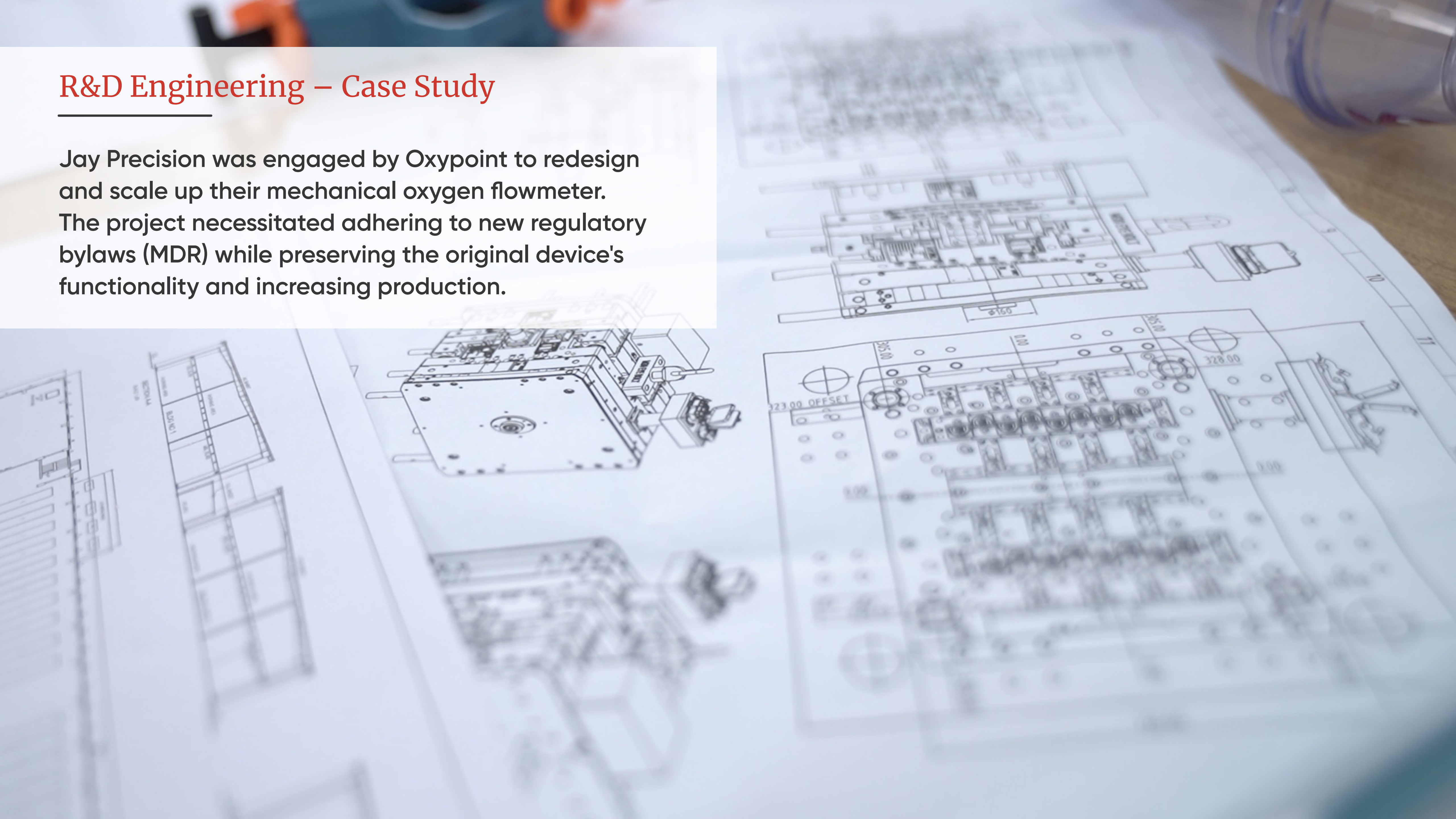
MVP Scaled Ready Manufacturing: Our senior engineering expertise combined with a complete toolroom for prototyping and producing pilot scale products ensures unparalleled timelines.



Engineer working on a new mould design.

R&D Engineering – Case Study

Jay Precision was engaged by Oxypoint to redesign and scale up their mechanical oxygen flowmeter. The project necessitated adhering to new regulatory bylaws (MDR) while preserving the original device's functionality and increasing production.



R&D Engineering – Case Study

The Challenge

The original device, used by hospital professionals, was made in small quantities. The regulatory changes required mechanical modifications without performance loss. Challenges included:

- Re-engineering CAD data to align with the desired functionality.
- Undertaking numerous dimensional iterations.
- Managing a complex mechanical system with multiple components.
- Accommodating flow control orifices as tiny as 30 microns.
- Upholding tight machining tolerances within 5µm.
- Transitioning to mass production, targeting over 10,000 units annually.

The Solution

Jay Precision's solution began with analysing the critical components and modifying the CAD data. Through a process of prototype creation, re-iteration, and cross-examination, they achieved the desired design.

Close collaboration between Oxypoint and Jay Precision experts was instrumental in the process. A rigorous testing protocol was established to retain the device's CE certification, involving the creation of durable testing equipment.

A dedicated team managed testing, assembly, performance checks, and packaging. After a successful pilot batch, full-scale production commenced.

Today, Jay Precision manufactures these devices on a large scale, showcasing their problem-solving expertise and quality commitment.



Oxypoint flowmeter undergoing testing

Mould Making

What we do

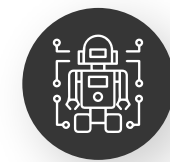
At Jay Precision, our state-of-the-art tool room is the heart of our operations. We've earned our reputation through the design and manufacture of intricate injection moulds for plastics and Liquid Silicone (LSR). Our goal is to bring ideas from leading companies to life, thanks to our high-end tooling hub and skilled craftsmanship. Our state of the art toolroom is equipped with over 50 CNC's from world renowned machine tool manufacturers such as Hermle, Charmilles, Makino, Tornos, Haas etc. These include 5-axis simultaneous machining centres, turn mills, EDM's and so on. We work with cutters as small as 0.2mm, spindle speeds of upto 150K rpm and machine hard parts up to 55HRc. This enables us to produce complex geometries and maintain the level of precision necessary for producing an accurate part. Our metrology systems include CMM's and vision inspection systems from Keyence and Rapid I. Our long-standing experience in special-purpose machinery is testament to our partnerships with the pharma industry.

Services

Our services encapsulate a vast range of R&D and engineering capabilities:



Design: Our end-to-end development and collaborative approach ensure exceptional mould making solutions tailored to your needs. Our team of over 15 design engineers have extensive experience in product modelling for a range of functional devices in various sectors. Facilitated by the latest CAD/CAM/CAE systems, we provide cost effective tooling solutions for all engineering thermoplastics



Manufacturing: We utilize a fleet of the worlds best CNC equipment including EDMs, Wire Cut machines, 5-axis milling, swiss automats, turning centres, turn mills, and others to manufacture moulds and special-purpose tools.



Machining of a part using a fourth axis attachment.



Injection Moulding: With over 150 injection moulding machines ranging from 40 - 450 ton capacity, we cater to various OEM projects.



Complex Tooling: Prototype Tools, High Cavitations moulds upto 64 Cavities, LSR Moulds, Coining Moulds for thick walled components, 2K Moulds, Unscrewing Moulds, Moulds for zinc and aluminium high pressure die casting.

Mould Making – Case Study

An aerosol actuator for treatment of asthma and COPD. Orifice diameters ranging from 0.2 - 0.48mm. We have extensive expertise in development of such tools and have over 25 such moulds running in our own production facilities. Tool qualification goes through an extensive IQ, OQ and PQ before production.



Mould Making – Case Study

Design

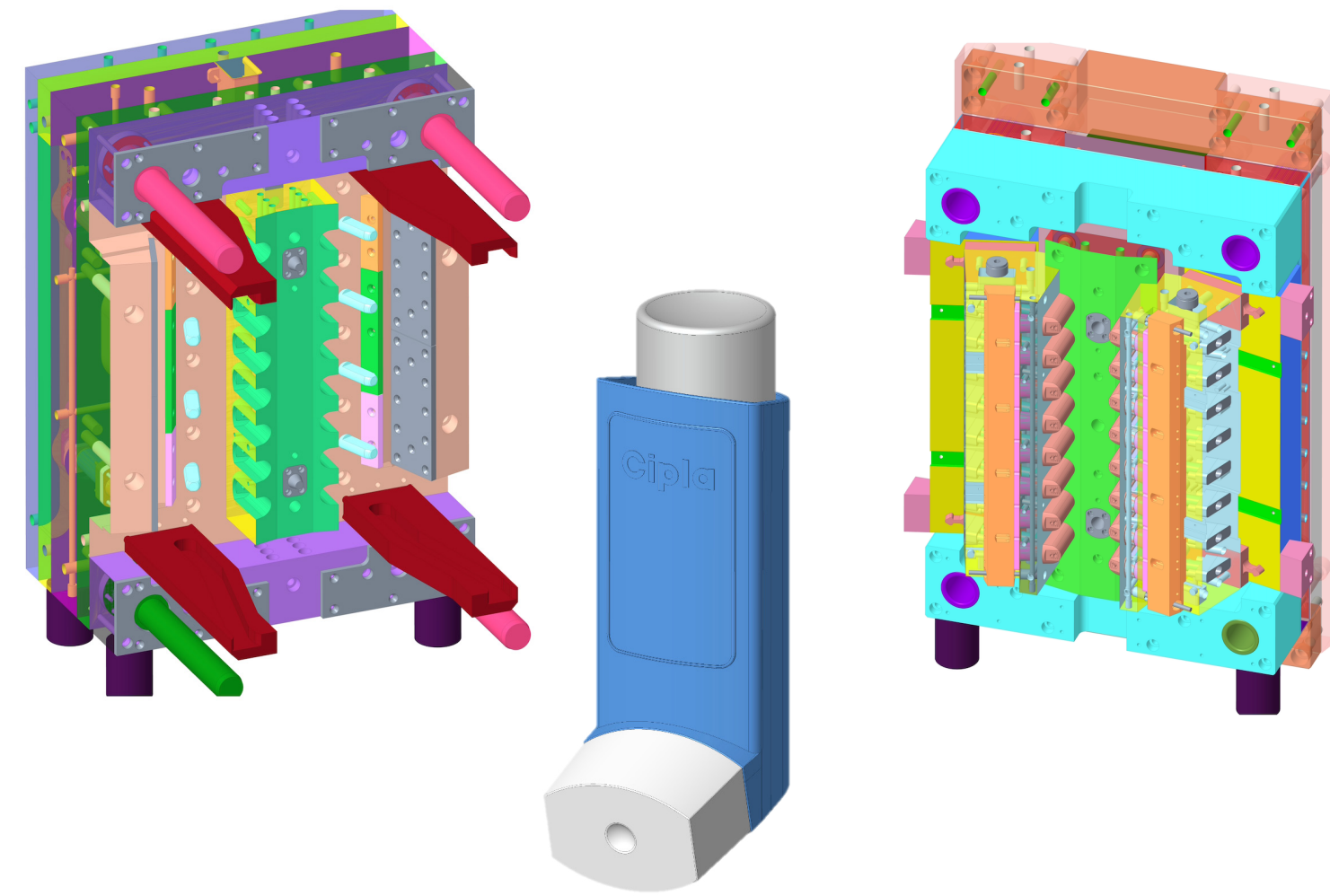
The product design is defined by the URS as stated by the client. The design begins with a detailed DFMA process to ensure all design aspects are considered not only for tooling but also for the end of line automation and inspection. Our design and manufacturing engineers have an extensive experience in producing complex tools for such applications. A sophisticated tool of such nature requires not only precise manufacturing but also skilled craftsmanship.

Product Details:

Material : PP
Orifice Diameter : 0.2mm

Mould Details:

Mould Type : 16 cavity Hot Runner
Hot Runner System : 16 Drop Valve Gated
– Mould Masters
Ejector : Stripper ejection
Slide Actuation : Cam track
Core Cavity Steel : 1.2083 52–55HRc Tooling
Lead Time – 8 weeks



Machine Details : Arburg 570 E Golden Electric

The cycle time was 18 seconds with Statistical Process Control (SPC) maintaining a CPk >1.33 on all critical dimensions, underscoring our commitment to precision and quality.



Manufacturing

What we do

We operate an extensive manufacturing network that includes over 150 injection moulding machines, with capabilities spanning from 40 to 450 tonnes. Our experience stretches across various industries, including pharmaceuticals, toys, med-tech, and specialized machinery.

We've also recently expanded into the electronics sector, specifically LED luminaires. Our manufacturing processes are characterized by a strong emphasis on automation and precision, ensuring high-quality results for our clients



Jay Precision India is Arburg's biggest client in the country with over 80 machines of all configurations.

Services

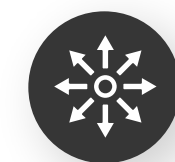
Our services offer a comprehensive set of manufacturing solutions:



Advanced Moulding Technologies : We house technologies for 2K moulding, coining technology, liquid silicone moulding, and vertical moulding. Automatic raw materials delivery is facilitated by centralized conveying systems, with robots ensuring automatic ejection and runner regrinding.



Automation Focus : The degree of automation is defined at the product development stage, depending on the product's complexity and business volume. Our strong machine-building department enables us to redesign manufacturing process flows, develop tailored solutions, and engineer precision parts or tools.



Diversified Manufacturing : With over 10 state-of-the-art facilities, we've developed the capability to expand exponentially and diversify into new verticals. We're proud to say that all employees are permanent staff, highlighting our commitment to a stable and reliable workforce.

Facilities

We have multiple locations in Mumbai, and our export-oriented unit (EOU) sprawling over 60,000 m², is strategically located near the port in Mumbai. Our inhouse lab enables us to facilitate mechanical and electronic testing of products to the required standards.

Our efficient quality control team ensures the best product quality.



These sites have been certified according to the following regulations: ISO9001:2015; ISO13485:2016; Sedex - Smeta 4 Pillar Compliance, SCAN CTPAT (Customs Trade Partnership against Terrorism, RBA

Manufacturing – Case Study

Jay Precision partners with renowned toy brands like Hasbro, Ferrero, and Hamleys, offering strategic OEM services. The toy market is extremely price sensitive. Having the ability to provide a turnkey solution right from design to manufacturing in high volumes allows companies to benefit from shorter lead times and competitive rates.



Manufacturing – Case Study

The Challenge

Our primary hurdles include offering competitive rates to secure large manufacturing volumes and adhering to clients' strict lead times. This necessitates an efficient, compliant manufacturing process.

The Solution

We begin by creating raw data for parts, refining 3D scans, sketches, or reverse-engineering through white light scanning when CAD data is unavailable. Engineers optimize these for manufacturability and functionality.

In-house prototype tools are crafted for functional part EP testing. Commercial tools, including hot runner systems and tools for LSR, are subsequently produced.


Post-transfer to our manufacturing plants, final product qualification is undertaken. Our facilities are outfitted for assembly processes and high-quality product decoration, including tampo printing and UV inkjet printing.

Products undergo in-house physical lab inspections and third-party chemical tests for global standard compliance. Our effective QMS and multiple certifications ensure all-round compliance.


Strategically located near Mumbai's port, our EOU facilitates fast global transit times. This efficiency has positioned us as a leading player in India's toy manufacturing market.




Medical devices for respiratory treatment developed by jay precision



150+
Injection Moulding
Machine



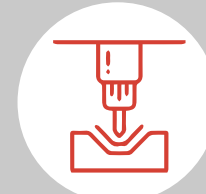
30-450
Tonnes
Tonnage



35+
Tampo Printing



10+
Spray Painting



25+
Ultrasonic Welding



1
UV Inject Printing

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