

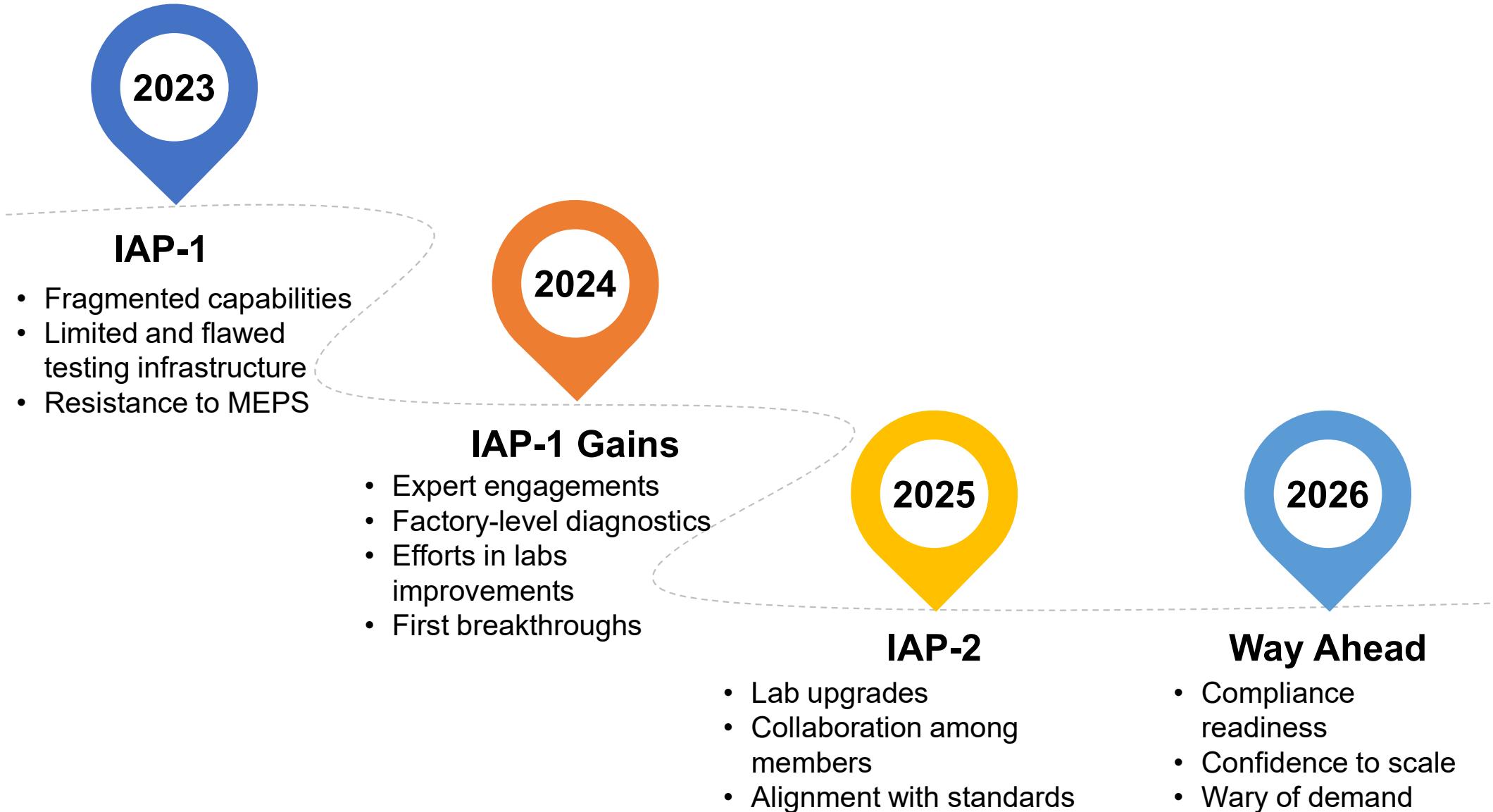


Journey to High-Efficiency Motors in Pakistan

PPEMMA's journey through the
Industrial Accelerator Program (IAP)

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Organization: PPEMMA

Journey at a Glance

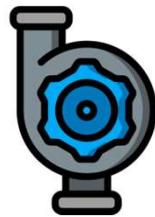


PPEMMA: Introduction

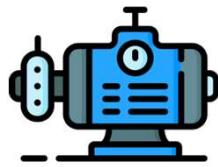
Industry association representing pumps & motor manufacturers across Pakistan



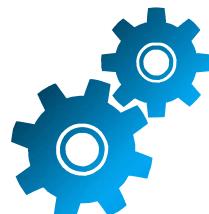
Existing Manufacturing Capabilities



Pumps: Deep-well injector pumps, mono-block pumps, centrifugal pumps, submersible pumps, reciprocating positive displacement pumps, and jet pumps.



Electric Motors: Single and three-phase electric induction motors, DC motors, and universal AC to DC motors.



Advanced Components: Local companies have started producing high-efficiency M470 grade stator and rotor cores, a significant step towards enabling the manufacture of more energy-efficient motors (IE2 threshold) in the country.

Structural Challenges Before IAP

- Conventional motor designs with limited to no access to advanced motor designs
- Inadequate testing and calibration facilities
 - Local labs were producing inaccurate results initially.
- Fragmented investments by individual manufacturers
- Uncertainty around upcoming efficiency standards by NEECA

PPEMMA's Motivation to Join IAP

- MEPS and labeling by National Energy Efficiency & Conservation Authority sent a clear market signal
- Need for structured, hands-on technical support related to design challenges and testing issues
- Risk of losing competitiveness without action

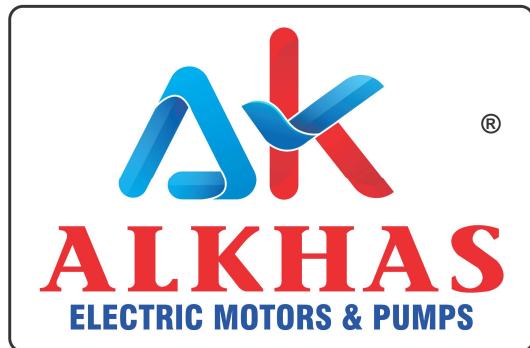
IAP Phase 1: Engagement Structure

- International experts visiting factory floors
- Hours spent on:
 - Design review
 - Process diagnostics
 - Testing gaps
- **Hands-on support**, not desk studies
- **Continuous feedback** between experts and manufacturers



IAP Phase 1: Key Breakthroughs

IAP-1 directly supported 3 manufacturers.



GOLDEN
DYNAMICS
(PVT) LTD.

Resulted in successful development of an **IE1**
motor now in commercial production.

IAP Phase 1: Key Breakthroughs

Shared learnings with a **broader group**, initiating **shared investments** highlighting behavioral changes.



21 manufacturers co-invested in high-precision progressive stamping mold.

IAP Phase 2: Consolidation & Compliance

- Expanded focus on widely used single-phase motors
- Improved production precision and quality control tools
- Strengthening of independent testing capabilities – improved **repeatability and reproducibility** of labs
- Growing confidence in meeting **MEPS requirements**

Way Forward

- Scaling efficient motor production across members
- Progressing toward IE2 and higher efficiency classes
- Continued strengthening of local testing laboratories
- Sustained collaboration with regulators and technical partners

Challenges in Sustaining the Wins

- Manufacturing readiness alone is not sufficient
- Market adoption depends on **awareness, enforcement, and incentives** which needs to work on
- Demand-side interventions are essential to sustain industry investments

Policy Support from Govt Institutes

- Securing 'SAVE UP' logo from mis-use
- **Export facilitation through trade missions** and commercial attachés(Africa & Middle East markets)
- **Targeted duty relaxation** for high-quality raw materials (e.g. electrical steel)
- Market **safeguards against second-hand and scrapped material imports**

Acknowledgements & Thanks

With sincere thanks to

SAMA[^]Verte

 **clasp**

 **EMOSAD**
Elektrik Motorları Sanayicileri Derneği



Multi Alloy

Pakistan Pumps &
ppemma
Electric Motors Manufacturers Association

Thank you!