

ECMA Brainstorming and Strategy Team Meeting 2022

July 22nd 2022

at

The Oxford Golf Resorts Pune

FUTURE VISION FOR THE ROLE OF ECMA

**The Past , Present and most importantly
The FUTURE**

SUDIPTO BASU
EXECUTIVE DIRECTOR

Welcome to our New Member

**ECMA welcome PI Green Innovations represented
by Mr Umesh Sawant**

<https://pigreeninnovations.com/videos.php>

Who are we

- We are a non-profit Association, representing thirteen manufacturers of exhaust aftertreatment for mobile & stationary sources. *We are committed to collaboratively lead India towards Cleaner Air.*
- We work with the Industry, Government Regulators, Oil Companies and the Public at large, to be a credible source of knowledge on emission control and *we strive to increase awareness in emissions management by providing relevant technical solutions for this.*
- *We achieve this through assimilation of technologies, providing and disseminating knowledge enabling emission control.* We hold Seminars and Conferences, pertaining to reducing pollution from automotive and powertrain exhaust sources

Agenda

1. ECMA the Beginnings
2. Brainstorming objectives
3. Current Headwinds and definition of the issues
4. Collective Thoughts for the Future Role and Relevance of ECMA

The Beginnings...

- Commencing in 2003, when emissions control in India was still young with BS II under implementation, ECMA focused on becoming a source of information and knowledge to regulators and government.
- In 2005 ECMA secured a place on the Standing Committee on Emissions (SCOE) - a Stakeholder Industry, OEM and Test Agency body, chaired by the Ministry of Transportation that was responsible for charting out the emissions regulatory road-map for India.
- Each year commencing 2006, we held an annual International Conference on emissions control that has become recognised as benchmark event in this area. Twelve such events have been held with Global participation from experts and Indian industry. AECC and MECA have been consistently supportive of our effort and have participated actively.
- From time to time we have held focussed events to highlight the importance of controlling tailpipe emissions to owners and drivers of vehicles. One such was a free campaign and instructive survey for vehicles in Delhi, offering free emissions testing.
- ECMA have been and continue to be actively engaged in discussions in SCOE and other forums, for regulation making and emissions control from all types of vehicles and engines.

A few lines for the younger generation

- ECMA have been holding similar Team Meetings with Brainstorming sessions to review and realign our strategies to remain in focus with our objects and be visible to the outside world as an influencing element for clean air
- Earlier sessions have been held in Goa, Delhi, Lavasa, Lonavala and Chennai
- With changing times and the challenges the aftertreatment industry is facing it is important leaders of the future, take up positions to align ECMA activities and continue to remain relevant in the future.
- Your contributions to his Brainstorming session will be of immense importance..

Brainstorming Steps

1. Define the Problem
2. Lay out the Context and Definitions
3. Pick an Appropriate Facilitator
4. Invite the Right People
5. Set the Agenda
6. Hold the Session

Brainstorming 1- Define the Problem

- The first step should be to determine a problem question that the brainstorming session will address. The question should be clear and prompt participants to think of solutions, such as “How can we differentiate our services?” or “How can we increase production?”
- Next, set boundaries for possible solutions. For example, solutions may have to be implemented within six months or involve finding a new market. “If you want a broad set of ideas, you’ll want fewer boundaries. If you’re looking for a very tight set of solutions, you’ll want tighter boundaries,” says Andrea Caulfield, Innovation Manager at BDC.

Our Problem

What Role will ECMA Play in Future and what should be our Relevance

Brainstorming -2 Lay Out the Context and Definitions

- Next, ask yourself what the participants already know about the context of the problem question and what else they need to know. Compile any additional information participants will need and send it to them, or present it during the session.
- You will also need to establish definitions of key terms so everyone is working from the same page. For example, let's say your problem question is: How do we increase production? You need to define what you mean by production. Total number of units, or total number of defect-free units? How much do we want to increase production by? Can we add resources to support the solutions we generate or not?

The Context

Laid out in the next Three Slides

Progression and Observations-1

- With membership in SCOE, we participated actively in the evolution of BS VI
- ECMA was also represented in the RDE Technical Committee and held several presentations at ARAI and ICAT while the Indian RDE was being evolved, providing guidance and updates on European regulations.
- Tractors, Non-road and Stationary engine regulations were also taken up and ECMA participated in these too.
- Then came the retrofit testing for vehicles and generator-sets and members have participated in these.
- For generator sets, retrofit regulations were evolved and released and currently some members are benefitting from this, with certification with a view to market solutions.
- During the days of virtual events, ECMA has been represented in various forums and of late some physical events too have been attended, where aftertreatment topics have been highlighted
- SCOE meetings in the meantime have become fewer and far between and here lies an observation

*..... After rulemaking for BS VI and CPCB/TREM 4 and 5, there seems to be a lull with a feeling among OEM and agencies that enough has been done and the stage is now set for a period of execution**This is an aspect that needs to be considered in our strategy for the future***

Progression and Observations-2

- Mean while, with fossil fuels getting not only the non-sustainable tag but also being looked at as a 'dirty' fuel and in spite of regulation, public opinion has commenced to look for alternatives..
- Electrification of Mobility with EVs, is continually gaining in stature, not only in the public consciousness but also, is being strongly supported by Govt., with incentivization and public announcements . Much of this is driven by the developed World and International forums on Cimate Change such as the COP26, where India too needs to make commitments
- In the real world though, the extent to which these will be practically achievable especially with concerns about maturity of technologies being used for energy storage as well as infrastructure for distribution and recycling .. needs to be seen
- For the aftertreatment community, especially in Europe, NA and Japan where most of ECMA's member companies are headquartered, the ripples from this disruption has prompted many to broaden the scope of activities and manufacturing to being more sustainable and aligned to the Nett Zero Emission targets being set in different parts of the World

.....How this will influence ECMA's goal 'to collaboratively lead India towards Cleaner Air' and whether we too should broaden our focus and activities to reflect the changing times ..is an important consideration

Progression and Observations-3

- Sustainability and clean combustion has prompted the energy World to look for cleaner and more sustainable fuels and here too, Indian govt., with an eye on the importation costs of fossil-fuels, has proactively worked to wards promoting alternate fuels.
- CNG, Ethanol, Bio and Flex fuels are gaining prominence along with amore fledgling Hydrogen, as a clean fuel
- Work seems to be going on to bring in an array of alternate and cleaner fuels with even private industry getting into the act.
- These fuels can also be used in Internal Combustion Engines, with some modification and here, although fossil-fuels may sometime in the future run out of favour the ICE with combustion as the agent for generation of power, will continue.....and with it, the need to have near–zero emissions with appropriate aftertreatment of course!

....here then we have an opportunity to focus on our goal.. to be a credible source of knowledge on emission control and strive to increase awareness in emissions management by providing relevant technical solutions for this.

Summery of Directions

*..... After rulemaking for BS VI and CPCB/TREM 4 and 5, there seems to be a lull with a feeling among OEM and agencies that enough has been done and the stage is now set for a period of execution**This is and aspect that needs to be considered in our strategy for the future***

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*....here then we have an opportunity to focus on our goal.. **to be a credible source of knowledge on emission control and strive to increase awareness in emissions management by providing relevant technical solutions for this.***

Brainstorming -3 Pick an appropriate facilitator

- The facilitator should be someone who can keep the session on track, has experience with brainstorming and is unbiased. They should be able to make sure everyone participates and that no one dominates the discussion.

Suggestions?

- Mr Babu
- Mr Kataria
- Mr Sardesai
- Mr Phansalkar

Who?

Brainstorming-4 Invite the right people

- Your session should include people in the company who are affected in some way by the problem question. It should also include experts on the topic being discussed and non-experts, such as employees in another area of the business or non-employees. Three to eight people is often ideal.
- “Experts have the burden of expertise. It’s harder for them to go beyond what they know,” Caulfield says. “Non-experts have the lightness of being a beginner. They can ask silly questions or suggest unconventional ideas.”
- To get a broad range of ideas, make sure to invite a diverse mix of participants from varying cultures, backgrounds and age groups.

Done ! 😊

Brainstorming-5 Set the agenda

- First, devote enough time for setting out the problem question, boundaries, context and definitions. Caulfield suggests approximately 20 minutes.
- Caulfield likes to divide the heart of the brainstorming into two parts—first, “diverging,” then “converging.” Diverging is when participants explore options and generate new ideas. This could take 30 minutes.
- Converging is when ideas are sorted and discussed in order to isolate the best ones. Converging usually takes less time—perhaps 20 minutes. The final step is wrapping up the session, which could take 10 minutes.

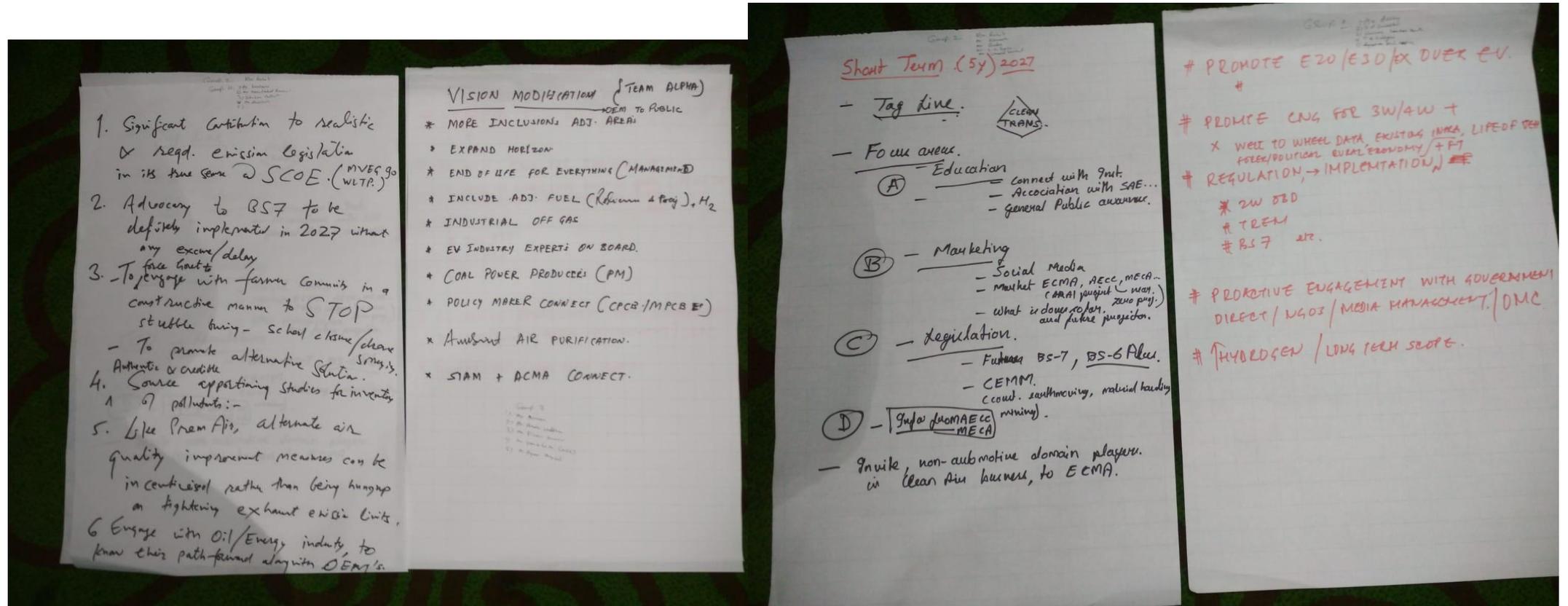
Set boundaries, context and definitions

- Divide into five groups
- Generate diverging ideas
- List on White Board
- Converge

Brainstorming -6 Holding the session

- Several techniques exist to structure the brainstorming. A simple one for the diverging component is for the facilitator to hand out sticky notes and give participants a few minutes to write down their ideas. The sticky notes are then put up on a wall or whiteboard.
- The facilitator then reads the ideas one at a time, gets any needed clarification and, with the input of participants, groups them into three or four categories. If new ideas come up, these can be added on extra notes.
- Converging can be accomplished by asking participants to put a checkmark or star by their favourite three to five ideas, depending on how many “top picks” you want to end with and how many people are in the room.
- The output from the session can consist of a list of the most favoured ideas and any themes that emerge. In addition, the output should highlight any highly innovative ideas, even if they didn’t receive many votes.
- All these ideas would be taken to a planning or strategy session to be looked at in more detail by a smaller group.
- As a wrap-up, the facilitator should explain the next steps and what will happen to the group’s ideas. Participants should also receive a summary of the top ideas.

Points from Four Brainstorming Groups



Ideas Generated

- New “catchy” Tag Line ... (Clean Transition ... ?)
- Regular interactions with sister organisations AECC-Eu and MECA-US
- More inclusion , broaden scope, expand to other areas
- Promote knowledge on sustainable and synthetic fuels powering the future
- More intensive participation in rule making & legislative bodies ...to influence decision makers (WLTP, 90kmph, BS-7...) .. As well as parallel associations (SIAM, ACMA...)
- Invite SMEs (subject matter experts) for various ECMA meets
- Sponsor studies on air quality (impact of BS-6 and potential of BS-7)
- Enhance visibility on social media, seminars, conferences, journals

Action Points and Targets



Actions	Responsibility	Time
New “catchy” Tag Line ... (Clean Transition ... ?)	SB, RK,	31-July-2022
Regular interactions with sister organisations AECC-Eu and MECA-US	SB, PS	quarterly
More inclusion , broaden scope, expand to other areas - expand membership (... also to other domain member companies ?) - ECMA charter	KVRB, RK, SB	31 august 2022
Promote knowledge on sustainable and synthetic fuels powering the future Ecosystem of fuels current and future, fuel roadmap - Prepare a plan on the above	SB, SK,DK, AG, SP	1-Oct-2022
More intensive participation in rule making & legislative bodies ...to influence decision makers (WLTP, 90kmph, BS-7...) .. As well as parallel associations (SIAM, ACMA...) Strengthen ECMA's position in the industry. Showcase value added by ECMA so far and future - Prepare a plan on the above	PS, NP, RK, SB, ToC	31-august 2022
Invite SMEs (subject matter experts) for various ECMA meets	SB,	ongoing
Sponsor studies on air quality (impact of BS-6 and potential of BS-7) - prepare scope document	RM, SKS	31-august 2022
Enhance visibility on social media, seminars, conferences, journals.. (prepare plan)	SB, PPS, PL, SK	31-august-2022

Tee off!



1. Significant contribution to realistic & reqd. emission legislation in its true sense w/ SCOE. (MVEG go WLTP.)
2. Advocacy to BS7 to be definitely implemented in 2027 without any excuse/delay
3. - To ^{force Govt to} engage with farmer community in a constructive manner to STOP stubble burning - school closure/cheap ^{Sony's} solution.
- To promote alternative ^{Authentic & credible} solution.
4. Source apportioning studies for inventory of pollutants:-
5. Like Prem Air, alternate air quality improvement measures can be incentivised rather than being hungup on tightening exhaust emission limits.
6. Engage with Oil/Energy industry, to know their path-forward along with OEM's.

VISION MODIFICATION (TEAM ALPHA)

- * MORE INCLUSIONS: ADJ. AREAS ^{→ OEM TO PUBLIC}
- * EXPAND HORIZON
 - * END OF LIFE FOR EVERYTHING (MANAGEMENT)
 - * INCLUDE ADJ. FUEL (Refinery & Proj), H₂
 - * INDUSTRIAL OFF GAS
 - * EV INDUSTRY EXPERTS ON BOARD.
 - * COAL POWER PRODUCERS (PM)
 - * POLICY MAKER CONNECT (CPCB/MPCB ET)
 - * Ambient AIR PURIFICATION.
 - * SIAM + ACMA CONNECT.

Short Term (5y) 2027

- Tag line:



- Focus areas:

(A) - Education

- Connect with 9mt.
- Association with SAE...
- General Public awareness.

(B) - Marketing

- Social Media
- Market ECMA, AECC, MECA...
(AAAI project - near, zero proj.)
- What it does today, and future projection.

(C) - Legislation

- Future BS-7, BS-6 Plus.
- CEMM.
- count. earthmoving, material handling

(D) - Guidance from AECC (mining) - MECA

- Invite non-automotive domain players in Clean Air business, to ECMA.

PROMOTE E20/E30/EX OVER EV.

PROMOTE CNG FOR 3W/4W +

X WELL TO WHEEL DATA, EXISTING INRA, LIFE OF VEH
FOREX/POLITICAL RURAL ECONOMY + FT

REGULATION → IMPLEMENTATION

* 2W OBD

TREM

BS 7 etc.

PROACTIVE ENGAGEMENT WITH GOVERNMENT
DIRECT / NGOs / MEDIA MANAGEMENT. / OMC.

HYDROGEN / LONG TERM SCOPE.