

INDUSTRIAL ENIGMA

"If you have genius, industry will improve it; if you have none, industry will supply its place" - Sir Joshua Reynolds

Industrial Enigma, Pahal' 20 wants to create and encourage science-based solutions for the benefit of the industries trending in the world. As a medium to target the problems of the industry by one of the brightest minds of the world, Industrial Enigma serves the society in whole. This year's theme being

"Entrepreneurial Idea that would help ELECTRIC VEHICLES to emerge in Indian Market"

INTRODUCTION:



- The electric vehicle segment is getting a lot of attention from the government and Niti Aayog Chief Executive Officer Amitabh Kant reiterated it by saying that it was a big opportunity for Indian manufacturers and they should look at not only producing such models for domestic market but also exports.

- *The Niti Aayog's proposal also added that two-wheelers below the capacity of 150cc sold in the country after March 31, 2025, should be electric ones only. It has also proposed that three-wheelers sold in the country should be electric ones only after March 31, 2023.*

1. Manufacturing

- *Hero Eco managing director Naveen Munjal struck a dissonant note recently, when he said that while the government's proposal to electrify all two-wheelers below 150 cc in the next six years is aggressive, it is necessary if India is to emerge as a hub for manufacturing electric vehicles.*



2. Infrastructure and Solar Charging

- *Meanwhile, the government has invited proposals from entities for the deployment of electric vehicle charging infrastructure in big and smart cities. Proposals are invited from entities that intend to develop EV charging infrastructure in million-plus cities as per the 2011 census; and smart.*
- *It advised that to the extent possible charging station should be connected with 'grid-connected solar power plant' of required capacity as per MNRE guidelines so as to ensure grid stability and green energy for electric vehicles.*



3. EV's in Pubic Sector

- *TERI chief Ajay Mathur said that even though EVs could be a better alternative to fuel-based automobiles to mitigate air pollution, the government's target to switch to e-vehicles in next 10 years is hard to achieve. He pointed out that consumers would need time to accept the change. He insisted that the shift towards e-vehicles should be initiated through introduction of electric buses and taxis.*



4. Fuel Cell EV's

- *Fuel cells in vehicles generate electricity to power the motor, generally using oxygen from the air and compressed hydrogen. Most fuel cell vehicles are classified as zero-emission vehicles that emit only water and heat*
- *The government recently approved Phase-II of the FAME India Scheme [Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India], for three years commencing from April 1, 2019 with a total budgetary support of Rs 10,000 crore. The government intends to support development of EV charging infrastructure by extending capital grant to different organisations working with city government for the promotion of use of electric vehicles (EVs).*



5. EV's used by Startups

- *Ola, one of the world's largest ride-hailing companies, today announced "Mission: Electric", with a commitment to place 10,000 E-rickshaws and Electric auto-rickshaws in its service in the next 12 months.*



Event Structure:

Participants have to select **any ONE** of the above-mentioned profiles and come up with a *unique entrepreneurial idea* to achieve the task and emerge into Indian market.

- Note that all the write-ups in the above-mentioned profiles has an underlying problem statement. For more queries regarding the problem statement mail to: infoie.pahal20@gmail.com

The event proceeds through Abstract round and 3 on-campus rounds.

- **Abstract Round:** Registration and One Page Submission

Registration Procedure: The participants have to register on the official website: technex.in >Pahal > Industry Remodelled > Register. Participant needs to submit a one-page report of their business model within a stipulated deadline on the basis of this pager evaluation. Participants will be shortlisted for the campus round.

The One Page report should be emailed to events@technex.in with the subject **Pahal ||IndustrialEngima || Abstract || Team Id** (For example: Pahal || IndustryRemodelled ||Abstract || 1234). The abstract must be submitted in **.pdf** format only. Teams must follow the following details for the submission:

Abstract Format:

In less than 1 page

- Team Name (Calibri, Font 10, Left, Bold)
 - Applicant's Name (Calibri, Font 10, Left, Bold)
1. Title of your Project or Business (Calibri, Font 12, Left, Bold): Short description of your idea. (Calibri, Font 10, justify).
 2. Technology Involved/ Needed (Calibri, Font 12, Left, and Bold): Please describe technology using diagrams or any other means.(Calibri, Font 10, justify).
 3. Innovative Components (Calibri, Font 12, Left, Bold): How is your idea innovative? In what way is it new and different from other similar ideas? If it is a well-known effective practice that you are newly adapting in your business, explain how your adaptation will be distinctive. (Calibri, Font 10, justify)

Round-1 (Presentation):

- The participants shall be required to pick the problem statement of their choice (out of the given profiles above) and work on solutions that are (but not limited to):

Relevant

Novel

Feasible

Economical

Efficient

Long-lasting

- Each team has to pitch their idea through a power point presentation. The max. time limit allotted for the each team is 10min. (7min for presentation + 3min for Q&A)
- A working prototype can be presented to demonstrate the proposed solution (may or may not be to scale). *Brownie points for any additional material that supports the idea(s).*
- These will be presented to a panel of judges, following which the shortlisted teams will proceed to the further rounds.

Round-2 (Group Discussion):

- The shortlisted teams shall be divided into two groups each consisting 7 teams. Each group shall be discussing over the problem statements they have opted and comes to a proper conclusion in a constructive manner including all the ideas of each team in that particular group.
- Time allotted for the group discussion will be around 30min.
- Each team in a group will be monitored by the panel of judges during the group discussion and marks will be allotted based on the valid points made, etc.
- Based on the marks provided by the panel of judges, 6 teams will be shortlisted for the final round.

Round-3 (Group Discussion):

- The shortlisted teams will be provided a new technical but business based problem statement a day prior to the round-3.
- The shortlisted teams shall be divided into two groups each consisting 3 teams. Each group shall be discussing over the problem statement given and comes to a proper conclusion in a constructive manner.
- Time allotted for the group discussion will be around 30min.
- Each team in a group will be monitored by the panel of judges during the group discussion and marks will be allotted based on the valid points made, etc.
- Based on the marks provided by the panel of judges, Winners will be announced at the final PAHAL Ceremony.

General Rules:

- Each team may have a maximum of four members.
- Final date for the abstract submission will be informed.
- Multiple teams from same colleges are allowed.
- A team comprising members from different colleges are also allowed.
- The Teams must strictly follow all the deadlines failing to which will lead to their disqualification.

Terms & Conditions:

- The decision of the judges shall be final and binding. All participants have to abide by the decision of the judges. No interim or later communication about the decision or its veracity shall be entertained and shall be viewed seriously.
- Violation of any rules may result in disqualification of the team.
- Technex holds all the right to change the dates for the submission and the participants will be informed about the same through email.
- All mode of official communication will be through email.