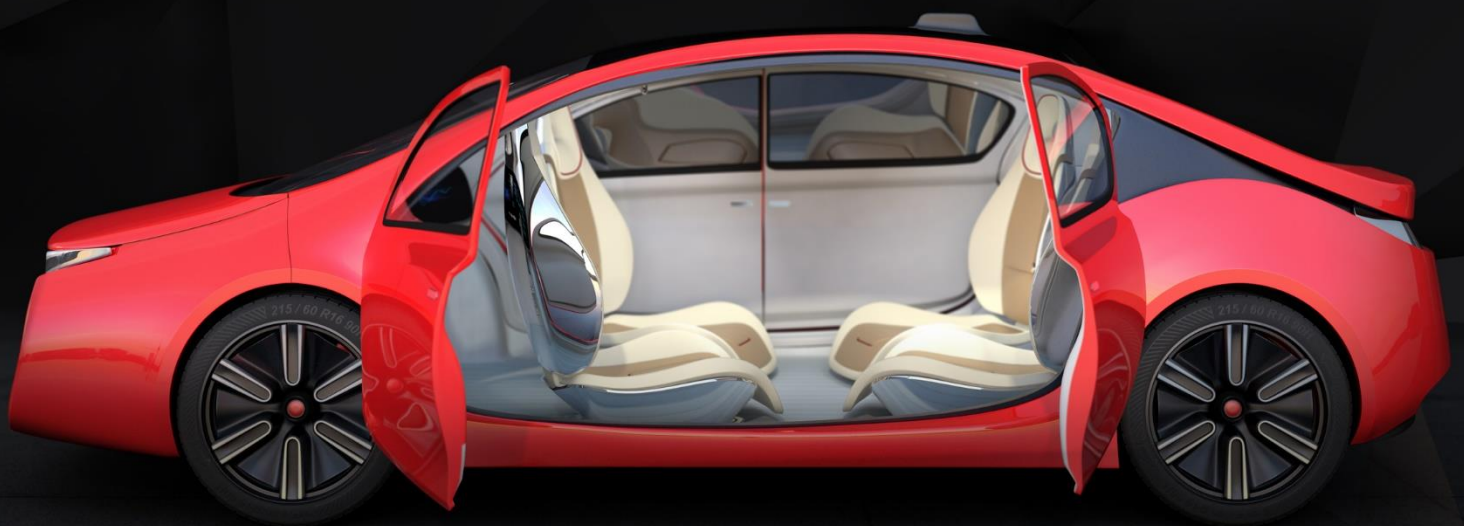
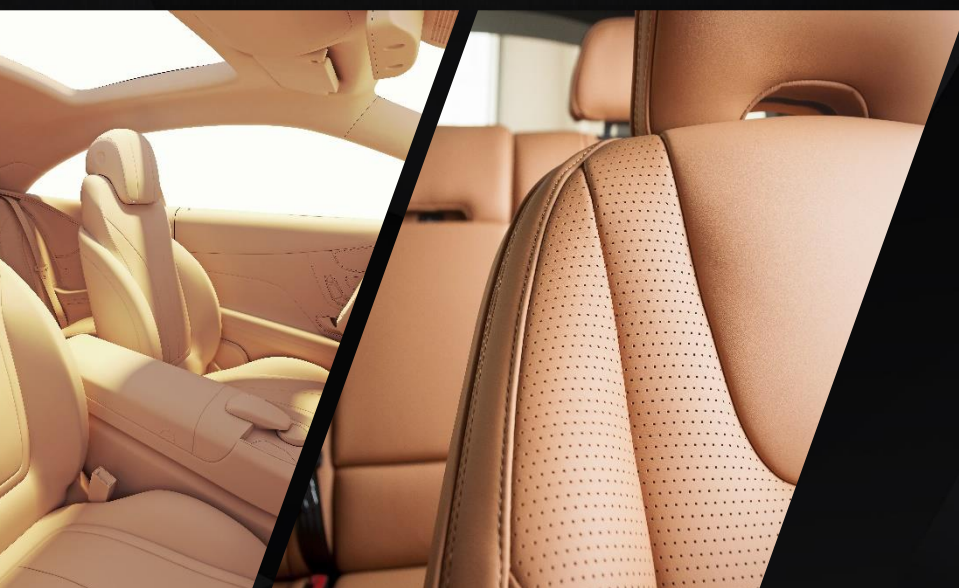




**Tech  
Mahindra**

# TECH MAHINDRA AUTOMOTIVE SEATING EXPERIENCE





**2000**

Started in year

**50+**

active customers

**4,300+**

Engineers

**50%**

Passenger OEMs

**10+**

Global engineering centers

**15%**

Commercial OEMs

**35%**

Auto Suppliers

**\$200+ Mn**

investments in future technologies and  
expanding global footprint

## INVESTMENTS ON FUTURE TECHNOLOGIES



Autonomous  
driving and  
connectivity  
technologies



Personalized  
mobility and  
connected car  
platforms



EV/ HEV  
technology



Future  
Interiors and  
seating



Vehicle weight  
reduction  
technologies

Platform based solutions for Connected Car and Personalized Mobility & Connected Factories

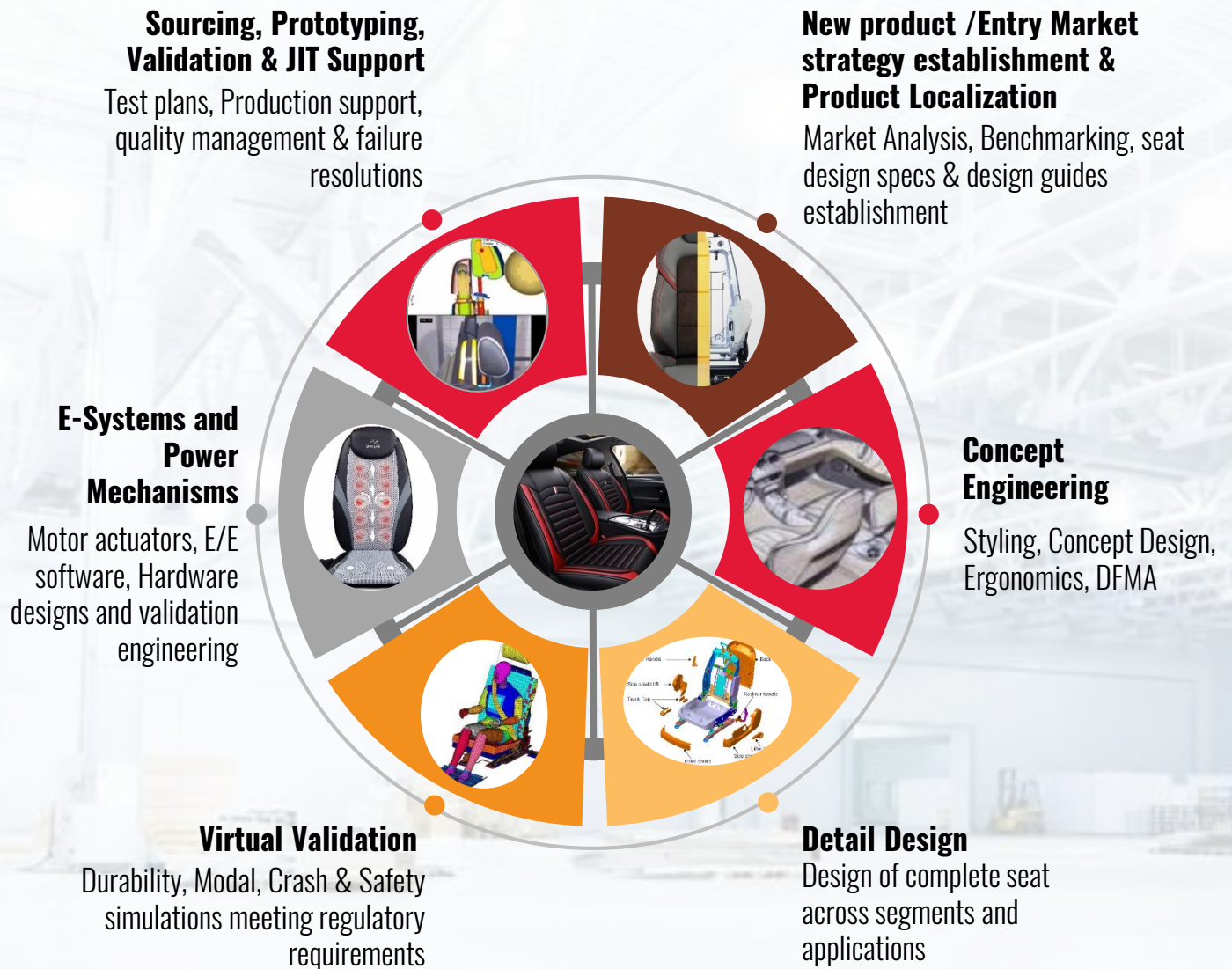




## KEY DIFFERENTIATORS

- Ownership of Derivative programs with global execution models bringing in **cost arbitrage to the tune of 25%**
- Simulation Driven Product Development, **15-20% reduction in product development time**
- **20+ years of experience** in Safety critical Automotive Electronics
- AI enabled cost optimization & supply chain management platforms, **10-12% product cost savings for 100+ programs**
- Industry 4.0 solutions, IoT based asset tracking, AR/VR solutions
- Engineering Automation, Up to **50% cost & time savings** achieved for **300+ projects**
- Innovative and flexible business models. Willing to co-invest/risk share on new technology programs

# TECHM VALUE PROPOSITION

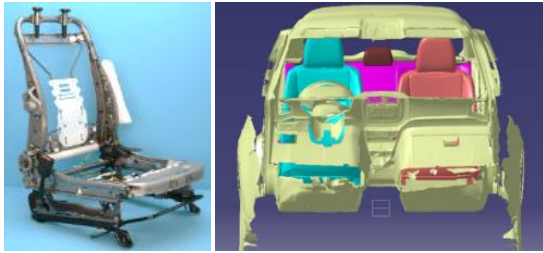


## HIGHLIGHTS

- A team of **500+ Interiors & Seating systems engineers** working for Automotive OEMs & Tier-1s across the globe
- Seat frame design evaluation and design updates for target markets – Application Engineering ownership for **20+ derivative programs**
- **New Age seats concept styling** for EV & Autonomous car applications
- Design optimization, 15% frame **weight reduction retaining the structural integrity**
- **Personalization** with HMI with OTA updates
- **Intelligent Seating algorithms**, Advanced control algorithms for low power consumption, overheat protection
- **Power mechanisms – motor actuators** design & durability checks – Analyzing the scenario of seats conversion to cargo mode
- Anthropomorphic study, User preferences, Dynamic teardown, LGQ Analysis, H-point definitions – **Seat concept Blueprinting**
- **JIT support**, component failure resolutions using quality tools, APQP

# AUTOMOTIVE SEATING

# KEY SUCCESS STORIES



## Driver Seat Design & Development

Re-engineering, H-point analysis, back & cushion frame design, side air bag addition, platform consolidation



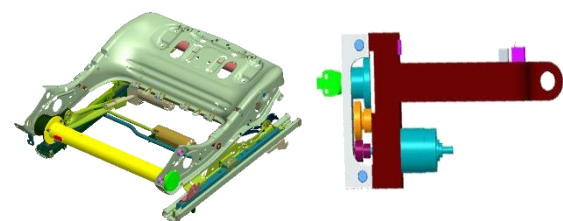
## Rear Seat Assembly Design

Back frame redesign to achieve full flat condition - Tubular structure, weight reduction by 15%



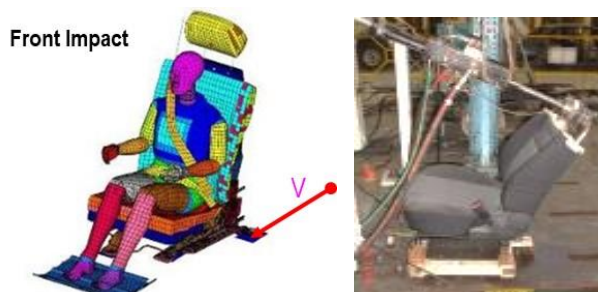
## Structures & Trims Design

Brackets for Seat back table, Luggage Hook and Arm rest. Modular bus seat frames. Assembly time reduction by 12%.



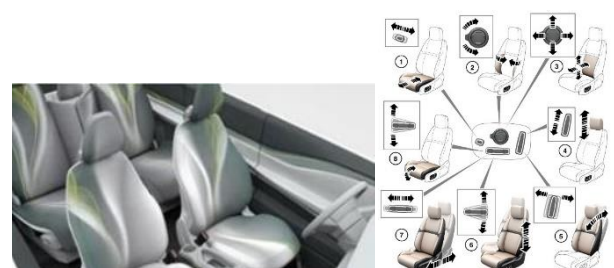
## Power Seat – Actuators & Mechanisms

Motorized Actuators design for Seat Height adjustment and Active seat buckle lifting



## Seating – CAE Analysis & Testing

ECE R-14 & FMVSS 207/210, FMVSS 225, 202, ECR 17 & 25, virtual & physical validations and correlations



## Intelligent Seating & E-Systems Development

L3 Automated Driving. Model Based Development for Seat Sensor and Actuator Controls. E-Applications – Luxury, Comfort & Safety





## INTEGRATED ENGINEERING SOLUTIONS (IES)

IES is a Connected Engineering Solutions business unit of Tech Mahindra. At Integrated Engineering Solutions, customers are at the core of every innovation. We align Technology, Businesses and Customers through innovative frameworks. We deliver future-ready digital convergence solutions across Aerospace and Defense, Automotive, Industrial Equipment, Transportation, Consumer Products, Energy and Utilities, Healthcare and Hi-Tech products. Our 'Connected' solutions are designed to be platform agnostic, scalable, flexible, modular and leverage emerging technologies like Networking, Mobility, Analytics, Cloud, Security, Social and Sensors, that enable launching of smart products and deliver unique connected consumer experiences, weaving a connected world. Coupled with this, our strong capabilities in Electronics, Mechatronics and Mechanical Engineering along with domain understanding and product knowledge, bring excellence to the entire lifecycle of these connected ecosystems.

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