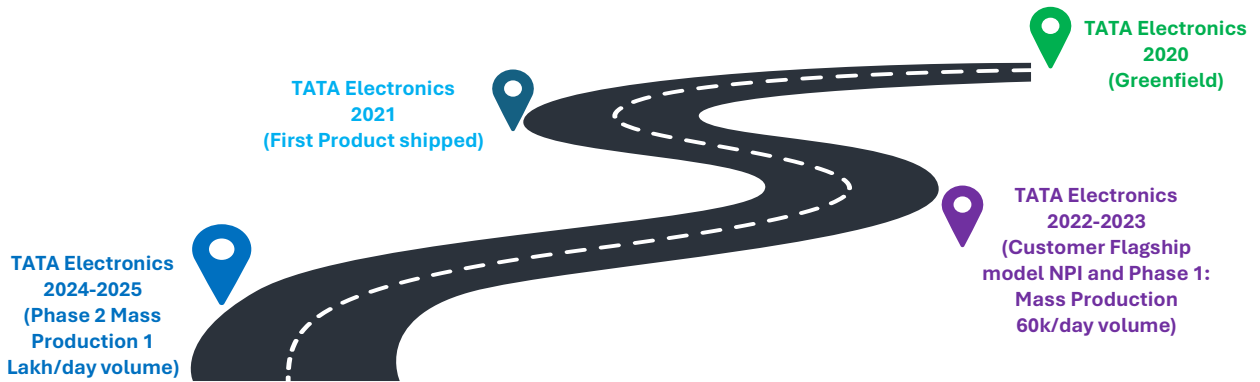


Smart Factory with Implemented innovations

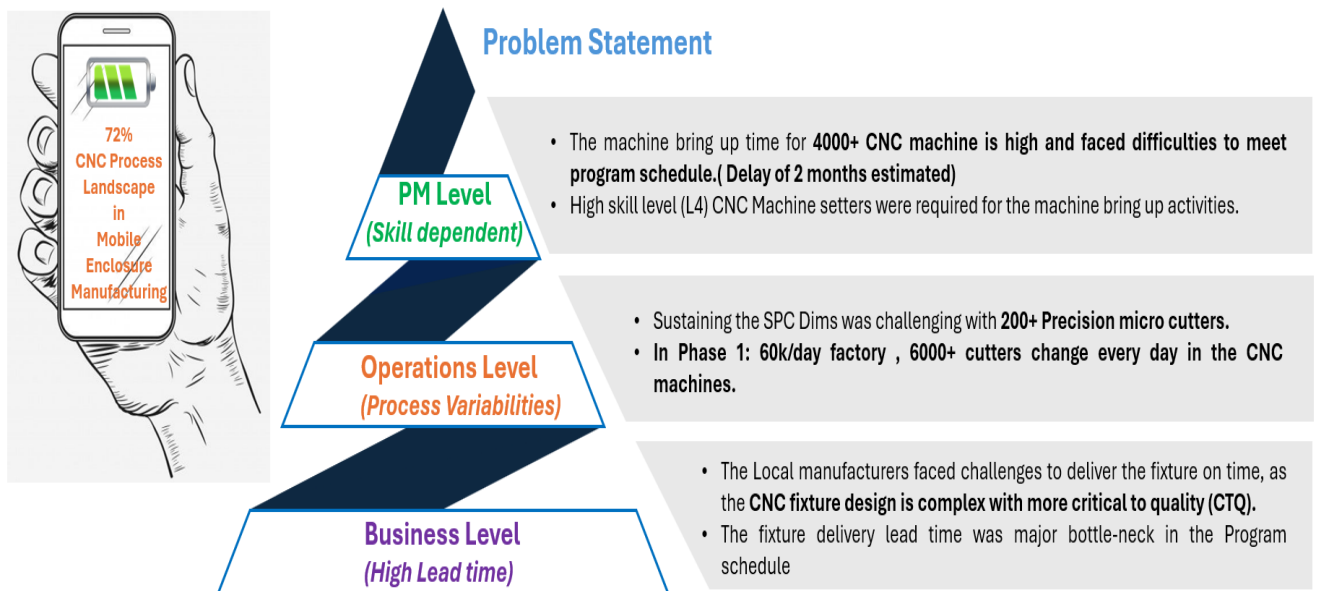
1. Brief description of the project

Tata Electronics pioneers in the EMS Industry with the vision to develop a strong supply chain base for Electronics Manufacturing Services in our nation, creating more job opportunities to benefit the nation's economic growth.



In the EMS industry, new product development and mass production sustenance need to be carried out in a very short span to cater to customer demand. **Tata Electronics** had to face challenges and risks involved in the conventional method of production ramp-up. The demand for digital gadgets is exponential. To meet the global supply chain demand, Tata Electronics planned a massive factory setup with a capacity of **1 lakh mobile enclosures per day in two phases, i.e., three enclosures can be made every second**. Factory readiness is expected to be completed in a very short span of six months.

2. Trigger for the project



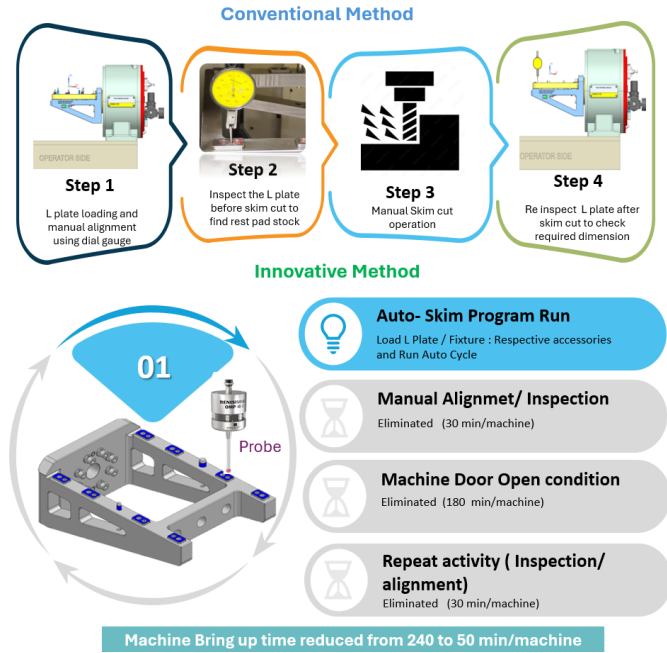
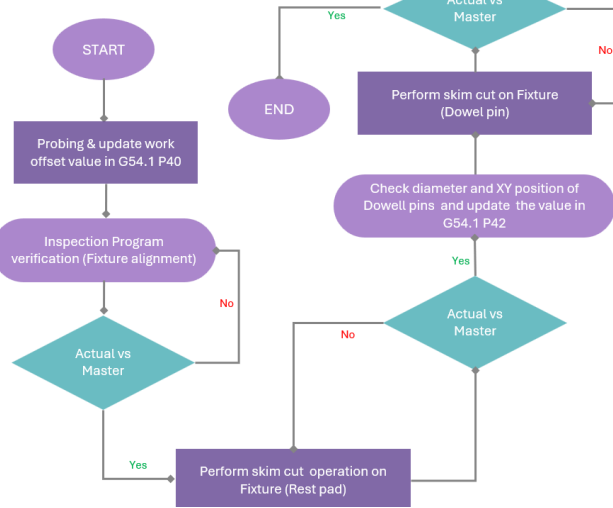
3.Solution generation, Innovation and Complexity

Innovation Project 1: Auto-Skim machining for CNC Fixtures

Problem statement:

- Fixture CTQ dims are having very stringent tolerances, leads to challenges for **fixture manufacturers**
- Conventional method of skim cut machining and inspection takes about **240mins/Machine (Impacting 4000+ CNC machine bring up)**

Flow Diagram for Auto Skim Algorithm:

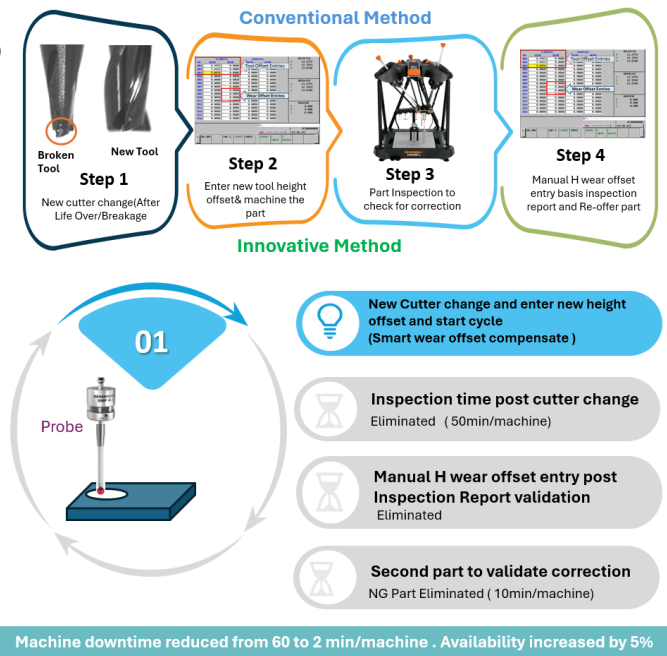
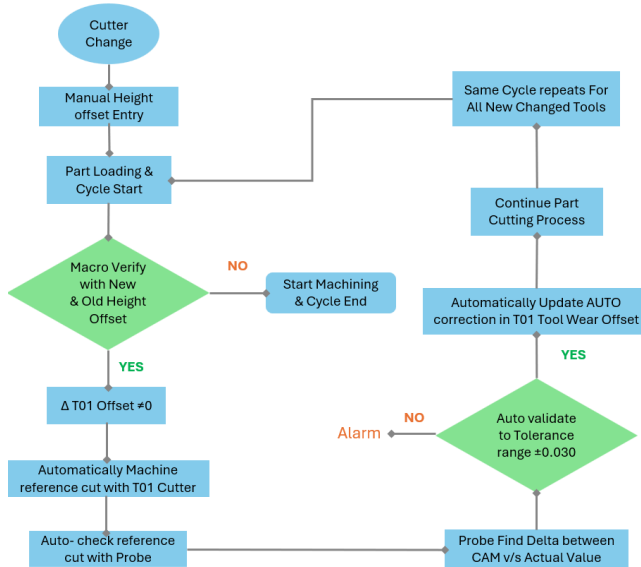


Innovation Project 2: Smart-cutter compensation for CNC Cutters

Problem statement:

- Every Cutter change/breakage, cutter wear compensation to be entered manually
- Setter must give manual correction in Cutter's Height wear offset (L4 Level skill required)

Flow Diagram for Smart Cutter Compensation :

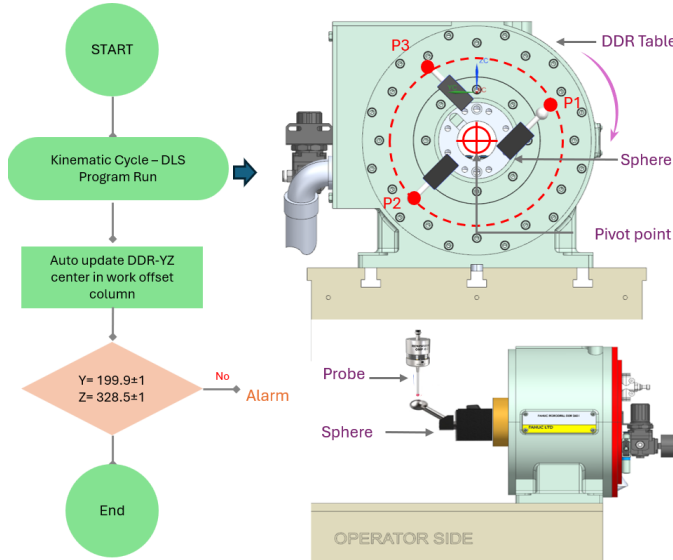


Innovation Project 3: Auto-DDR Centre for Work offset

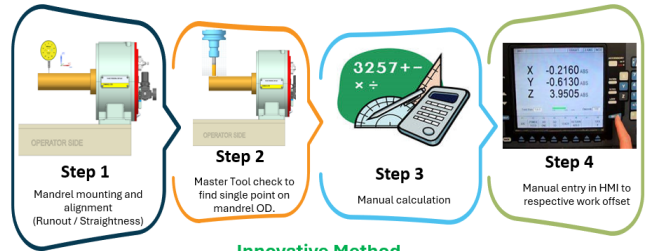
Problem statement:

- CNC Machine High setup time (75 min/Machine)
- 4000+ CNC Machines to be setup within 15 days to meet customer demand.

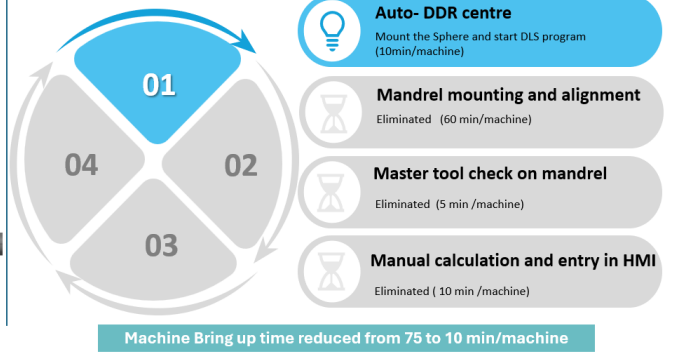
Flow Diagram for Auto DDR :



Conventional Method:

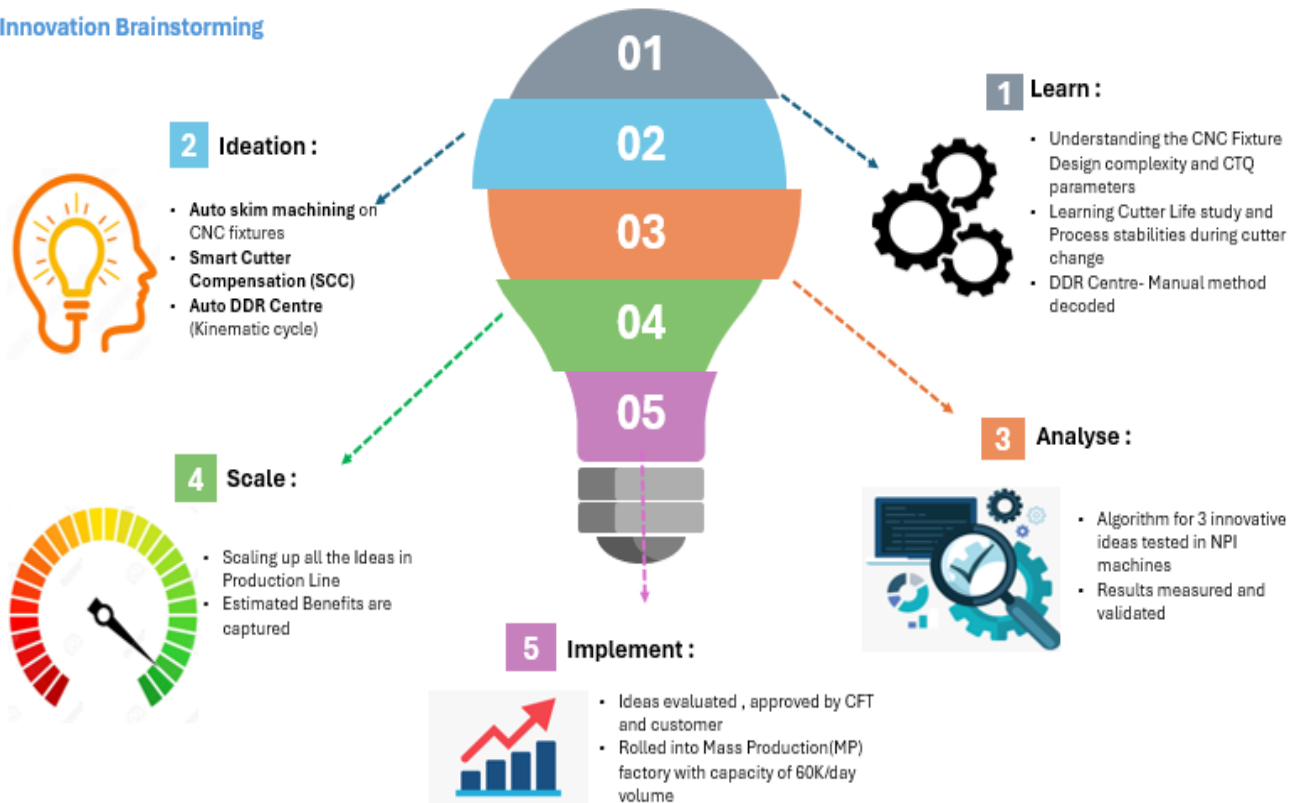


Innovative Method

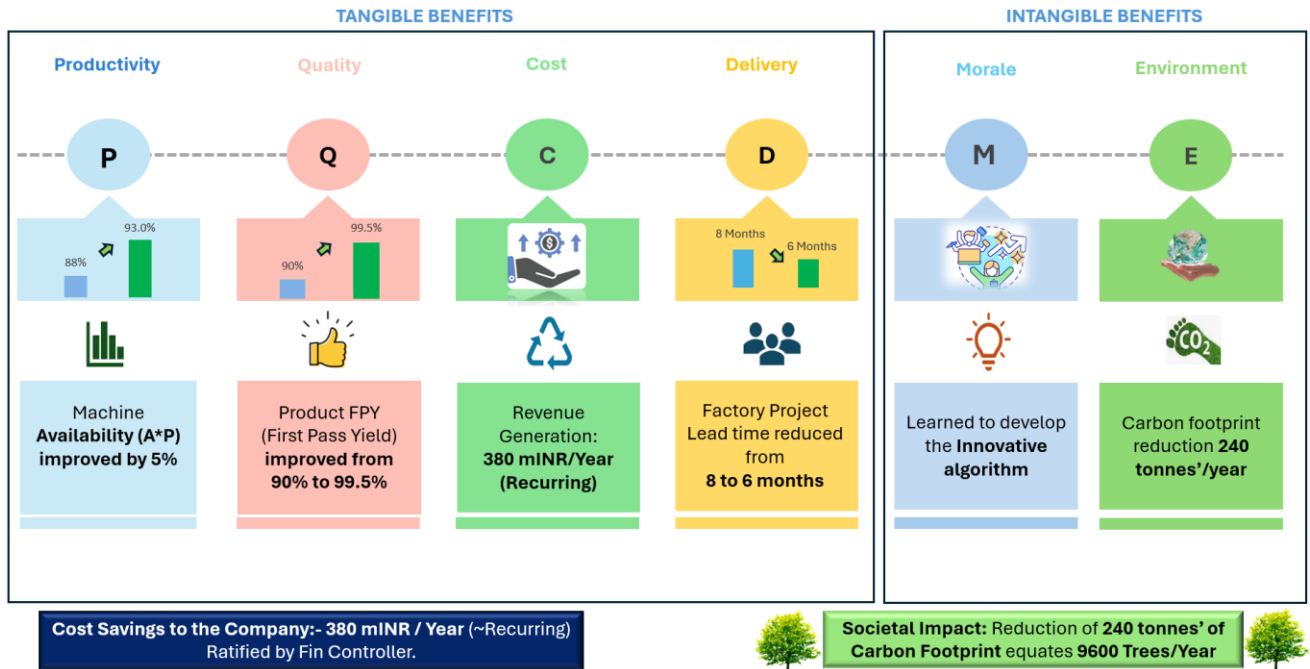


4.Implementation

Innovation Brainstorming



5. Results and Impacts



6. Business sustainability and Future Focus

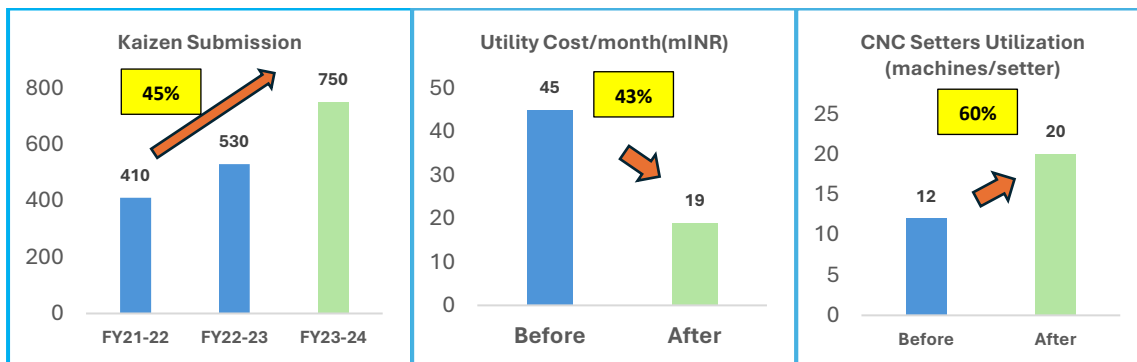
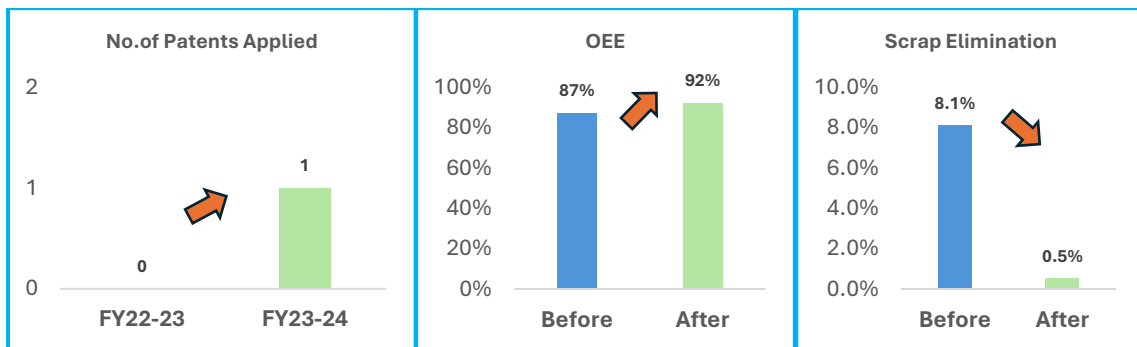
- Our innovation mapped to **Sustainable Development Goal 9 (Goal 9 or SDG 9)** is about "Industry, innovation and infrastructure" and is one of the 17 Sustainable Development Goals adopted by the **United Nations General Assembly** in 2015.
- SDG 9 aims to build resilient infrastructure, promote sustainable industrialization and foster innovation.



- Implemented Innovations Deskilled the skilled works to **“Create the Gender equality”**, so women also can do highly skilled CNC setting work, which is men dominated industrial works.



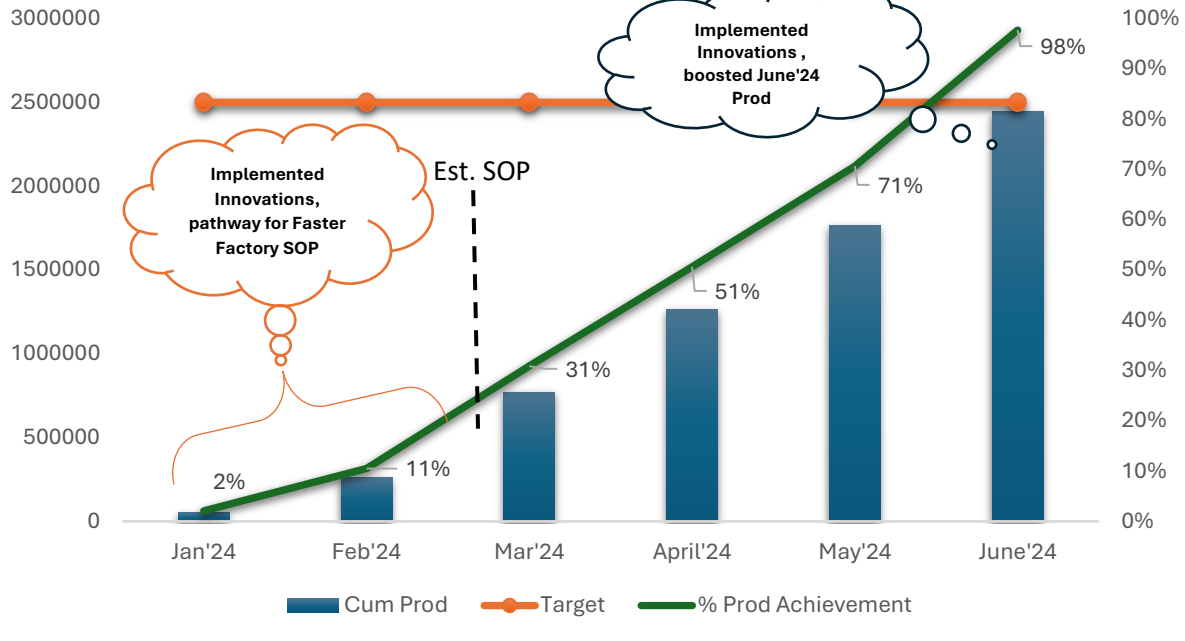
7. Resource Impact



8. Business Metrics



Factory Mass Production Ramp



9. Horizontal Deployment scope

- All innovative ideas will be horizontally implemented in **Phase 2 Factory** set-up.
- All ideas shared across **TATA group** to implement with immediate effect.



10. Recognition and Appreciation



we have reached a level where we can have export-led growth in electronics sector.

Tata's manufacturing plant, Hosur



Appreciation from Government of India

4000+ CNC under one Roof- First time in Nation



Customer appreciation

From: Vijay B Shankar
 Sent: Monday, April 15, 2024 9:57 AM
 To: Pavan Khaotare <pavan.khaotare@tataelectronics.co.in>; Rajapradeep Baganal <rajapradeep.b@tataelectronics.co.in>; Bharath kumar <bharath.kumar@tataelectronics.co.in>; Sadiq Basha M <sadiq.basha@tataelectronics.co.in>; Hanumanth Kulkarni <hanumanth.kulkarni@tataelectronics.co.in>; Rajneesh Kathuria <rajneesh.kathuria@tataelectronics.co.in>; Gautam Lahiri <gautam.lahiri@tataelectronics.co.in>; Phil Chew <chew.phil@tataelectronics.co.in>; Palanivel V <palanivel.v@tataelectronics.co.in>; Ganesh Thawari <ganesh.thawari@tataelectronics.co.in>; Chokkalingam TS <chokkalingam.ts@tataelectronics.co.in>; Gaurav Sehgal <gaurav.sehgal@tataelectronics.co.in>; Malay Kumar Das

Subject: milestone

Caution: This email originated from outside of the organization. Do not click links or open the attachments unless you recognize the sender and know the content is safe.

Congratulations to the entire Marigold team on achieving the 1M milestone

Thank you for all the hard work.

Hardships may come & go but memories/learnings and dedication is never ending.

Many more milestones to come...!



Thank You

