



# AUTO EXPO NEWS

GLOBAL PLATFORM FOR FUTURE TECHNOLOGIES & INNOVATION



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# COMPONENTS SHOW AN UNMATCHED SUCCESS

The 16th edition of the Auto Expo Components Show, which enjoyed unparalleled success, reflected an underlying spirit of transformation and technological excellence that infused life into the whole Indian components ecosystem and signalled a fresh start on the road to a promising future



Large crowds thronged exhibition area on Day Three to interact and learn about new products from exhibitors



Visitors making their way to the exhibition areas in Pragati Maidan, New Delhi, on January 14



Business visitors making business enquiries at a stall in Auto Expo Components Show 2023



ACMA-AIWA Conference on Spare Service Support in a Charging Environment in progress at Pragati Maidan on January 14

## TAKEAWAYS

- 1 The 16th Auto Expo Components Show is the largest show since 1986, and it represents the start of the sector's metamorphosis into a driver of growth and technological excellence.
- 2 The expo demonstrates that the government's policy effort to boost the production of the components sector and foster innovation for sustainability has not been lost on companies, as seen by the products and innovations on display by exhibitors.
- 3 The majority of products and innovations on show were components for electric vehicles and green fuel engines, clearly indicating the industry's focus on developing cutting-edge solutions for future mobility.

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# A Show of Milestones

The 16th edition is the largest Auto Expo Components Show since its inception, reflecting the components industry's transformational path toward future mobility and its enormous potential to meet India's vision of being a \$10 trillion economy by 2030 and a developed nation by 2047

The Auto Expo Components Show 2023 is a show of numerous milestones, kicking off the change process towards a new future. From focusing on a few OEMs to becoming a full-fledged mobility event in its own right, it emerged as the only forum for participants to demonstrate their determination to continue to innovate and drive the Indian economy to its \$10 trillion goal by 2030. Coming out of the pandemic, it also acted as a venue for people to engage, deliberate and establish new business synergies in order to tackle present and future challenges in meeting the need of a world moving towards cutting-edge sustainable future mobility solutions.

Speaking about the transformation of components industry, Vinnie Mehta, Director General, ACMA, said, "I'm glad to see that the auto component industry in India is keeping pace with the transformation that is required for it to stay relevant and continue to be competitive. So I guess that's what the whole show represents. I think it also in some sense, is a testimony to the fact that this industry is here to stay. Because if you are transforming, if you are keeping with the changing times, you know, you will be relevant."

Vipin Sondhi, Chairman, CII National Committee on Future Mobility and Battery Storage, said that while component can be named in a differ-



ent form, every vehicle may not have now an IC engine. "The mindset of the people will slowly change who will call it differently, but components in the true sense will always remain and is it," he added.

Day Three witnessed a continuation of communication between a significant number of business visitors and network manufacturers and innovators ranging from MSMEs to startups and well-established names in the sector with the same degree of vigour as the first day. An industry-relevant 'ACMA-AIWA Conference on Spare Service Support in a Charging Environment' was held at the Conference Room in Pragati Maidan, which was attended by many stakeholders from the EV sector to gain better insights into the issues impacting the spare service sector.

## TAKEAWAYS

- 4 Cooperation on technological front amongst all stakeholders in India's automobile industry will be the key for future growth of the sector, as no single company will have the capacity to do it all on its own.
- 5 The government has provided all the required support to the industry, now it all boils down to the execution part, which would require a great deal of effort.
- 6 The emerging technologies, whether it's in the space of ADAS, digital technology, AI, Virtual Reality or Augmented reality, are going to define the growth trajectory of the sector.
- 7 In the future, mobility will mean more than just a mode of transport, it will be an experience, and components industry must work towards that goal.
- 8 The event personifies the tenacity that the components business represents. It reflects the notion of staying relevant via transformation.
- 9 Whether it's ethanol, alternative fuels, or engine innovations, the conventional products on exhibit have been enhanced to reflect what the government expects from the industry.
- 10 To remain competitive, the auto components industry would need to go out and benchmark its products against the worldwide market.

## ARAI: NURTURING STARTUP ECOSYSTEM

The Automotive Research Association of India, which has a stall at the 16th Auto Expo Components sector, has emerged as an important support system for startups in India, assisting them at every stage of product development, from product performance and durability to failure analysis, benchmarking, material characterisation and modelling, and localisation. The company has put on display rechargeable energy storage systems for two and three-wheelers with a 35AH capacity. The technology used in the system has been patented by ARAI and startups can apply for its usage in their vehicles. The basic goals of the ARAI R&D Program are to develop competencies, capacities, indigenous technologies, and to perform country-specific research. Safety, environmental concerns, reliability, and sustainability have been important factors in selecting projects for R&D, either as regulatory hurdles or as a desire for advancement. Current R&D efforts are focused on fuel economy, low emissions, light weighting, ride comfort, vehicle stability and handling, reduced road damage, and cost efficiency.

## 8 THINGS TO DRIVE CHANGE

As the components industry walks the path of transformation, these are the eight things which will determine their future success

- Carbon neutrality will remain a dominant theme for decades to come. 2070 has been announced as the year to achieve this goal, and during its presidency of G20 India will further stress on sustainable manufacturing.
- A lot of focus will be on digitization and Industry 4.0. As a responsible and successful industry, auto component sector would have to adapt to the evolving ecosystem.
- The FAME-II scheme and the PLI scheme for the auto and the auto components, as also the ACC battery PLI have been extended as government support measures to facilitate transformation. Thus, the transformation is inevitable.
- Closer cooperation between automobile manufacturers and components manufacturers is the key to the success of the entire industry. One cannot do without the other.
- Research and development and patented technology will be critical components of manufacturing world-class products to further increase share in global market.
- Supply chain disruptions will continue to impact the industry, which means more resilient systems with diversified supply chain will hold the key for success.
- Technology as it evolves in the future is going to depend a lot on usage: the region in which it is being used, as well as the type of vehicle that will be used.
- Technology will democratise the process of disruption in future.

# Change is Inevitable

As responsible stakeholders, it is our obligation to guarantee that we have cleaner, greener, and safer automobiles, says Vinnie Mehta, DG, ACMA

## What are the key takeaways from the Auto Expo Components Show 2023?

We're extremely delighted and overwhelmed with the response that we've had from the show. This is probably the largest ever Auto Expo Components Show that we've had. And the energy levels are palpable. In some sense, this show embodies the resilience that our industry stands for. It embodies the very spirit of staying relevant by transforming. Because the automotive industry the world over is transforming from the existing conventional fuels to more carbon neutral modes, so what you see in display has an underlying spirit of transformation and technological excellence.

The theme of the show is Technovation. Electric vehicle technologies, hydrogen technologies, and technologies like ADAS are some of the dominant themes in the show. The conventional products that are being displayed, whether it's ethanol, alternate fuels, or other engine technologies, are in fact echoing what the government wants the industry to deliver.

## What are a few things that will drive the auto component sector going forward?

A dominant theme is to look at carbon neutrality. Our prime minister has announced 2070 as the year for carbon neutrality. We are hosting presidency of G20, and sustainability, particularly



Vinnie Mehta, Director General, ACMA

sustainable manufacturing, is something that will drive the components sector. This is very well reflected in the show. And I think we will continue to build on these. As responsible stakeholders, it is our responsibility to ensure that we have cleaner vehicles, we have green vehicles, we have safer vehicles. Also, you will find a lot of focus on digitization and on Industry 4.0.

## What are the challenges for the component industry to be able to transform to the next level?

No transformation is without pains. You cannot go to the other side of a river, unless you swim. So you have to swim, and you have to jump into the water. Now, the moot point is, can you swim? I think, to-

day, the fact is very evident that the transformation is inevitable. The vehicle manufacturers and the component manufacturers have to win this battle together. I'm also very thankful to the government for the support that they have extended in this transformational journey. It's very heartening that the journey of transformation has begun.

## The component industry in India is restricted to certain specific hubs. Do you think that there is scope for many more states to come up with auto component hubs?

We have three-four dominant hubs and maybe some satellite hubs. You have the NCR area as one big hub, you have Chennai and Bangalore, and the other would be Pune, Nashik and Gujarat. The car penetration in this country is something like 30 per 1000 people, the two-wheeler penetration is 165 per 1000 people. And the bus penetration is one per 1000 people. In China, the car penetration alone is probably 70 or 80 per 1000 people. So even if we aspire to double the penetration levels, say from 30 to 60, we would need twice as many hubs that we have. So, we are already looking at maybe six hubs to be developed. It is also important from the point of view that this industry is a huge contributor to the GDP and employment. I'm very confident that we would definitely need several more hubs. And that's why you find a lot of the states are very keen to attract investments.

## AUTO COMPONENT INDUSTRY: BY THE NUMBERS

**23%**

Growth of components sector in 2022-23

**8.6%**

Growth of component exports in first half of 2022-23

**36%**

CAGR is expected expansion of the Indian EV industry

**80%**

Aimed EV penetration for two and three-wheelers by 2030

**2.3%**

Auto Components' share to GDP

**Rs2.23 lakh crore**

Component sales to OEMs in domestic market

**5 million**

Direct and indirect jobs providing to India

**\$56.5 bn**

Combined turnover of the component sector in FY2022

**50%+**

Component share in India's manufacturing GDP

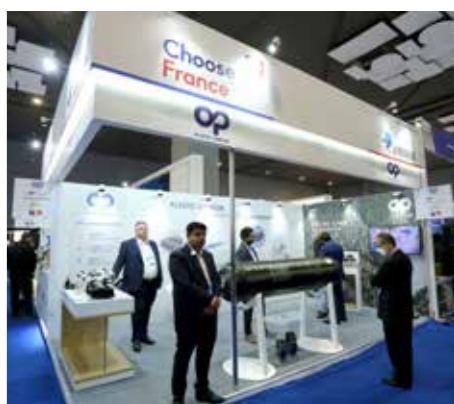
**\$30 bn**

Expected growth of component exports by 2026



# Energy Levels a Notch Up!

On Day Three of the 16th Auto Expo Components Show, the energy levels remained high as visitors flocked to the exhibition area in great numbers to make business enquiries and grasp the application areas of new products and technologies on display



# Products with Future Tech

The Auto Expo Components Show 2023 is an excellent venue for showcasing novel products and services that will assist the industry in going green and achieving technological excellence. Here are few innovative products



## Quad Zone Climate Control HVAC System

The product by Suros allows to set independent temperatures for each passenger based on personal comfort or requirement. It is for the first time that a product of this kind is available for Indian cars.



## IMCM, EDL and ACAM

These products from Sona Comstar are new to the Indian market. The IMCM is an intelligent motor for predictive active suspension system. The EDL is a smart EV differential that enables safe driving under slipper road conditions, while ACAM is an in-cabin sensing solution that detects life presence and child presence with accuracy.

## GDC60 coated components

The benefits of this coating is useful for increasing life and efficiency of the components as it increases scuff resistance, wear resistance and is applicable for all top and oil ring designs.



## Advanced Driver Assistance System

The ADAS by Valco is an advanced safety feature that does not require driver to put his hands on the steering wheel while parking. The system automatically parks the vehicle in the slot. Currently this parking solution is available in BMW cars in India



## Powertrains for two and three-wheelers

The integrated electric drive solution for two and three wheelers by Matel come with field oriented control and are designed to meet functional safety. The products have thermally stable design and can achieve a speed of 50km/hr.



## Modular and stackable battery solutions

These battery solutions by ARAI are available for 2 and 3-wheelers. These are based on intelligent mechanical design to enhance volumetric and gravimetric energy density. They feature efficient thermal management system and smart battery management.

## Mechanical meters and gauges

These mechanical meters and gauges by Abhirashi are of world-class quality and are mainly exported outside India. However, given the growing demand in India, the company plans to offer these products in Indian market too.



## Light weight forged motor shafts

These motor shafts are made using cold forging technique. These light weight components are ideal for motors used in electric vehicles.



## TVS Life 360

This is a telematics device which actually gets connected to the OBD port of the car to diagnose the whole car, it also does live GPS tracking, and gives out stress signals to make passenger safe.



## Green manufacturing solution

The green manufacturing solutions by Denso are designed to reduce emissions for manufacturing plants. Their equipment help convert atmospheric co2 into oxygen.

# Redefining Future Mobility

The Auto Expo Motor Show 2023 witnessed a rush of new EV launches, hammering home the message that India is about to enter a new era of mobility, presenting a great opportunity for the components sector to capitalise on the new technological solutions that would be required for future mobility



# Trends to Drive Industry

Future of mobility is all about efficiency, safety and green fuels. Here are few of the technologies featured at the show that will drive the industry going forward

## 1 Hydrogen Fuel

The basic components for hydrogen-fuelled engines will remain the same, but certain design features will be changed to make workable solutions.

## 4 Face Recognition

This advanced technology provides access control through facial data, which is stored in an encrypted QR code. It prevents false identity verification and can be used for security enhancement.

## 2 ADAS

This technology helps the driver in doing complex tasks in the vehicle, for example, parallel parking and perpendicular parking automatically.

## 3 TVS Life 360

This is a telematics device which actually gets connected to the OBD port of the car to diagnose the whole car, it also does live GPS tracking, and gives out stress signals to make passenger safe.

## 5 LiDARs

This technology is a remote sensing method that uses light in the form of a pulsed laser to measure ranges. It is the technology that will drive autonomous vehicles of future.

## 6 OTA

OTA is a technology to update the software or the firmware remotely. In case of a vehicle, the firmware or software is updated wirelessly using a telecommunication device, through a gateway inside the car to the ECU whose presence is increasing in modern vehicle.

## 7 Automotive Chassis System Made of Aluminum

Chassis systems made of aluminum and its alloys are likely to gain traction in the automotive markets fueled with EV adoption.

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