

ROBOTIC_CRAWLER

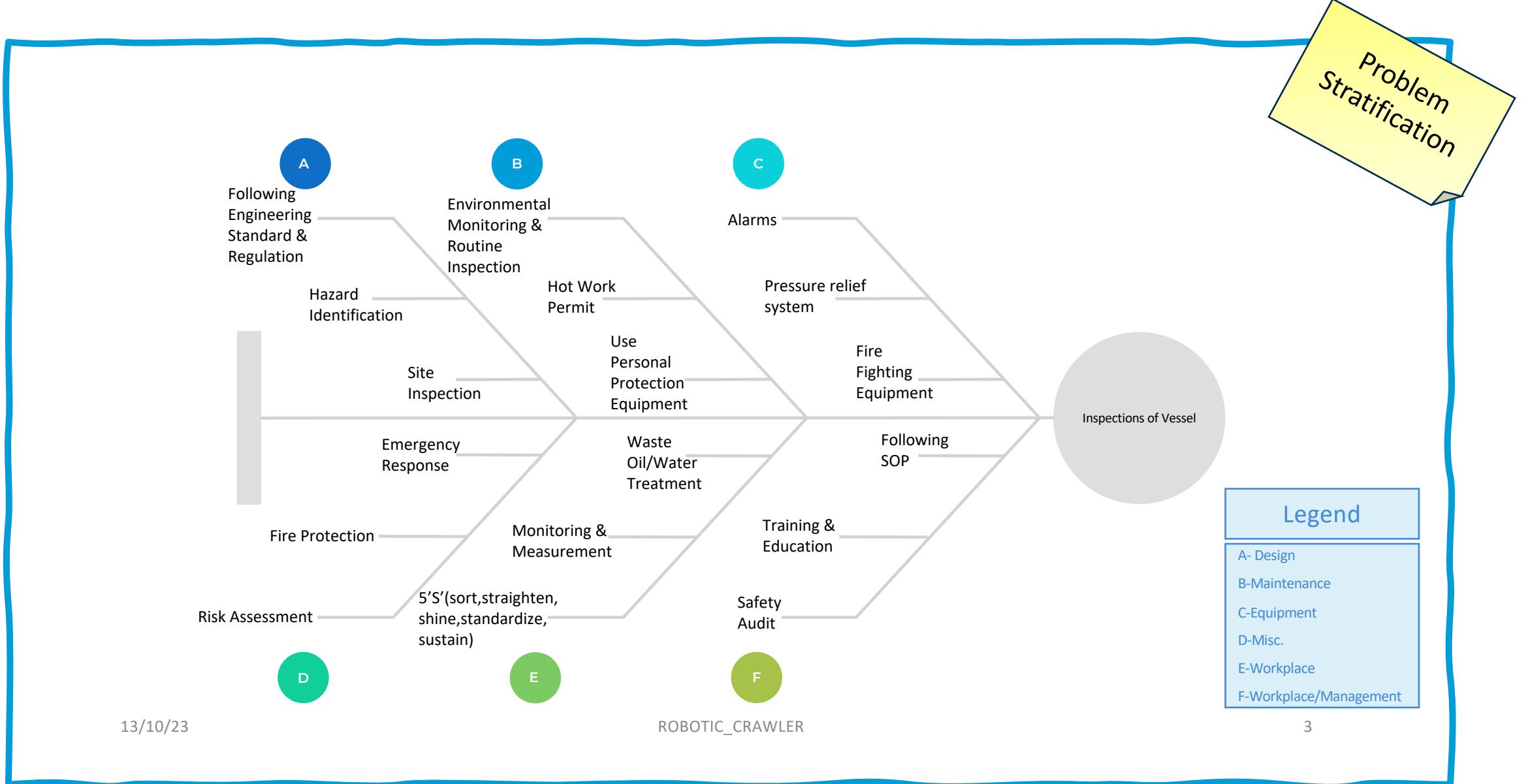
Revolutionizing boiler inspections
with cutting-edge robotics for
enhanced safety and efficiency.



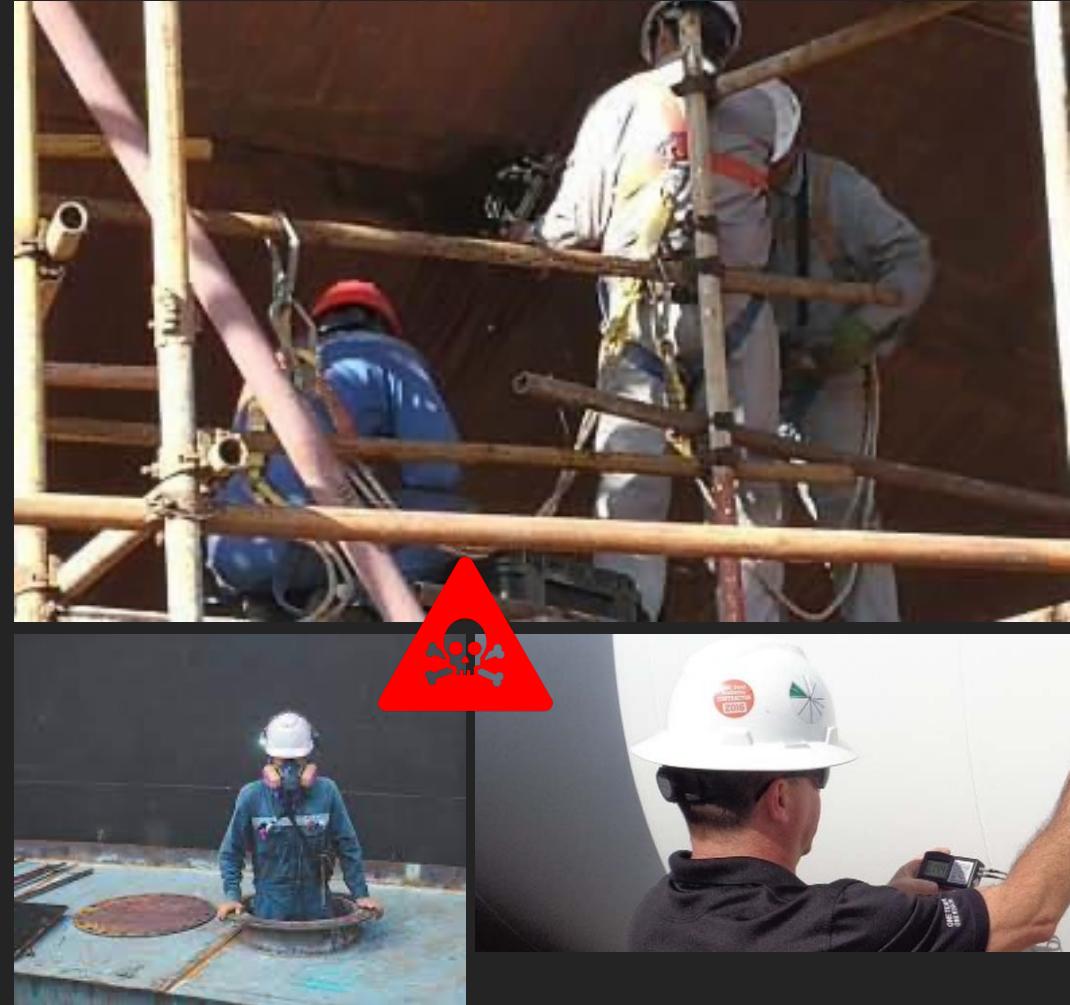
Current Scenario

Manual inspection remains a **common practice** for various industries, including boiler inspections. **Human inspectors physically enter the inspection areas and visually examine the equipment or systems.** They rely on their expertise and experience to identify potential issues, defects, or abnormalities.

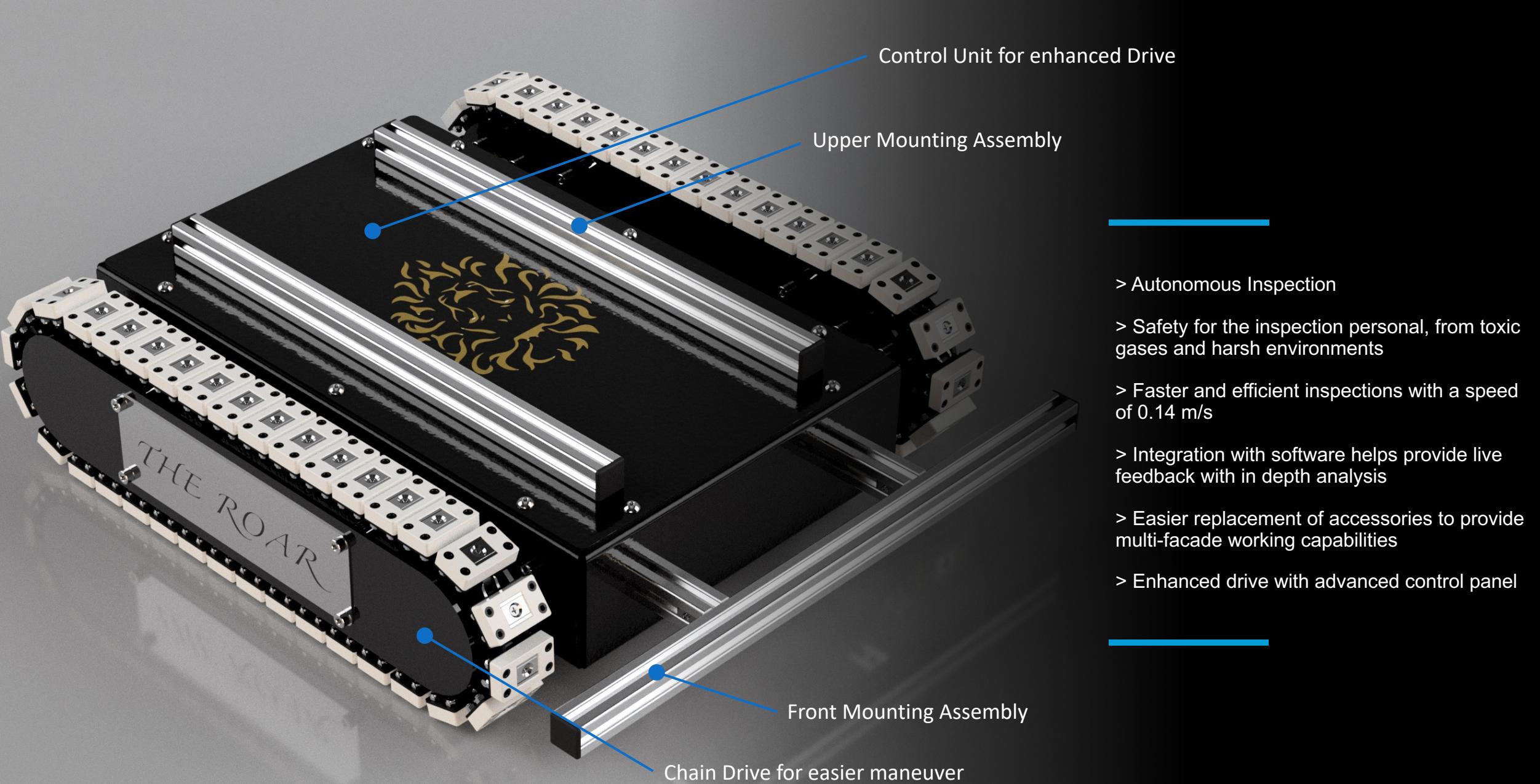
- It is **Time consuming**, Leading to operational downtime.
- It has **High Risk factor**, as inspectors are exposed to hazardous environment.
- Human entry is limited due to **confined spaces**.
- **Variations** in Inspection result due to human error.
- Manual documentation and reporting can lead to **delayed analysis and decision making**.



Why settle for
the ordinary
when you can
pioneer the
extraordinary?



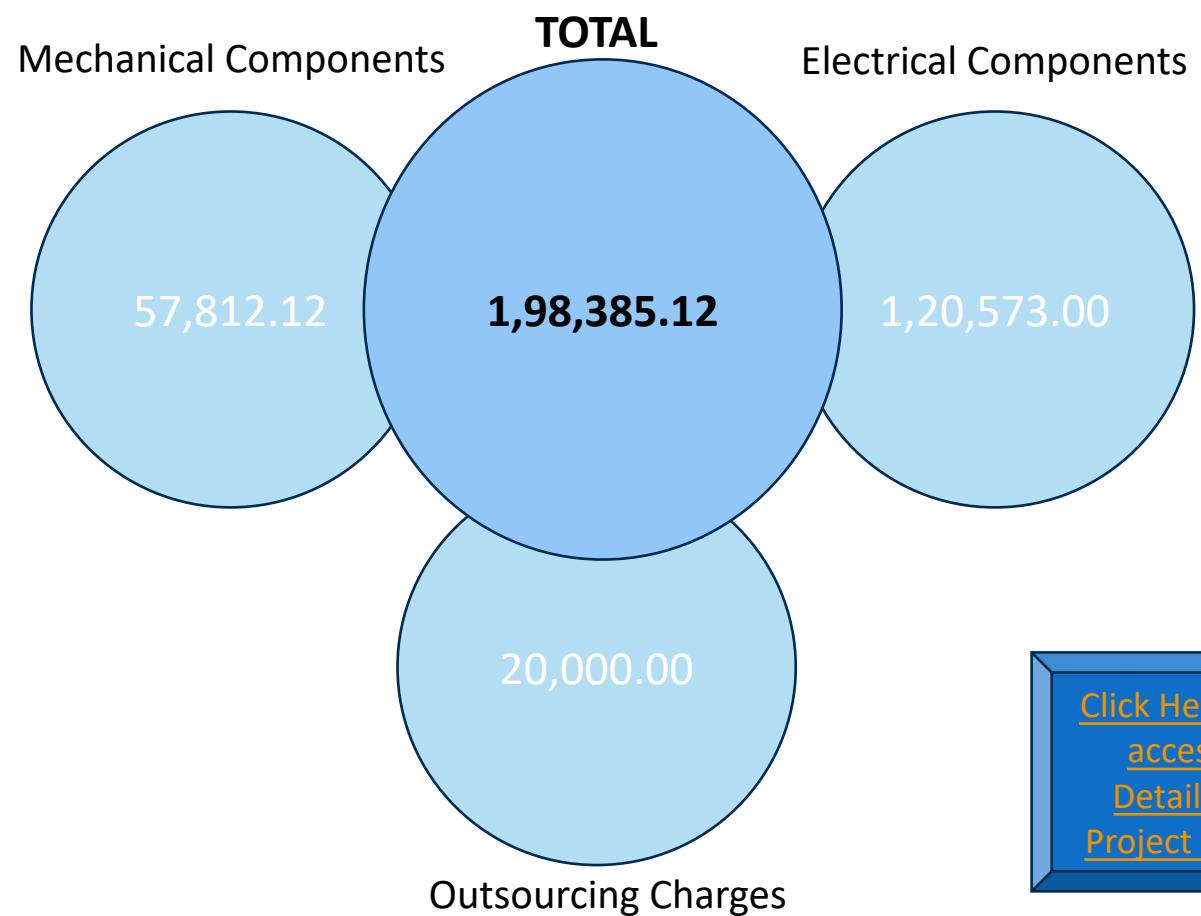
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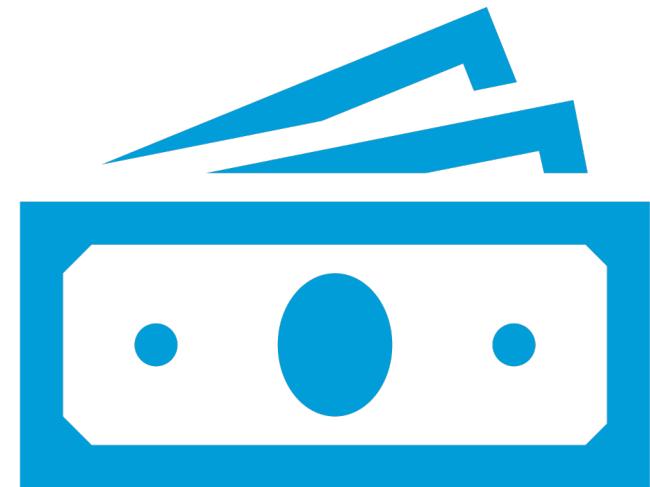
- > Autonomous Inspection
- > Safety for the inspection personal, from toxic gases and harsh environments
- > Faster and efficient inspections with a speed of 0.14 m/s
- > Integration with software helps provide live feedback with in depth analysis
- > Easier replacement of accessories to provide multi-facade working capabilities
- > Enhanced drive with advanced control panel

Project Cost Estimation

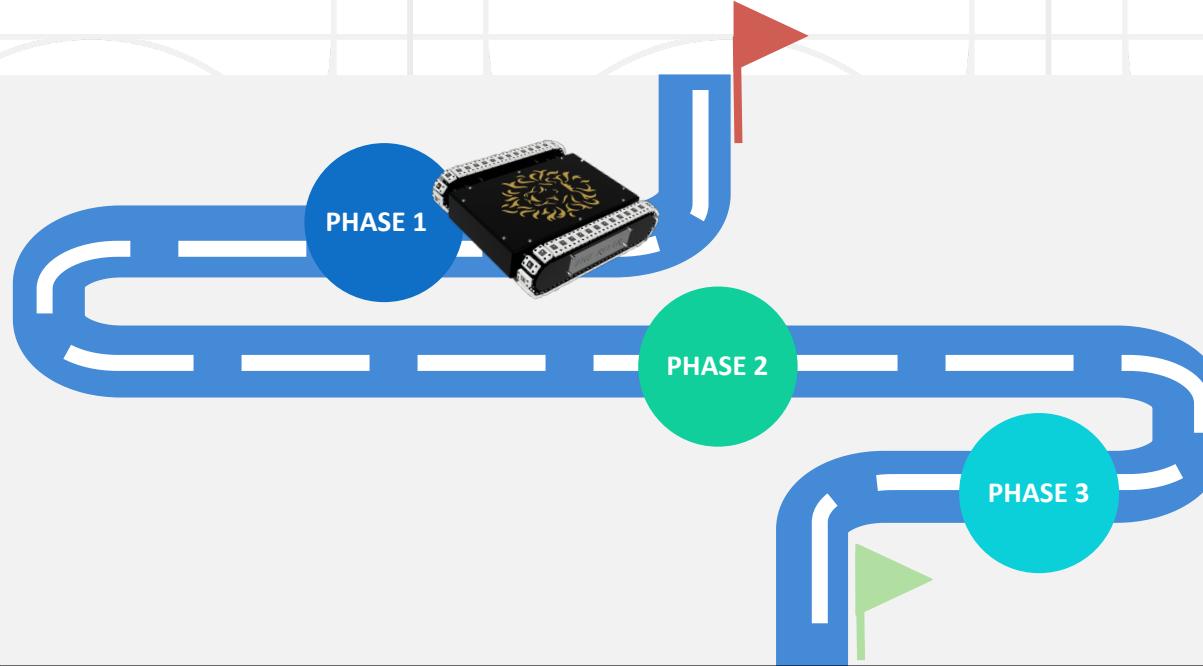
(Proof of Concept Development)



[Click Here to
access
Detailed
Project Cost](#)

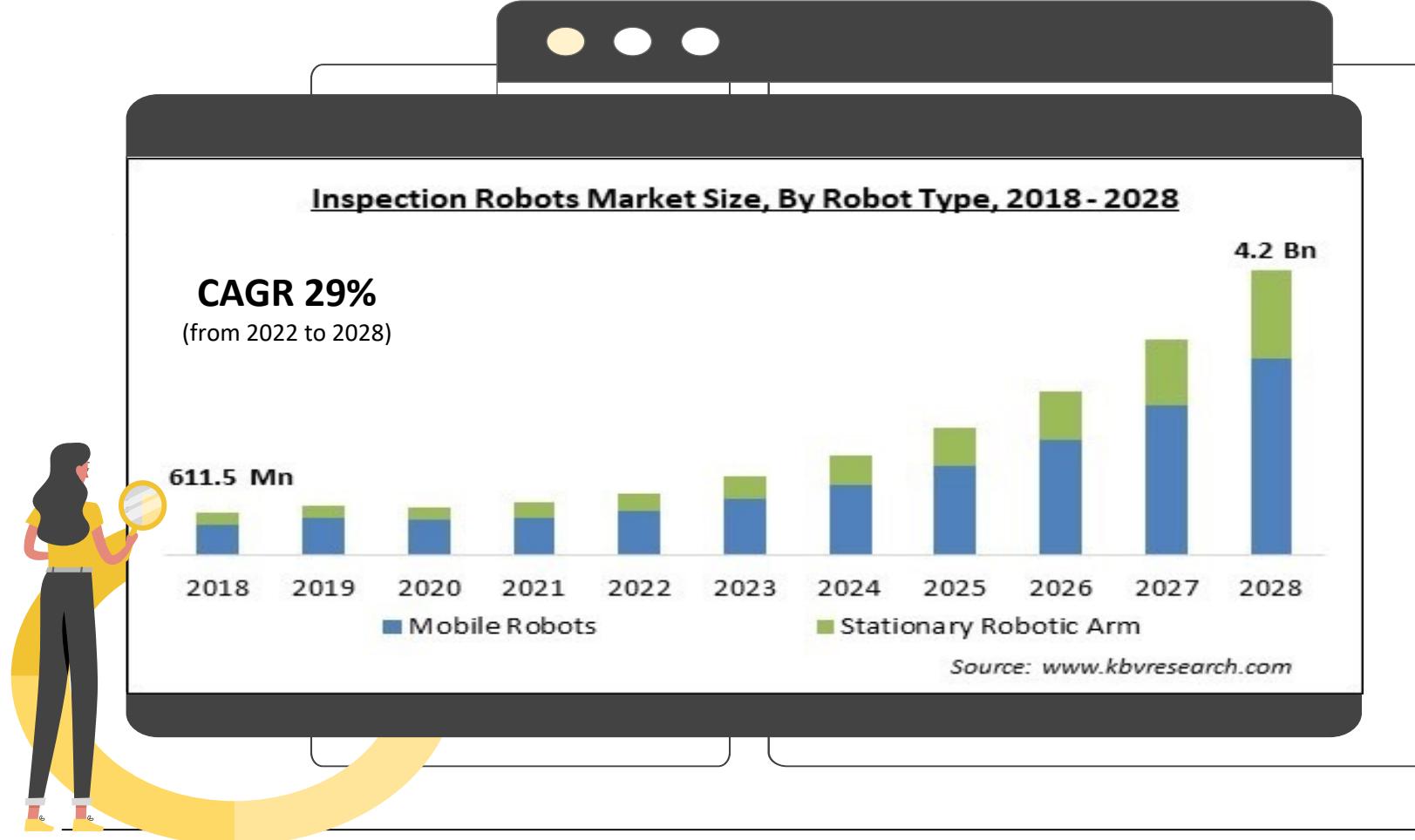


Project Timeline



INSPECTO_BOT Product Development Timeline	
Phase 1 (TRL 1-3)	
1. Product Research & Development	Week 1-4
2. Manufacturing of Prototype	Week 5-9
3. Phase 1 Trials (Check and Rectify Vertical Drive in different environments)	Week 10-15
Phase 2 (TRL 4-6)	
1. Analyse Robotic Crawler in Simulated Environment	Week 16-19
2. Development of Autonomous Drive System and its Enhancement	Week 20-24
3. Phase 2 Trials (Creating Semi-Autonomous Drive System)	Week 25-30
Phase 3 (TRL 7-9)	
1. Product Realisation	
A. Creating according to industry standards,	
B. Providing efficient control systems and incorporation of Fail-safe systems,	
C. Designing control unit	Week 31-42

Market Analysis

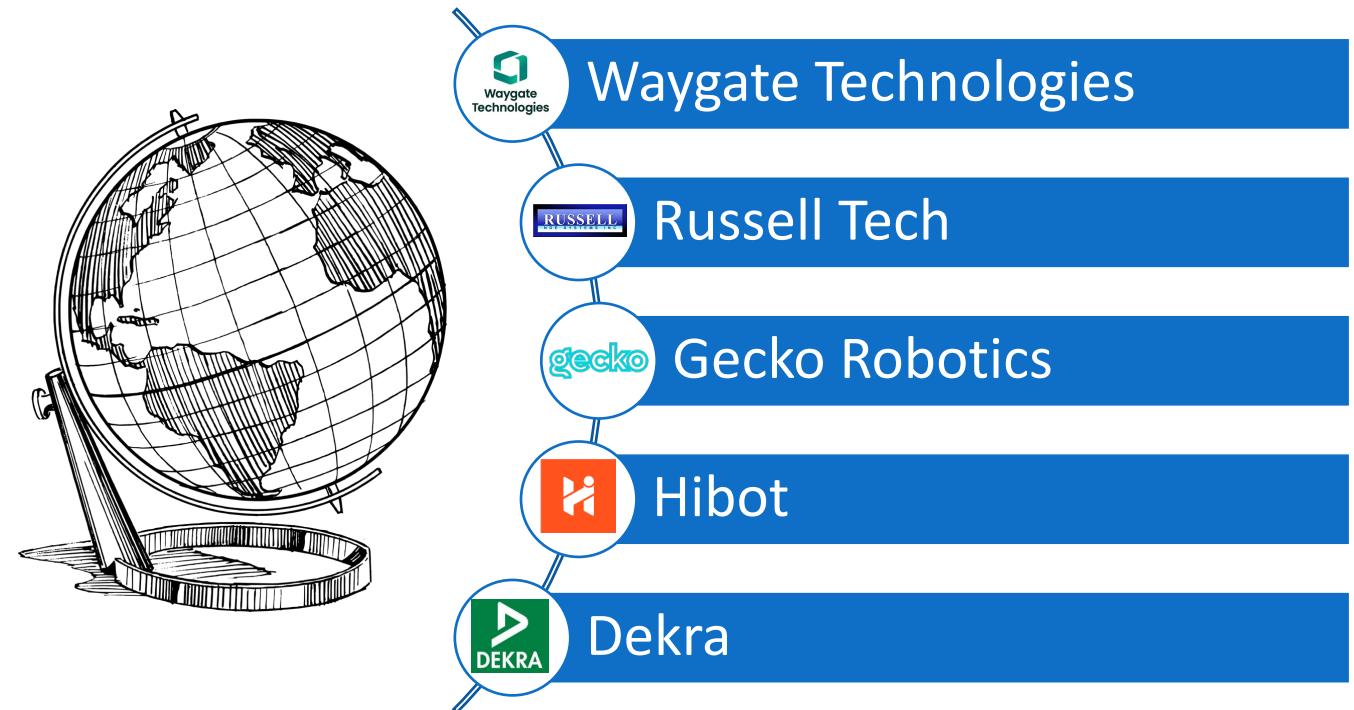


BUSINESS MODEL CANVAS

<p>Key Partners</p> <p>1.Boiler manufacturers: Collaborate with manufacturers to understand boiler specifications and requirements for inspection.</p> <p>2.Industrial maintenance companies: Form partnerships with maintenance firms to offer the robot as a service to their clients.</p> <p>3.Robotics technology providers: Partner with companies specializing in robotics to leverage their expertise and access to advanced technologies.</p> <p>4.Regulatory bodies: Collaborate with regulatory agencies to ensure compliance with safety standards and regulations.</p>	<p>Key Activities</p> <ol style="list-style-type: none"> Research and development: Continuously improve the robot's design, functionality, and inspection capabilities. Manufacturing and assembly: Produce the robot units and ensure their quality and reliability. Marketing and sales: Promote the robot's benefits and capabilities to potential customers. Maintenance and support: Provide ongoing technical support, upgrades, and maintenance services for the robot. <p>Key Resources</p> <ol style="list-style-type: none"> Technical expertise: Employ engineers and technicians with knowledge in robotics, automation, and boiler systems. Manufacturing facilities: Establish production facilities equipped with necessary tools and machinery. Intellectual property: Protect and leverage any patents or proprietary technologies related to the robot. Financial resources: Secure funding for research, development, manufacturing, and marketing activities. 	<p>Value Proposition</p> <ol style="list-style-type: none"> Improved safety: Reduce the risk of human inspectors being exposed to hazardous boiler environments. Time and cost savings: Increase inspection efficiency and minimize downtime for boiler maintenance. Enhanced accuracy: Provide precise and detailed inspection reports to identify potential issues. Scalability: Enable simultaneous inspections across multiple boilers with a fleet of robots. 	<p>Customer Relationships</p> <ol style="list-style-type: none"> Personalized customer support: Provide technical assistance, training, and ongoing support for the robot's operation. Feedback and collaboration: Engage with customers to gather feedback, improve the robot's features, and address specific needs. Long-term partnerships: Build strong relationships with customers to encourage repeat business and future collaboration. <p>Channels</p> <ol style="list-style-type: none"> Direct sales: Reach out to potential customers through sales teams, industry events, and trade shows. Online platforms: Utilize a website and online marketing strategies to showcase the robot's features and benefits. Partnerships: Collaborate with maintenance companies to leverage their existing networks and customer base. 	<p>Customer Segments</p> <ol style="list-style-type: none"> Industrial facilities: Target large-scale manufacturing plants, power plants, refineries, and other facilities with boiler systems. Maintenance companies: Cater to businesses that outsource their boiler maintenance to specialized firms. Regulatory agencies: Offer a solution that helps regulatory bodies monitor and ensure compliance with safety standards.
<p>Cost Structure</p> <p>1.Research and development: Allocate resources for continuous improvement and innovation.</p> <p>2.Manufacturing and production: Cover the costs associated with the production, assembly, and quality control of the robots.</p> <p>3.Marketing and sales: Budget for marketing campaigns, sales teams, and promotional materials.</p> <p>4.Support and maintenance: Invest in customer support, technical assistance, and maintenance services.</p> <p>5.Operational costs: Account for facilities, utilities, employee salaries, and administrative expenses.</p>	<p>Revenue Streams</p> <ol style="list-style-type: none"> Robot sales: Generate revenue by selling the boiler inspection robots to industrial facilities and maintenance companies. Service contracts: Offer maintenance contracts and subscription plans for ongoing support, upgrades, and access to new features. Licensing: Explore the possibility of licensing the technology to other companies or entering into technology transfer agreements 			



Market Competitors



Team_The Roar



Anmol Shah

in



Anil Maity

in

Funds Raised

Details of Present Funding

Sr. No.	Date of Funding Received	Funding Type	Agency Name	Amount in Rs.
1	22-07-2023	Bootstrapping	Anmol Shah	₹ 25,000/-
2	25-07-2023	Bootstrapping	Anil Maity	₹ 25,000/-
Total (INR)				₹ 50,000/-

Thank You

Project Progress

Sr No.	Activity	Remark	Status
1	Magnet Calculation & Testing		✓
2	Motor Calculation and Testing		✓
3	Designing Of Prototype		✓
4	Manufacturing of Some Parts	Manufacturing of Parts such as Couplers is started.3D Printed parts such as Magnet Block are also completed.	✓
5	Programming of Drive System	Development of Semi-Autonomous system.	✓
6	Market Reach- Connect with ONGC, Dutt Engicon (Mehsana)	In talks with Dutt Engicon of how this crawlers can be utilized by inspection agencies, In Talks with ONGC for Pilot Runs of our Prototype.	