Rotary Club of Bombay
DISTRICT 3141
Celebrating 96 Years of Service

DISTRICT 3141

ENABLING THE FUTURE
WITH EMERGING TECHNOLOGIES

Robotics , IoT, 3D modelling

A look at the success of Rotary Club of Bombay
IT Innovation Lab Centres

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ENABLING THE FUTURE FOR INDIAN CHILDREN

In the age of artificial intelligence and automation, the true divide lies between those who merely use technology and those who understand it, shape it, and command it. The Rotary Club of Bombay IT Innovation Labs were conceived precisely to bridge this divide.

Since January 2022, the strength has reached **10,000+** students across multiple schools to date, supported by structured curricula, trained teachers and dedicated lab infrastructure. **What changes is not only skill, but self-belief.**

The impact of the IT Innovation Labs extends well beyond the classroom, shaping aspirations, strengthening digital confidence and preparing young minds for a future defined by possibility.

Here, education is not delivered as information but experienced as capability. Students do not memorise concepts, they design, build, test, refine, and explain real solutions.

- A 3D-printed human spine becomes a lesson in both anatomy and engineering.
- A smart home system, designed and installed by students themselves, transforms abstract electronics into lived reality.
- A crowd-management smart door system teaches not only automation, but responsibility for public safety.

ENABLING THE FUTURE
WITH EMERGING TECHNOLOGIES

Robotics , IoT, 3D modelling

Students begin to carry themselves with confidence.
*Their **thinking deepens**, their **engagement strengthens**, and their ideas find assured expression. **Curiosity replaces fear**, courage replaces hesitation, and initiative takes the place of dependency. **Questions grow sharper**, challenges are met with resilience, and communication gains clarity and purpose.*

Parents and teachers witness not only enhanced skills, but a visible awakening of confidence, interest, and self-direction.

In these moments, technology ceases to be intimidating. It becomes familiar, expressive, and empowering. A child who once hesitated to speak now confidently explains how a metal sensor guides a mine-detecting robot. Another describes how wall thickness in a 3D model alters strength and density. **Learning is no longer about remembering answers, it is about discovering possibilities.**

What changes is not merely what students can do... it is who they believe they can become.

SHARED LEARNING LEADS TO EXCELLENCE

In these labs, mistakes are not erased, they are refined. Confidence is not taught, it is earned.

The IT Innovation Labs have evolved from a project into a movement because they are designed to grow through people collaboration, not merely through equipment. Each new centre is strengthened by the experience of those that came before it, through mentoring, teacher training, and carefully structured guidance.

Teachers immerse themselves just as deeply as their students, creating a culture where learning is shared rather than delivered. Students respond instinctively to this environment. Across centres, they collaborate naturally, question assumptions with ease, and refine their designs with patience. For many, this is the first space where experimentation feels safe, where mistakes are understood as part of learning, and where improvement is quietly celebrated. They experience a rare privilege, the freedom to fail safely.

A Class 7 student designs a basket using two software features, not as a limitation, but as a lesson in simplicity-driven innovation. A Class 8 student converts 2D artwork into 3D forms, discovering that imagination can acquire dimension. Students from different grades collaborate to design a temple model, learning that excellence often emerges from shared vision.

From collaboration to confidence.
Within this culture, creativity gains discipline and discipline gains imagination. Ideas are tested, errors are refined, and belief is built.

What begins as collaboration becomes character and what begins as guidance gently becomes self-belief.

PALGHAR IT INNOVATION LAB CENTRE
ST KADAM SCHOOL, PALGHAR

This IT Innovation Lab Centre is the largest and longest-running centre. Since January 2022, the lab has delivered multiple structured sessions.

Palghar IT Innovation Lab Centre projects reflect not only technical skill, but aesthetic intelligence, cultural sensitivity. **Palghar IT Innovation Lab Centre stands as the foundation of the IT Innovation Lab network, a place where curiosity first found confidence.**

*With over 500+ models created across **Robotics, 3D Printing and IoT** batches, the centre comes alive with invention.*

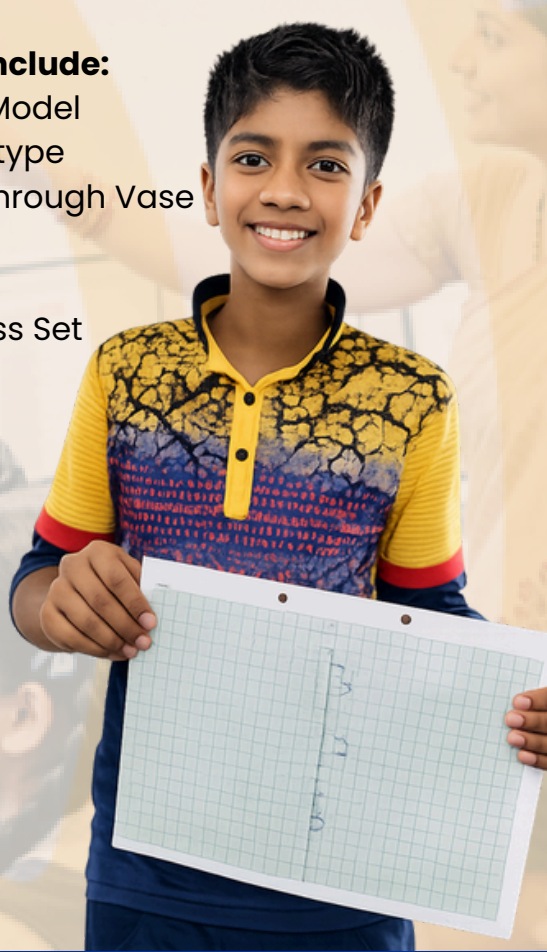
Students move fluidly between laptops, 3D printers, IoT kits, and design software, transforming ideas into working realities.

Here, students explore advanced 3D modelling, additive manufacturing, IoT systems, mechanical principles, and architectural design with quiet determination and growing pride. Their projects address safety, public systems, healthcare learning models, and community needs, earning recognition not merely for technical merit, but for thoughtful relevance.

Students from Palghar IT Innovation Lab Centre have presented their work at inter-school robotics showcases and district science exhibitions, receiving jury appreciation and podium recognition, early affirmations of their growing confidence and capability.

Impressive projects include:

- A Ram Mandir 3D Model
- Smart Home Prototype
- A 3D printed see-through Vase
- Gokul Ashtami Pot
- The Basket Model
- A customized Chess Set



WADA IT INNOVATION LAB CENTRE
P.J. HIGH SCHOOL, WADA

At P.J. High School, Wada IT Innovation Lab Centre, the IT Innovation Lab since March 2023 has engaged thousand plus students across Robotics, 3D Printing and IoT. Students' progress from foundational concepts to practical execution. The structured programme supports students in presenting technology-led solutions and participating in science and innovation platforms at higher academic levels.

At Wada IT Innovation Lab Centre, innovation carries a strong sense of social responsibility. Students developed a Crowd Management Smart Door System, presented at the Rotoscience Competition, demonstrating how sensor-based automation can enhance public safety.

The Automatic Parking System addressed urban challenges through intelligent system integration. The Agricultural Tractor Model reflected mechanical understanding rooted in rural relevance. Through the 2D to 3D Art Conversion Project, students discovered how creativity can migrate across dimensions. The Decorative Card Stamp Press transformed mechanical principles into artistic utility, proving that engineering and aesthetics can coexist gracefully.

Students arrive early, stay beyond scheduled hours and often return during holidays, not out of obligation, but out of ownership.

BOISAR IT INNOVATION LAB CENTRE
S.D. VARTAK SCHOOL, BOISAR

The IT Innovation Lab at S.D. Vartak School, Boisar IT Innovation Lab Centre began operations in February 2025.

With multiple Robotics, 3D Printing and IoT batches, the centre adapts the experiential learning framework to a semi-urban context. Students engage with applied technology concepts linked to sustainability and civic challenges, strengthening their ability to connect classroom learning with real-world relevance. At Boisar, innovation is grounded in practicality and purpose.

Projects from Boisar IT Innovation Lab Centre have drawn appreciation for their practical orientation and industry relevance, reinforcing the connection between classroom learning and real-world application.

MUMBAI IT INNOVATION LAB CENTRE
ITI ELPHINSTONE MUMBAI 1

Beginning in 2026 January at ITI Elphinstone, vocational education finds a renewed identity.

The IT Innovation Lab at ITI Elphinstone is designed to reposition vocational education as a learning-by-doing pathway. Equipped with industry-aligned systems, tools, and software, the lab enables students to experience technology not as instruction, but as application.

Aligned with national priorities such as the Skill India Mission, Atmanirbhar Bharat and NEP 2020, the lab strengthens sustainable employability and future readiness.

DAHANU IT INNOVATION LAB
K.L. PONDA HIGH SCHOOL, DAHANU

The Dahanu centre has been conducting multiple batches each across the three lines of technology benefiting hundreds of students since its inception in November 2025. Emphasis is placed on fundamentals, teacher-supported learning and gradual application, ensuring students build confidence before advancing to more complex technological problem-solving.

Dahanu reflects the quiet power of steady transformation. Here, learning unfolds with patience and purpose. Students' progress step by step, building conceptual clarity alongside confidence. Designs are rooted in community observation, linking technology with everyday relevance.

Projects emphasise simplicity, usability, and social awareness, allowing students to discover that innovation need not be complex to be meaningful.

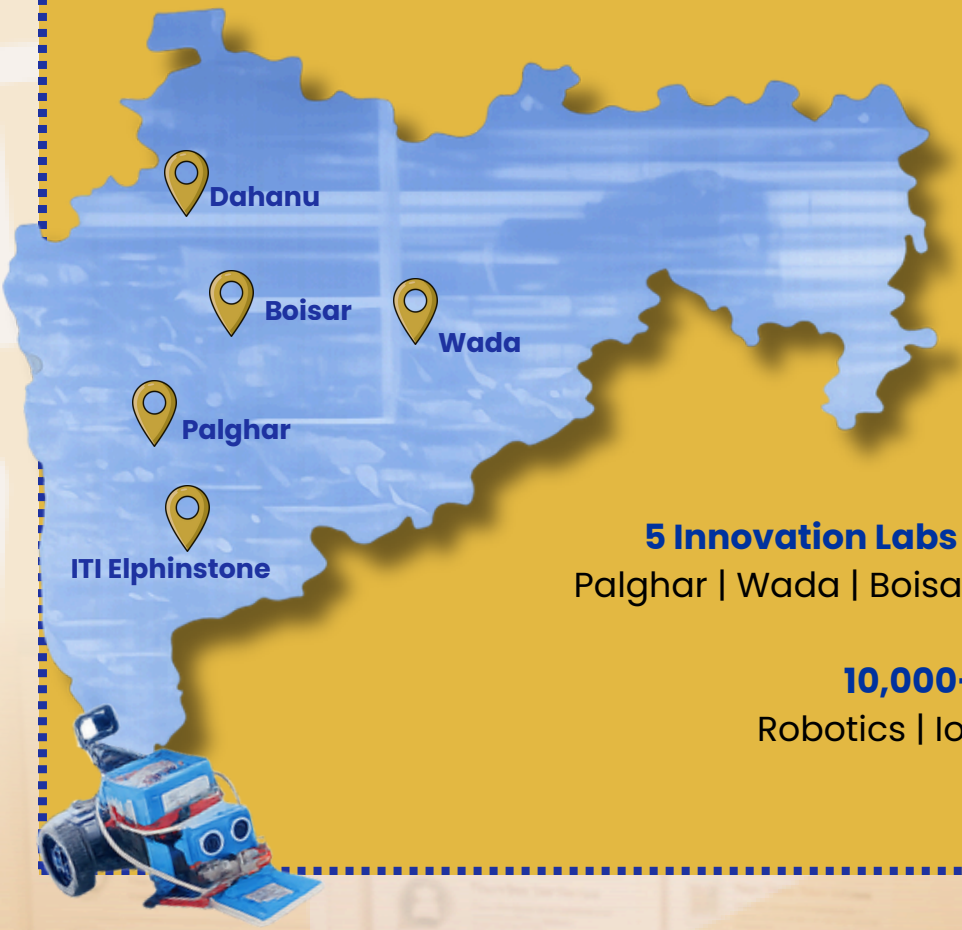
A WINNING CASE STUDY

School: K. L. Ponda High School, Dahanu
Smart River Plastic Waste Segregation & Management System
Students: Divy, Vedant, Aksha
Instructors: Dipali and Richa
The team impressed the judges with a working model that tackled river pollution head-on, earning them a well-deserved 2nd Runner-Up position!

Problem Statement: Water pollution is one of the major environmental challenges affecting aquatic life, human health, and natural ecosystems. At the same time, improper waste management contributes significantly to this issue by allowing garbage and plastics to enter rivers and lakes.

Solution: The project focused on using IoT (Internet of Things) technology to monitor and manage water waste efficiently. The main aim was to develop a smart river waste collection and segregation system that helps clean polluted rivers using IoT-based sensors and automation. The system not only collects waste but also separates it into dry and wet waste for proper disposal and recycling.

OUR IMPACT SO FAR



Across all centres, continuity is sustained through mentoring, shared curricula, and collective learning, ensuring that quality, vision, and purpose travel together as the network grows.

5 Innovation Labs across Maharashtra
Palghar | Wada | Boisar | Dahanu | ITI Elphinstone

10,000+ students
Robotics | IoT | 3D modelling

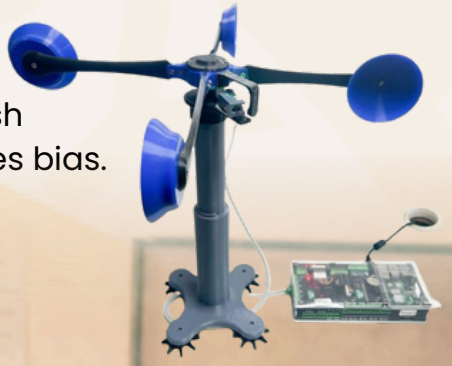
A CREDIBLE DIGITAL FOOTPRINT

We are standardising the way data from our IT Innovation Labs is captured, authenticated, and published online. Every centre now records enrolments, sessions, projects, outcomes, and case studies using a common framework, and uploads this information to a shared public web repository.

This creates a credible, searchable body of evidence that reflects real work on the ground and aligns closely with India's broader push toward a digitally empowered rural ecosystem. It also confronts a critical and interconnected challenge of our time: **Digital marginalisation and AI bias**. When rural learning environments and grassroots innovation remain undocumented or inconsistent, they are effectively absent from the digital world and increasingly from the datasets that shape technology, policy, and opportunity.

In an era where AI systems learn from what is visible online, such absence quietly reinforces AI bias, privileging urban and well-documented contexts. By placing verified lab data in the public domain, we interrupt this cycle, ensuring that communities traditionally excluded from digital ecosystems are not only visible but accurately represented. This enables partners and policymakers to assess progress objectively, while teachers and students can reference proven, context-relevant ideas.

In essence, we are converting everyday activity into accessible, trustworthy data so that young minds across our labs can establish a clear digital footprint, one that reduces marginalisation, mitigates bias.



FROM CLASSROOMS TO WINNING COMPETITIONS

Creativity leads to thinking, thinking provides knowledge, and knowledge makes you great.
- Dr. A. P. J. Abdul Kalam

Across our IT Innovation Labs, every child gets the chance to compete beyond the classroom, across schools and districts. Challenges are built into the course so students design, prototype and pitch solutions in IoT, robotics, coding and design thinking. The result is visible confidence, stronger teamwork and presentation skills, and an early habit of thinking beyond the textbook.

We run an annual competition calendar, with internal sprints, inter-school showdowns and district-level competitions. In the past year, teams from all our centres have taken podiums and jury mentions at inter-school robotics showcases, district science fairs and innovation challenges, with multiple first prizes and special awards.

HIGH FINANCIAL PROFICIENCY
CRISIL VO 2A
CERTIFIED
STRONG DELIVERY CAPABILITY

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Celebrating 96 Years of Service

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Rotary Club of Bombay brings disciplined governance, deep industry engagement, and an unwavering commitment to initiatives designed for enduring, measurable impact.

Our **IT Innovation Labs** exemplify this approach by translating national priorities into locally anchored capability—through world-class infrastructure, future-aligned skill development, and the purposeful empowerment of young learners. Conceived as a replicable model, the Labs ensure that excellence is institutionalised and never contingent on geography.

Through structured mentoring, sustained teacher enablement, and a culture of shared learning, each centre reinforces the next, creating a virtuous cycle of quality and scale.
This is how access is transformed into capability, and capability into lasting confidence.

Support the expansion and strengthening of our
IT Innovation Lab Centres.

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