

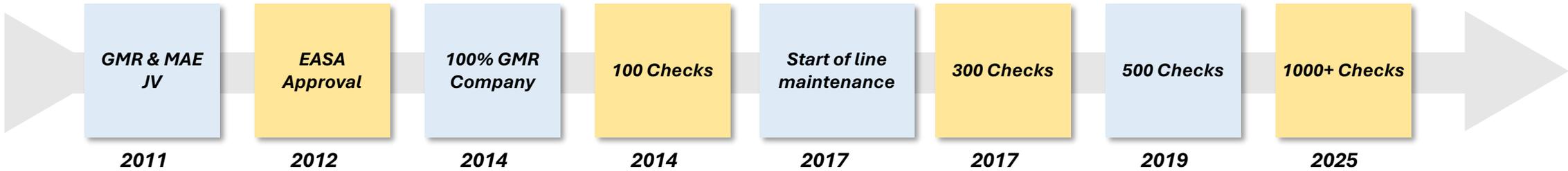


## Technology and talent strategies

**Ashok Gopinath**  
*President (GMR Aero Technic)*

# GAT boasts world-class infrastructure, advanced capabilities, and a highly diversified portfolio across multiple business lines

## GAT's Vision: To be the Lead MRO in the Asia-Pacific Region



**Located in SEZ** — **4-Hangars & WS** — **Excl. Paint Hangar** — **30+ Accreditations** — **ALL NB Type A/C**

### Base Maintenance



- Largest Independent Airframe MRO. Pan India Work capable
- C checks, EiS, EoL, Major Structural works

### Line Maintenance



- A checks, Tech handling, GSE support
- 50+ Int'l airlines
- 14 Airports Pan India

### Pax to Freighter



- Completed ATR 72 Conversion
- Signed with Boeing for B737 BCF Project

### Painting



- State-of-the-art Painting hangar.
- Completed complex Livery painting for international airlines

### Defence



- Projects IAF / IN and DRDO
- In talks for Airbus, Boeing, Lockheed Martin and Embraer asset projects

### Components



- Spirit Aero for Nacelles & Flight control surfaces
- Liebherr for heat exchangers
- Safran for De-Icer Boots Facility

### School of Aviation



- State of the art Aviation School
- Approvals of DGCA/EASA & 147 Training Centre

# Why Technology & Talent Matter in MRO



**Skilled workforce is now the biggest capacity constraint in the MRO industry.**



**Technology is the best scalable way to improve productivity with limited manpower.**



**Modern aircraft complexity demands higher technical skills.**



**Turnaround time and cost efficiency are increasingly driven by talent and digital maturity.**



**MRO competitiveness is highly dependent on productivity & Quality – which in-turn depend on Technology and Manpower.**



# Technology

# Leveraging the current ERP to make complete digital paperless processes across the hangar floor activities by end of this year



## Mobility

- Mechanic anywhere :To capture the work packages in Line and base maintenance and realization of online billing



## Material Management

- Spares / parts procurement
- Warehouse anywhere
- Approve anywhere
- Robotic based parts / spares operations



## HR and Admin operations

- Success factor
- My GMR app
- Travel module
- Visitor management (Athithi)
- Facility management (FMS)



## GMR cloud

Moving traditional ERP to integrated cloud



## RPA

- Work package extraction, creation and package preparation
- Finance freight invoice



## Production

- Employee authorization - Completed
- Engg order digitalization



## Production

- Task card digitalization and e-sign-off.

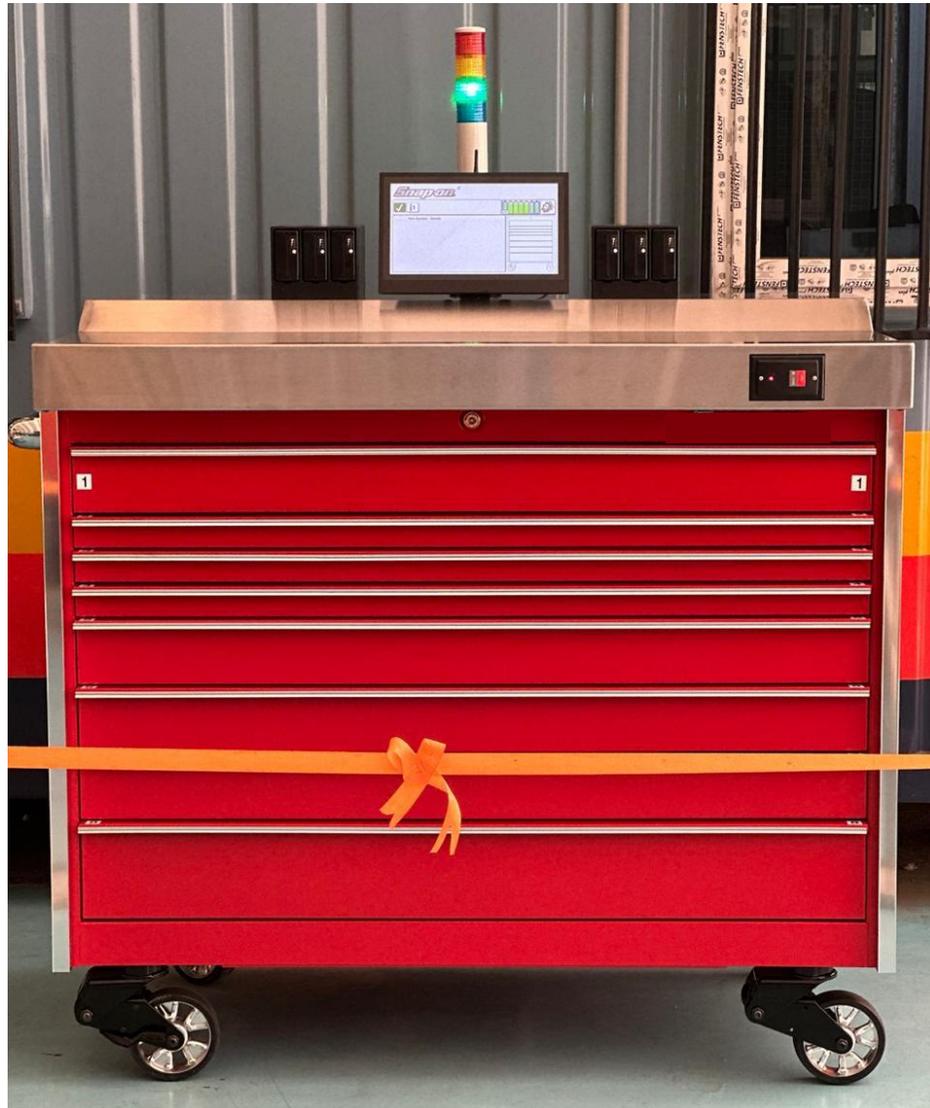
## ATC



- Automatic tools issue and receiving systems – linked to ERP

# Smart Tool Management (Automatic Tool Retrieval System)

## GMR Aero Technic Case Study



### Challenge

- Tool receiving & handover is **critical but time-consuming**
- AMEs/technicians spend significant time **walking to central stores**
- Risks:
  - Tool control compliance
  - Productivity loss
  - Delayed task execution

### GMR Solution – Automated Tool Retrieval

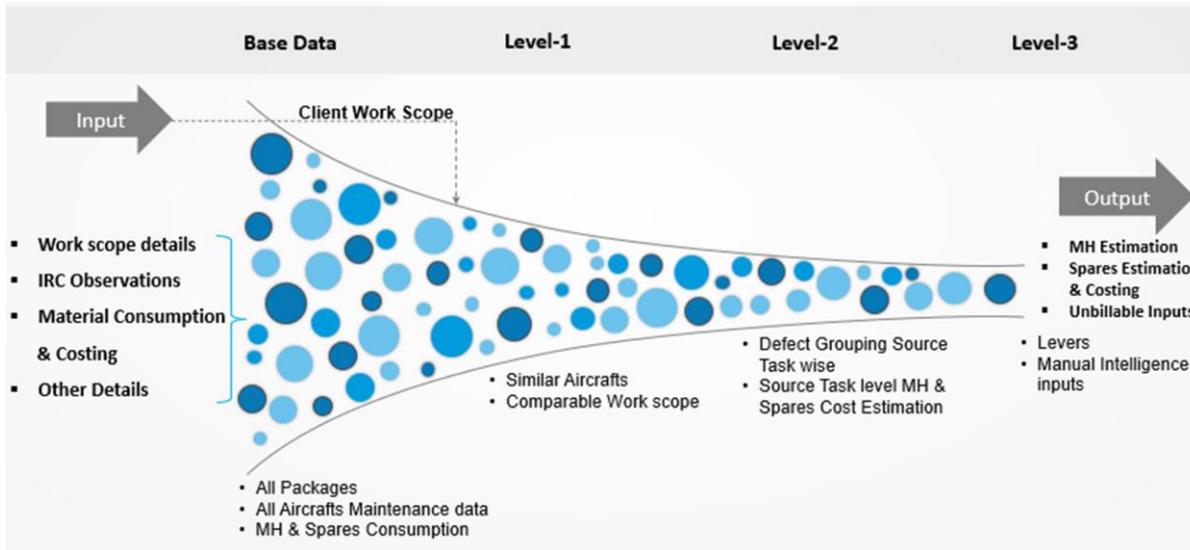
- Installed **automated tool vending systems** near hangars
- AMEs access tools using **ID-based authentication**
- System tracks:
  - Who took what tool
  - At what time
  - Auto alerts for missing tools

### Impact

- Improves **tool traceability & safety compliance**
- Increases **productive wrench time** of AMEs

# AI-Based Planning & RFQ Automation

## GMR Aero Technic Case Study



**AI based planning**

### Challenge

- During base maintenance - New defects appear beyond planned job cards
- Manual estimation of:
  - Man-hours
  - Spares
  - Cost
- is slow and inaccurate

### GMR Solution

- AI-based planning platform using:
  - **Natural Language Processing (NLP)** – Reads job card descriptions
  - **Machine Learning (ML) & Statistical Models**– Predicts:
    - Man-hours
    - Spare parts
    - Defect probabilities
- Tested via **2 POCs on 5 aircraft** (C-check & EoL)

### Benefits

- **Faster RFQ preparation**
- **Better inventory forecasting**
- **Stronger customer negotiations**
- **Lower AOG & manpower costs**
- **Optimized hangar resource planning**

## Benefits ( SMS / HSC / Audit )

- **Centralized Project Oversight**
- Paperless & Mobile App
- **100 % Reporting feasibility incl for Vendors**
- Enhanced Team Collaboration
- **Streamlined Task Management – Remedy Measures**
- Visual Progress Tracking ( Dashboard )
- Improved Resource Allocation
- **Real-time Status Updates**



## Traditional Method

- Structural inspection is:
  - Highly manual
  - Time consuming
  - Dependent on human visual accuracy
- The current solution doesn't meet Base Maintenance requirements in terms of accurate mapping

## GMR Initiative

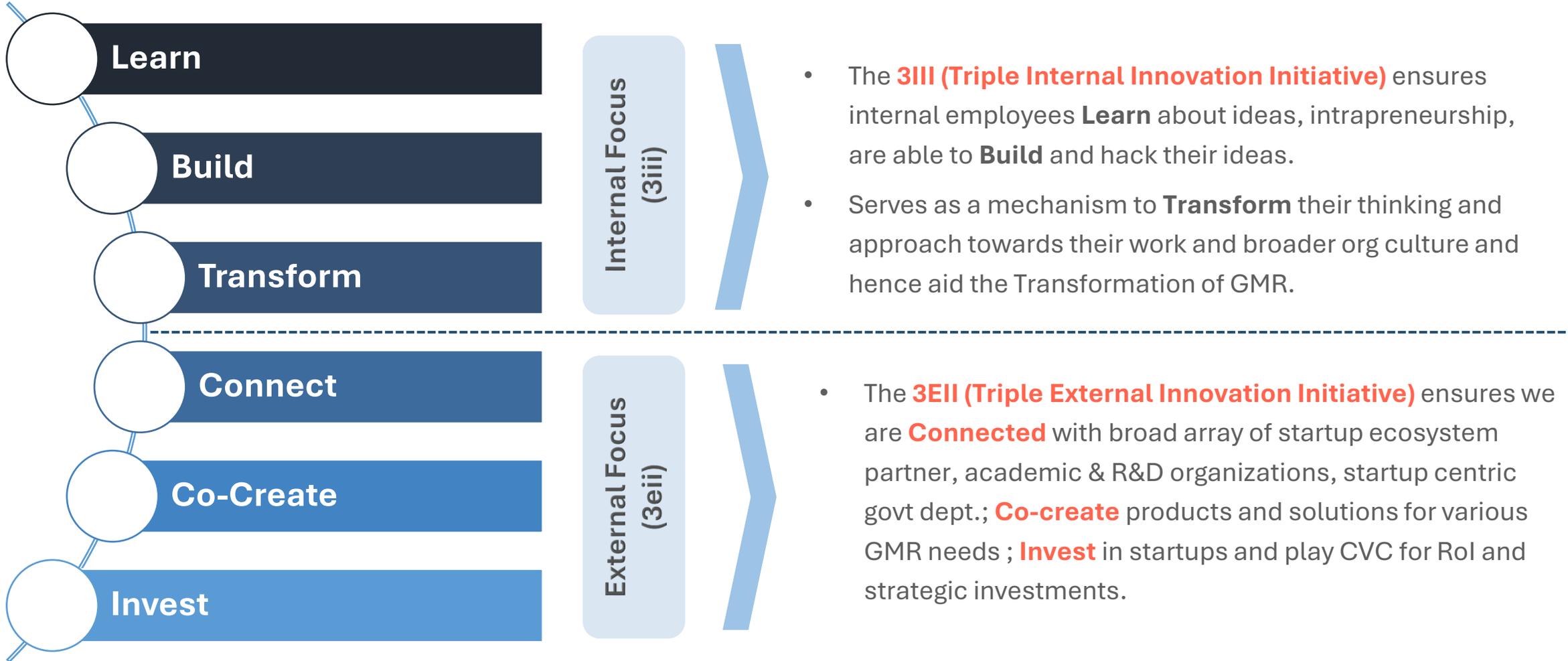
- Working with a startup on **drone-based inspection**:
- AI-based defect recognition
- Digital defect mapping
- Measurement & crack analysis

## Advantages

- Faster inspections
- Improved **safety (less scaffolding, less human exposure)**
- Digital records
- Enables **data-driven structural inspection & analysis**

# GMR Innovex





# AIRBUS

- **GMR selected as testing facility for next-generation Airbus maintenance tools**
- **Early access to innovations before industry-wide deployment**
- **Supporting Industry to have better tooling systems**
- **Strengthens customer relationships through cutting-edge capabilities**



- **Agreement with Boeing for Competency-based training framework aligned with Boeing standards**
- **Strengthens workforce skill development and certification**
- **Improves maintenance quality and regulatory compliance**

# Agreement signed with Boeing's CBTA



**Agreement signed with Boeing's CBTA aiming to provide modern, performance-focused training approach to MRO maintenance staff**



# Talent Strategies

# Human Capital Challenges in the Aviation MRO Industry

**1**  **Rapid Growth**

- *Global aviation has entered a rapid phase of growth*
- *Fleet size doubling in next 15–20 years (especially in Asia)*
- *MRO demand growing faster than supply of skilled manpower*
- *Workforce is becoming the biggest bottleneck, not infrastructure or capital*

**2**  **Talent Gap**

- *Aging workforce (30–40% technicians retiring by 2035)*
- *Low inflow of young engineers into MRO*
- *High global competition for licensed engineers*
- *Increasing complexity of aircraft (A320neo, B787, A350) – Composite Material*

**3**  **Indian Context**

- *Brain drain to Middle East, Europe, SE Asia*
- *Gap between academic education and shop-floor readiness*
- *Limited EASA/FAA/DGCA Part-66 talent pool*
- *Training ecosystem fragmented*

# The GMR School of Aviation is a Flagship Initiative to address the Workforce Challenges focused on Training and Upskilling



- 1 Centre of Excellence for promoting world class education/training for Aircraft Maintenance Engineering
- 2 Complete 4-year integrated program (2yrs in school & 2yrs OJT in MRO). Executive Courses & Degree Programs
- 3 Airbus technical collaboration
- 4 Approved under DGCA & EASA – B1.1, B2 and B1.1 & B2 program
- 5 In 2025 - MOU with RMIT Australia for International Degree Programs. DGCA approval for Level 3 Type Trainings for B737 family
- 6 Industry partnership- Agreement with Boeing for Competency Based Training



**Airbus Simulator**



**Hangar with operating aircraft**



**System Trainers**



**Avionics Lab**

# Placement Program



**Structured placement programs to induct the students from GMR School as permanent staff**



**Programs ensures the continuous availability of talent into MRO ecosystem**



**Reducing recruitment costs while building cultural fit**



**Placements (Phase-2) offered to 2024 AME Batch.**



## Type Training



Specialized Aircraft Maintenance Engineer (AME) courses for specific models like A320 or B737, ensuring certification compliance and hands-on simulator practice.

## Global OEM Partnerships



Collaborations with Airbus and Boeing for advanced type training, factory-authorized programs, and competency-based modules that align with manufacturer standards.

## Leadership Training



Executive programs on strategic decision-making, team management, and change leadership, often through partnerships with business schools or OEM academies.

## Cross-Functional Training



Finance for Non-Finance: Workshops teaching budgeting, cost analysis, and ROI evaluation tailored for technical teams.

## AI-Focused Trainings

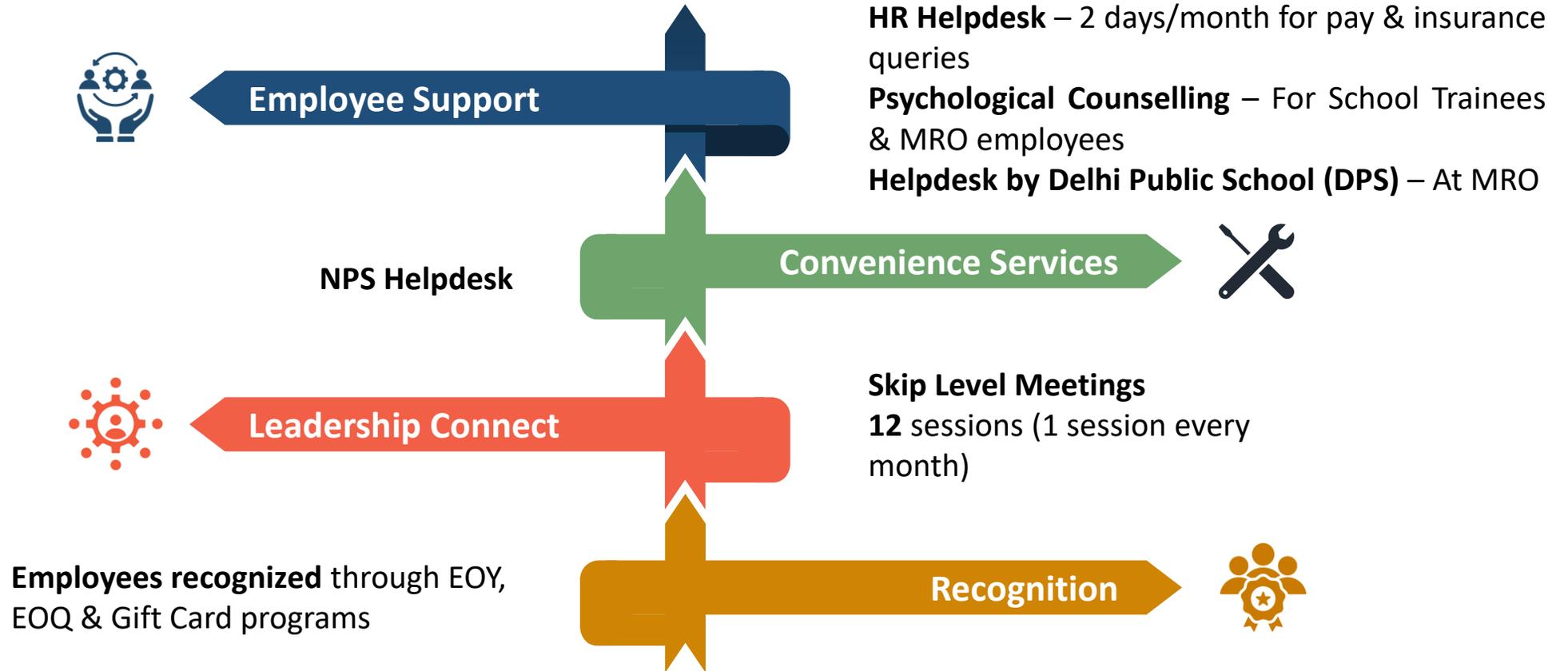


Courses on AI applications in MRO, including predictive maintenance, defect analysis via machine learning, and data-driven planning using tools like NLP.

# Retention Strategies specially focused on GenZ

 <p><b>15 Business Specific policies</b> rolled out</p>	 <p><b>Transportation Allowance</b></p>
 <p><b>AME Retention Policy</b></p>	 <p><b>Employee Referral Policy</b></p>
 <p><b>Employee Housing</b> in GMR Township</p>	 <p>Company Borne <b>Group Medclaim Policy</b></p>
 <p><b>Rehire Policy</b> for critical / Technical positions</p>	 <p><b>Family Travel Allowance</b> for all employees</p>

# Employee Engagement Initiatives



# Employee Engagement: Inter GMR companies Annual Sports Event



**Kabaddi Men Winners  
Mighty MRO**



**Box Cricket Women Winners  
Mighty MRO**



**Women Badminton Winners  
Mighty MRO**



**Kabaddi Women Winners  
Mighty MRO**



**Women Badminton Runner up  
Maverick MRO**



**Men Football Winners  
Mighty MRO**

Thank You!