

TATA ELXSI

www.tataelxsi.com



**ADVANCED AUTOMOTIVE
EXPERIENCES**

PHYSICAL | DIGITAL | EMOTIONAL



TATA ELXSI

AUTOX
LONDON DESIGN STUDIO



AUTOX, or Automobile Centre of Excellence, is Tata Elxsi's holistic approach to conceptualising innovative and futuristic automobile experiences and is located in our London design studio.

Our HMI Design and Technology experts help top automotive OEMs design physical and digital experiences that align with their brand values, vehicle segments, typology, and end-user requirements.



WHY US?

▶ **15+** Years of Developing Next-Gen Automotive HMI

▶ The Largest Design House in Asia, with over **400** Designers & Engineers

▶ **300+** HMI Projects Executed Successfully

▶ Design-to-Deployment Expertise

EXCEPTIONAL DIGITAL EXPERIENCES

Holistic HMI Experience



Inside

Driver/ Passenger Experience

Rethinking the strategy for passenger experience for mobility solutions



Outside

Surround Mobility Experience

Strategizing the evolving landscape: what is happening around the mobility solution?



Connected

Remote experiences

Extending the experience beyond the vehicle with connected ecosystems and services

OUR SERVICES



Research & Benchmarking

Stay ahead of the competition. Our team of experts can help identify changing customer needs and industry trends and help OEMs implement HMI best practises (both interior and exterior) for cars.



HMI & Broader Digital Experiences

Reimagine the future of interfaces and digital services for Electric, Autonomous, and Connected Vehicle Mobility with our end-to-end UI/ UX development.



Advanced Interiors Concept Design

Based on insights from advanced concept research and emerging technologies, we help brands create sustainable and futuristic automotive interior solutions that are in line with their brand vision.



Digital Marketplace

Communicate with your target consumers in the most effective way through our virtual new vehicle launch and model upgrade platform and self-assisted virtual vehicle configurators that aid in better browsing, pre-viewing, and selection.



SUCCESS STORIES



2030 VISION STRATEGIC DESIGN RESEARCH

Behavioural Research

Trend Forecasting

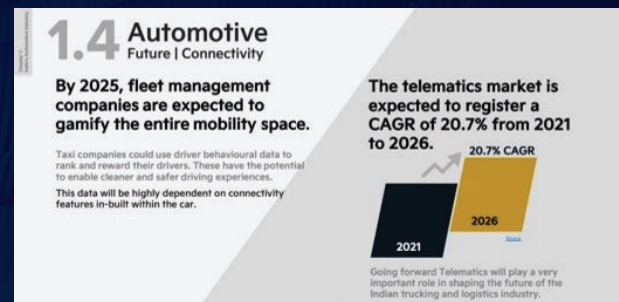
Premium SUV

Context

Conducted a thorough analysis of the Indian market to determine the future needs of Indian consumers for a high-end SUV in 2030.

Key Highlights

- Solid insights on present consumer trends and forecasting what future consumers will expect
- In a market that shows continuous growth in SUV trends, this assists in identifying the key design areas for digital mobility



BENCHMARKING & DESIGN OF HMI

Trend Forecasting

Best Practices

HMI Design

Context

Benchmarking car cockpit UI designs of premium automotive brands established best practices in HMI design and key takeaways across infotainment trends and systems.

Key Highlights

- Support OEMs identify the top trends, present and future, through forecasting, which in turn inspires further HMI design
- Establish a baseline using best practices and standards, which aid in the development of high-quality and innovative HMI experiences



FORECASTING DESIGN TRENDS FOR LUXURY AUTOMOTIVE

Trend Forecasting

CMF Research

Context

The project focused on capturing and tracking design trends on a monthly basis to serve as inspiration for CMFP for a luxury automotive brand, culminating in the development of four CMF themes for interiors.

Key Highlights

- User preference driven CMF design directions for the OEM
- Insights into consumer preferences and lifestyle choices to drive material and colour choices offered to consumers



HUD FOR SEMI-AUTONOMOUS VEHICLE

AR Experience

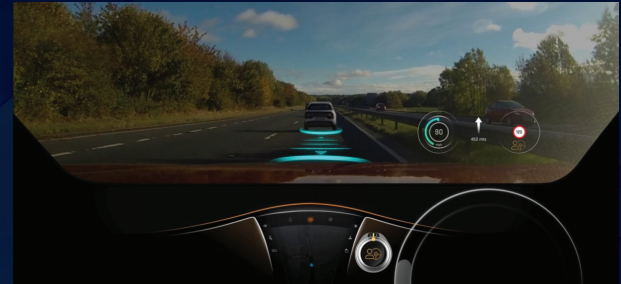
Concept Visualization

Context

- Augmented Turn by Turn Navigation
- Intelligent recommendations by vehicle through gaze
- Ghost Car Detection and Follow Mode
- Path Clearance feedback system
- Path and Prediction indications

Key Highlights

- Envisioning new use cases and experiences leveraging the projection technology with a clear strategy for the way ahead
- High-fidelity concept visualization to enable demonstration and communication across organizational levels



SAKURA INSPIRED DIGITAL CLUSTER FOR JAPAN

Concept HMI Design

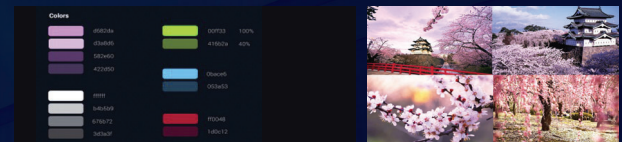
Production Spec HMI

Context

Borrowing the symbolic values of the flower translated into a futuristic design with cultural connect.

Key Highlights

- Departure from generic theme of EV consoles, to exploration of culture-based color schemes and design
- Production level specs to ensure direct handover for implementation of the HMI



L4 AUTONOMOUS VEHICLE HMI STRATEGY & SOLUTIONS

L4 Autonomus

HMI Strategy

Concept Visualization

Context

To define HMI strategy for a Level-4 autonomous environment where interactions are complex and safety critical.



Key Highlights

- Detailed visualization of the focus area in the context of L4 vehicles to get a first-person view of the experience
- Define a clear strategy with a well-defined roadmap of implementation for the near as well as long-term future



Transfer of Control

ADAS	V2X	Personalization
Trust	Driving Styles	Motion Sickness
Mode Confusion	Sleep Prevention	Secondary Controls
MRM	Navigation	
Inadvertence	DMS	

HMI PLATFORM EVALUATION & ENHANCEMENT

HMI Platform Evaluation

Concept Visualization

2D-3D integration

Context

Transforming the overall driver experience by upgrading the existing cluster to a new look and feel, integrating advanced 3D-based features like ADAS, V2X, etc., and optimizing for platforms.

Key Highlights

- Optimization on cost and performance
- Strategizing user experience with development technology
- Adaptability to EV and other platforms
- Upgrading the entire cluster into an enhanced 3D experience



PRODUCTION HMI FOR EV PASSENGER VEHICLES

Production HMI Design

End-to-end Design Engagement

Context

The customer had an existing non-EV HMI platform which they preferred to repurpose in a smart way to give a whole new perception of a completely new experience designed specifically for EV.

Key Highlights

- Visualizing state-of-the-art features like vehicle health monitoring, safety and security, driving and trip analytics, etc.
- Communicating smart drive tech features like regenerative braking and hill ascend/descent assistance
- Recognition of the work delivered with prestigious awards



UX FOR MaaS – CAR SHARING AUTOMOTIVE MAJOR

Passenger Vehicle

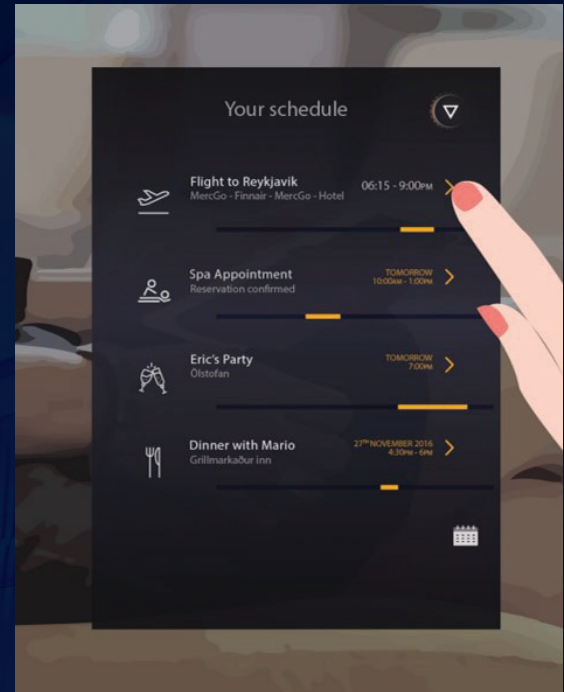
Shared Mobility

Context

A ride sharing platform to enable a seamless and intuitive experience for the users in the new age mode of mobility as a service.

Key Highlights

- Interactive digital prototype to enable easy demonstration and communication for various stakeholders
- A scalable UX framework proposed to accommodate feature upgrades and additions
- Use case visualization as visual storyboards to communicate the integration within the user lifestyles



ECO LOUNGE – SUSTAINABLE INTERIORS

Contemporary

Poised

Elevated

Context

The interior design takes cues from Scandinavian and Mediterranean influences, with a spine-like central structure and a cool box with a wine glass holder.

Upcycled wood, recycled materials, and sustainable plastics are used to create a sustainable ambiance, promoting environmental consciousness.



DYNAMIC LUXE

Opulent

Exquisite

Elegant

Context

This theme immerses the user in an atmosphere of opulence and luxury. Each tactile encounter evokes a sense of sumptuousness as the carefully selected materials exude an aura of exquisite grandeur.

The front seats emanate a refined elegance reminiscent of an executive chair, while the rear seats provide a haven of indulgence akin to a luxurious couch.



SERENITY – THE COMFORT OF HOME

Cozy

Earthy

Inviting

Context

This theme immerses the user in an atmosphere of opulence and luxury. Each tactile encounter evokes a sense of sumptuousness as the carefully selected materials exude an aura of exquisite grandeur.

The front seats emanate a refined elegance reminiscent of an executive chair, while the rear seats provide a haven of indulgence akin to a luxurious couch.



AR CAR CONFIGURATOR

Augmented Reality

Configurator

Customization

Context

A car visualizer that enables users to customize a car's appearance and view various parts.

Uses Snapdragon SDK with plane detection for A3 glasses and the Unity3D engine to create the car model and dashboard.

Key Highlights

- Users can customize and personalize a vehicle
- Helps increase engagement, generate interest, and create awareness about the vehicle and make an informed purchase
- Helps OEMs create a virtual experience that is easily accessible and scalable, communicate variants, features, updates, and launches of their products



AR PRODUCT/ EXPERIENCE VISUALIZATION

Augmented Reality

Market Place

Virtual Experience

Context

This experience will help to overcome the lack of understanding and difficulty in showcasing large audience, and to emphasize the details and part-level functionalities of the automotive

Explore product specifications and functionalities through exploded views and ghost vision by clicking on hotspots via the gaze feature.



Key Highlights

- Increased appreciation for the product as internal mechanisms are highlighted
- Greater reach to a wide variety of audiences
- Easy and deeper understanding of the product and its part-level features

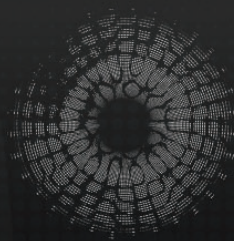


ABOUT TATA ELXSI

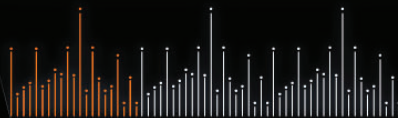
Tata Elxsi is among the world's leading providers of design and technology services across industries, including automotive, broadcast, media, communications, healthcare, and transportation.

Tata Elxsi helps customers reimagine their products and services through design thinking and the application of digital technologies.

With a multi-disciplinary team of design researchers, strategists, product designers, UX and UI designers, technologists, and engineers, Tata Elxsi helps clients globally bring new ideas and award-winning products and services to market. For over 30 years, we have been helping brands differentiate and win.



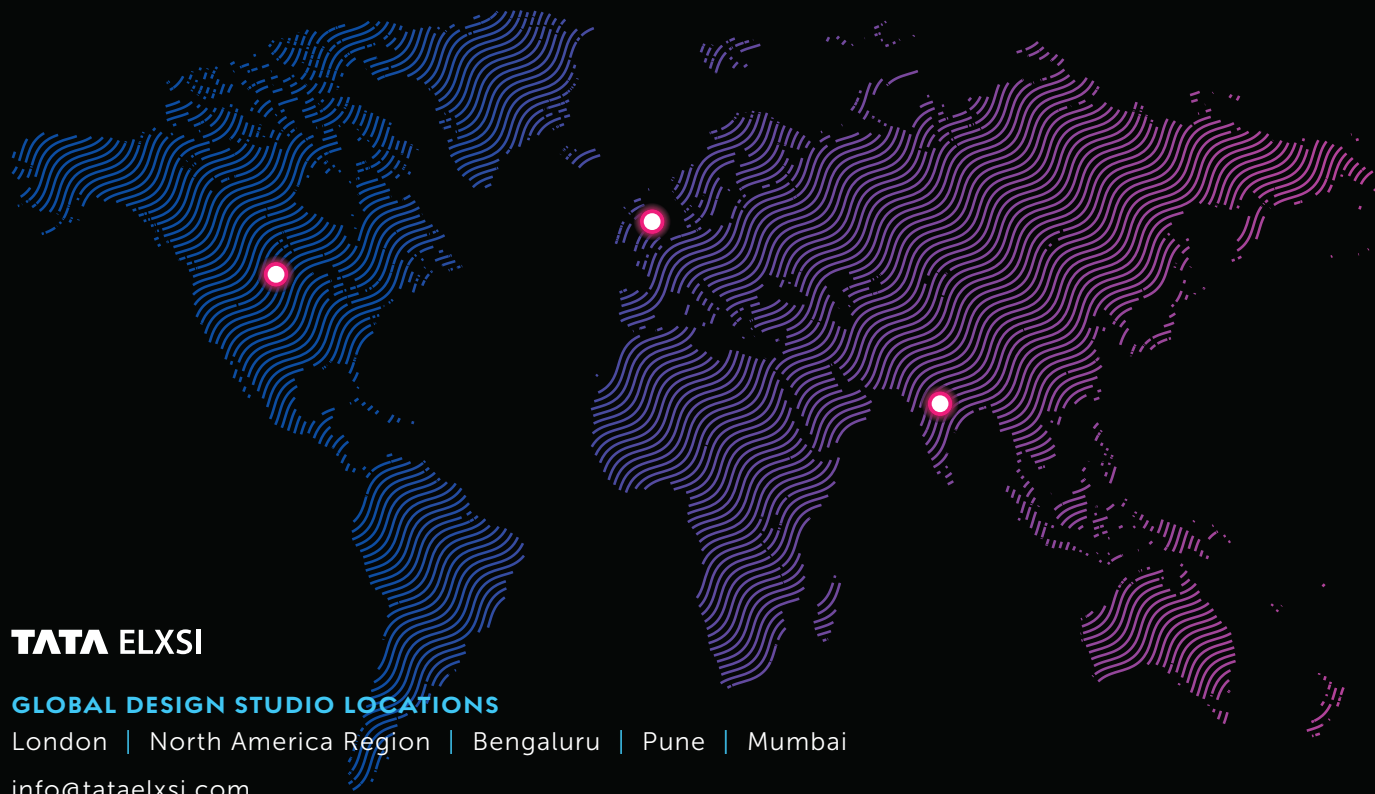
ETA Lilycove Bay
(19 miles)
25 minutes



All My Days
Alexi Murdoch - 2006



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TATA ELXSI

GLOBAL DESIGN STUDIO LOCATIONS

London | North America Region | Bengaluru | Pune | Mumbai

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