



KEEP CREATING

# Company Profile



↗ Exploring  
Challenges to  
Trailbraze robotics.



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# About Us

“Building Robotics General Intelligence™ for the Future Applications.”

Our idea focuses on developing advanced robotics solutions to enhance productivity, efficiency, and safety across various industries. The company's mission is to build robots that will empower the world around us. We are building robots that free people from low-productivity, mundane high-risk jobs increasing the customer's productivity and efficiency.

## OUR MISSION

A collaborative human-robots world to achieve sustainability.

## OUR VISION

Developing Robots to enhance and empower global communities.

We value believing in —



Agile & Adaptable



Innovation & Research



Quality & Excellence

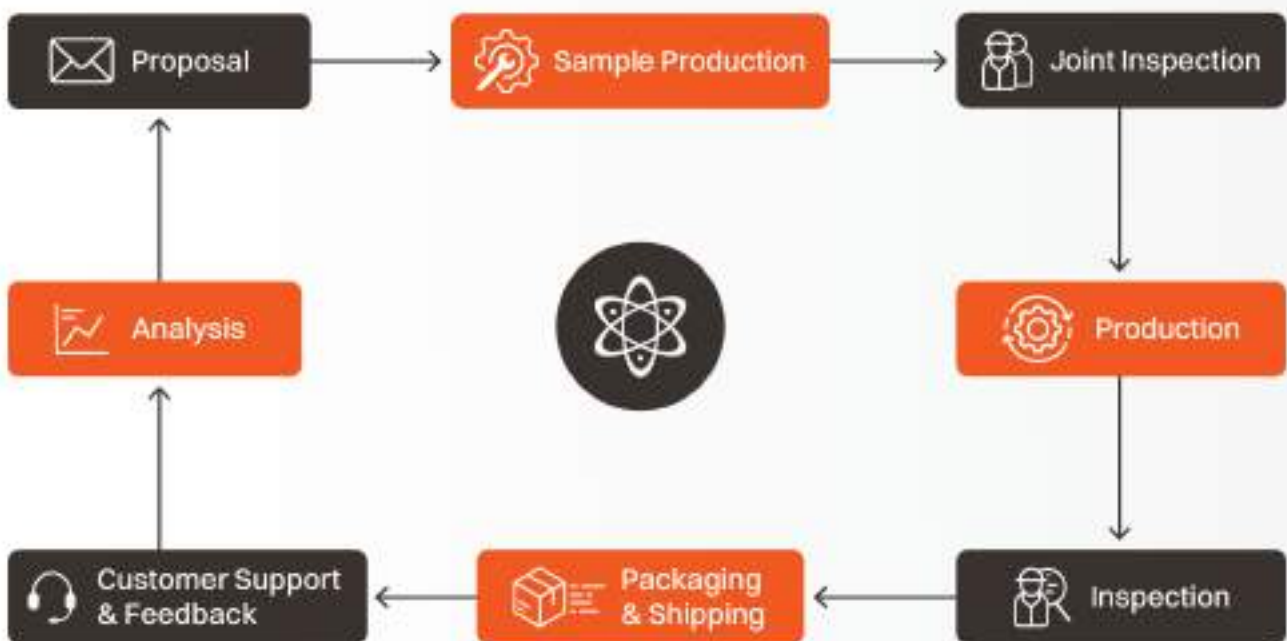


Trust & Sustainability

# Corporate Strategy

As technologies advance the world, we can package exceptional computation and power to drive innovation in a chaotic environment. Rosa Tech aspires to blend the cyber and physical worlds to develop novel technologies, algorithms, materials and hardware that address the critical challenges of industries by harnessing the infinite potential of hybrid manufacturing and autonomous services.

Our team of technocrats, creators and visionaries is driven by an insatiable appetite for innovation, challenges, and commitment to pioneering unique and groundbreaking products to empower our customers to achieve sustainability.



# Strategic Alliances

**Bridging gaps through  
Partnerships & Collaborations**

We value on building long term relationships that can drive innovation through creative thinking & building the products to solve the future.

## PARTNERSHIP PROGRAMS WITH LOYAL SUPPORT



Proud to partner with  
Microsoft for Startups



Inception  
Program



Zoho for  
Startups



nasscom  
deeptech



MeitY  
Startup Hub  
Enriching innovation



Jyoti Cero  
Rubber



STARTUP  
INCUBATION AND  
INNOVATION  
CENTRE  
IIT KANPUR

# Infrastructure & Research

Crafted for research to design and develop innovative and complex robots, cross-functional engineering products and solutions that are manufactured with a aim to achieving sustainability by implementing Robotics General Intelligence™.

- Critical and Interdisciplinary Products
- Sustainable Manufacturing Practices
- Modern & Precise Infrastructure
- Digital & Secure Facility



# State of the Art Electronic Facilities

We house **state-of-the-art** electronic facilities and clean room that ensures precision and reliability in the design and production of PCBs and systems. Our proficiency in manufacturing intricate assemblies and developing advanced designs highlights our holistic capabilities.

Through the integration of rigorous quality control processes with innovative testing infrastructure and expertise, we produce durable and efficient solutions that meet the highest industry standards.

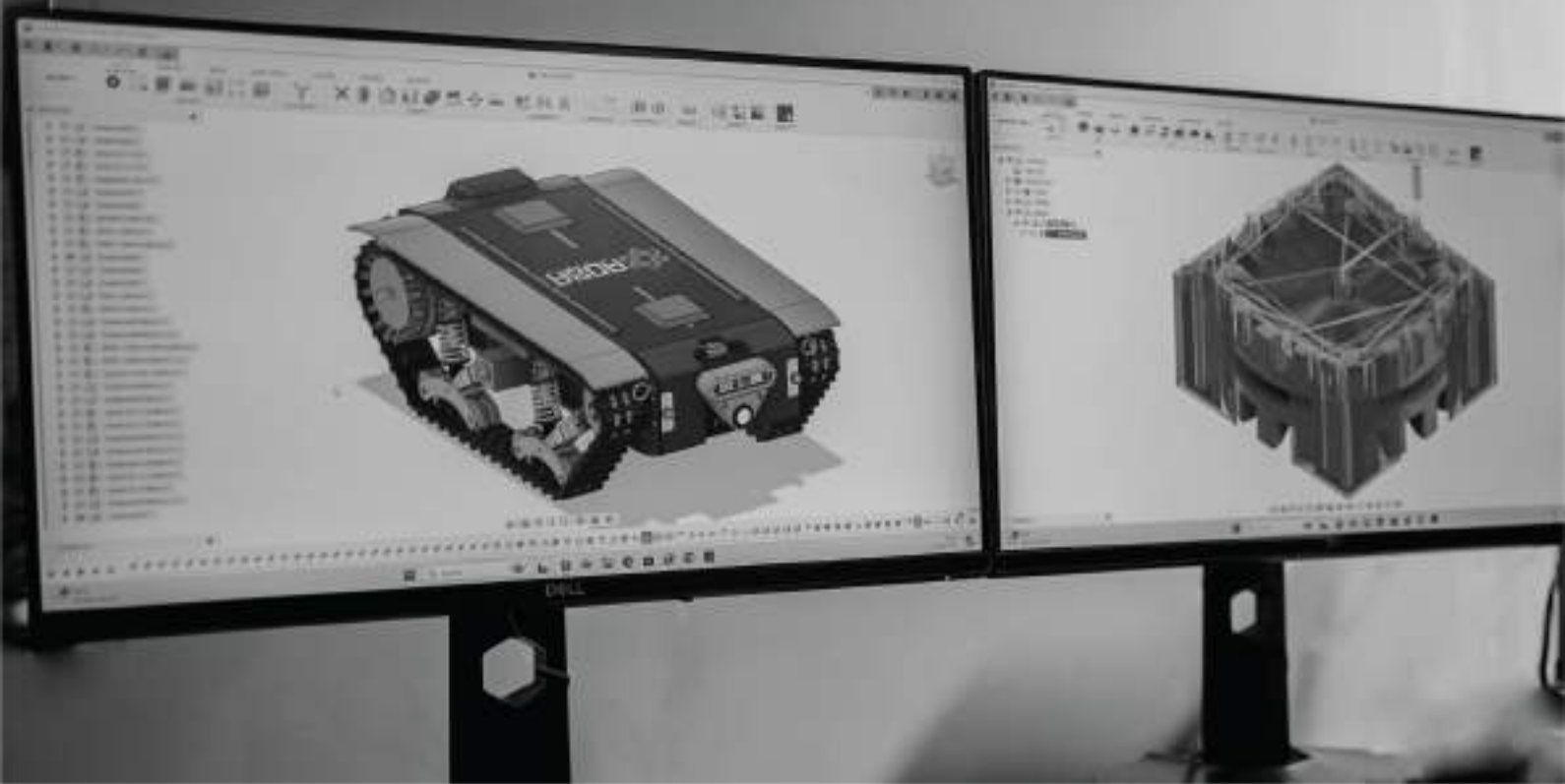
Our innovation in PCB fabrication and assembly processes has reduced the lead time providing us the edge in the product development cycle and enhanced the quality subsequently.

Our innovative team & deep domain expertise enable us to excel in top-tier, interdisciplinary product development and implementing sustainable and scalable manufacturing techniques. Our Inventory stashes an array of passive and active versatile components to innovate faster.

To power modern application we implement our cross-domain capabilities to infuse electronics to make material smarter.

To procure original and reliable component we have setup a strategic supply channel to procure the criticals compent with minimal intervention that ensure maximum uptime and compnent availability for production.





# Simulating **Success** with Visionary Design

The cornerstone of our development process is our advanced software and high-performance computing resources. These tools enable the seamless integration of design and simulation workflows, resulting in a faster development cycle and scalable manufacturing capabilities.

Our commitment to cutting-edge design and simulation tools ensures that we stay at the forefront of technological advancements, delivering solutions that are both innovative and effective.

• CAD & CAM

• EDA & Testing

• CFD & Thermal Simulation

# Designed for **Precision** and Manufactured with **Excellence**

The fusion of advanced engineering principles with cutting-edge manufacturing capabilities sets us apart, enabling us to achieve sub-millimeter precision across a wide range of alloys to deliver maximum repeatability and precision.

The modern infrastructure, combined with experienced craftsmen, ensures the durability and finest quality of our products, meeting the highest industry standards.

Our rigorous and digitized quality control procedures ensure the tracking and inspection of raw material and assemblies at every step to produce premier quality identical products that are maintenance-free and reliable.

With safety first approach, our SoPs are designed for timely machine maintenance and minimised human machine interference to produce extrinsic part of finest order.

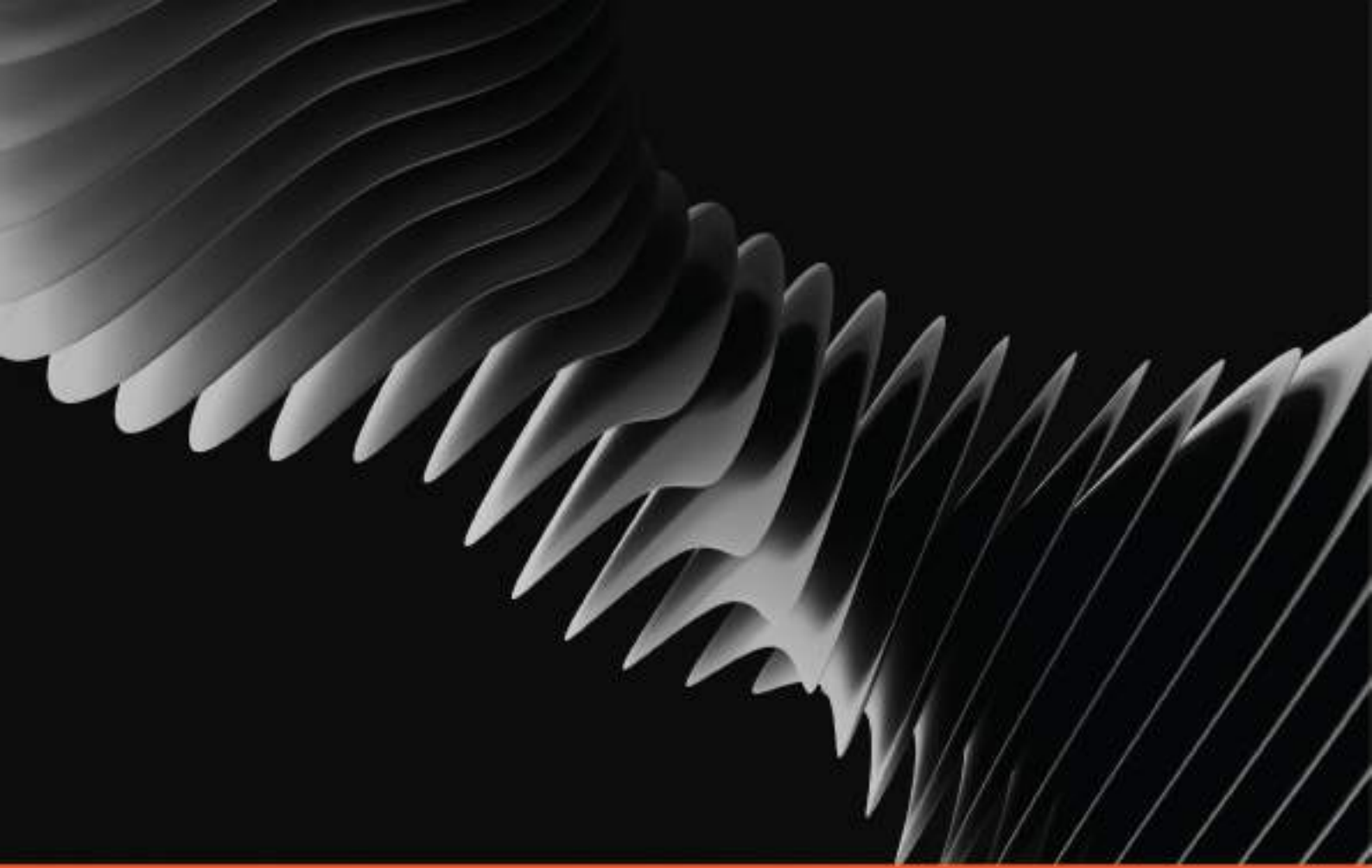
Multi-Axis  
CNC

Die  
& Tooling

Bending  
& Lasers

Aesthetics  
& Textures





# Blending Chemicals to Characterize Performance & Stability in **Materials**

We excel in developing advanced materials with our phenomenal research and design facilities that push the boundaries of performance and functionality embedded with rugged electronics to deliver exceptional results in material properties and application versatility. The excellence is evident in our infrastructure and team ensuring that our material solutions exceed industry standards for durability, efficiency, and innovation



Elastomers



Fiber Composites



Engineering Plastics



Nano Materials

# Designed by **Intelligence**, Layered to achieve Perfection & Performance

The transformative approach to design & production, leveraging printing technologies to build resembles our agility and flexibility. The in-house capability allows for unprecedented design flexibility and precision, enabling the creation of intricate geometries. Our expertise in Additive Manufacturing ensures high-quality results and tailored solutions that push the boundaries of product design and accelerate the development cycle.

The skilled and expert team enable us, to excel in AI-enabled techniques to optimise shapes and manufacture parts that enhances product quality, optimise weight and increase performance. Our creative processes of manufacturing blended with texturing for superior, smooth finished allow us to embedded electronics during the printing that pave path our ground breaking innovations.

**Fused Deposition  
Modeling (FDM)**

**Metal Fused  
Deposition  
Modeling (MFDM)**

**Stereolithography  
(SLA)**

**Selective Laser  
Sintering**



# Software And Control

RGI™ Pioneering   
Autonomous Solution.



# Redefining the Link : Redesigning **Cyber Physical Link** to Achieve Perfection



An integral part of our solutions is a cross-platform application to operate, manage, monitor and debug the products. Our expertise in architecture, communication, etc allows us to develop sophisticated solutions for optimal functionality and compatibility.

Our knowledge to design & manufacture hardware triumph us to develop critical software solutions with optimising the performance & minimising the energy.

Our team, driven by innovation and knowledge, develops enterprise software according to international standards to solve the modern-day cyber problems enabled by intelligence.

It enhances the efficiency and robustness of our product to meet accelerating technological growth, scalability, and ever-evolving customer requirements.

**Architecture & Services**

**Communications & Network**

**Cloud & Edge**

**SDK & Applications**

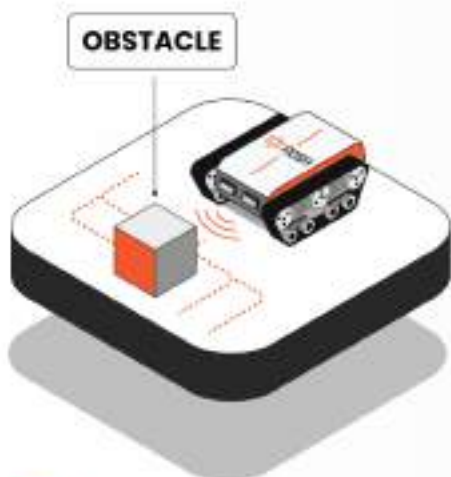
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# Driven by Autonomy Perfected with Precision

- Prediction and autonomy are central to our technological advancements, propelling our products into the future. Our algorithms and analysis create smart solutions by improving accuracy and efficiency while reducing human error and intervention.
- This combination of prediction and autonomy is pertinent for industries, in implementing autonomous services, smart manufacturing, and beyond.
- Our interdisciplinary team is developing Robotics General Intelligence™ to achieve anthropomorphic movement, understanding, communication to solve critical and chaotic problems.



# Bringing upon a Change In the Industry with Our **Robots** Enabled With RGI™



## 01 Perception

Fusing intelligence with data that transforms the path to sense the surroundings.



## 02 Articulation

Redefining dexterity for precise interaction with the environment enabled by rapid learning.



## 03 Localization

Implenting intelligence to learn, locate and navigate with maximum replicability.



## 04 Interaction

Intelligence to build the simplest method to interact and understand.

# A Collaborative **vision** to better world.

The vision of a collaborative human-robot world has set us on a path to revolutionize in a sector-agnostic manner. Industrial development and technological progress in fields such as next-generation semiconductors, automobiles, and information terminals, space, and agriculture are unrelenting and have given birth to infinite opportunities for robotics applications.

[ MINES ]

[ AGRICULTURE ]

[ SPACE ]

[ RETAIL ]

[ SHIPPING ]

[ AIRPORTS ]

Buis  
Applic



[ DEFENCE ]



[ AUTOMOTIVE ]



[ HEALTH CARE ]



[ CONSTRUCTION ]



Business Applications

[ FOUNDRY ]



[ WAREHOUSES ]



[ SEMICONDUCTOR ]



[ OIL & GAS ]





# ORION

## Envisioned to **Accelerate** Automation in Future Applications.

Orion is a autonomous cyber-physical solution that address the challenges of manufacturing, quality, productivity and safety by Robotic General Intelligence™ in the most chaotic environmental conditions ultimately driving profit, optimizing operations and reducing the time to market.

**Designed for controlled indoor environments to challenge outdoor landscapes for smart manufacturing, autonomous service, and unmanned warfare.**



Platform (Physical)

IP67 Waterproof

All Terrain

Secured

Autonomy



Command & Control C2 (Software)

Cross Platform

Fleet Operation

MultiBand Support

Application Integration



Robotics General Intelligence (RGI)™

Mapping

Path Planning

Easy Manage

Environment Awareness

# Ideating the **Innovative** way to operate.



## 01 Conveyor Cleaning

In processing plants, critical conveyor belts require timely maintenance and inspection to manufacture efficiently with maximum uptime.



## 02 Monitoring & Inspection

To ensure the safety and efficiency of critical infrastructure, inspections are conducted to monitor extensive parameters.



## 03 Logistic Automation

A huge chunk of daily operations across industries involves mundane and repetitive material movement.



## 04 Material Articulation

Operating Machines, quality control, sample collection and other similar jobs employ most of the workforce.



## 05 Research & Development

Orion's API provides a framework for researchers, enthusiasts, and students to propel their journey to the future that reduces efforts and streamlines outputs.



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