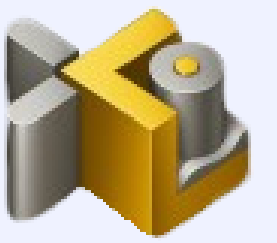
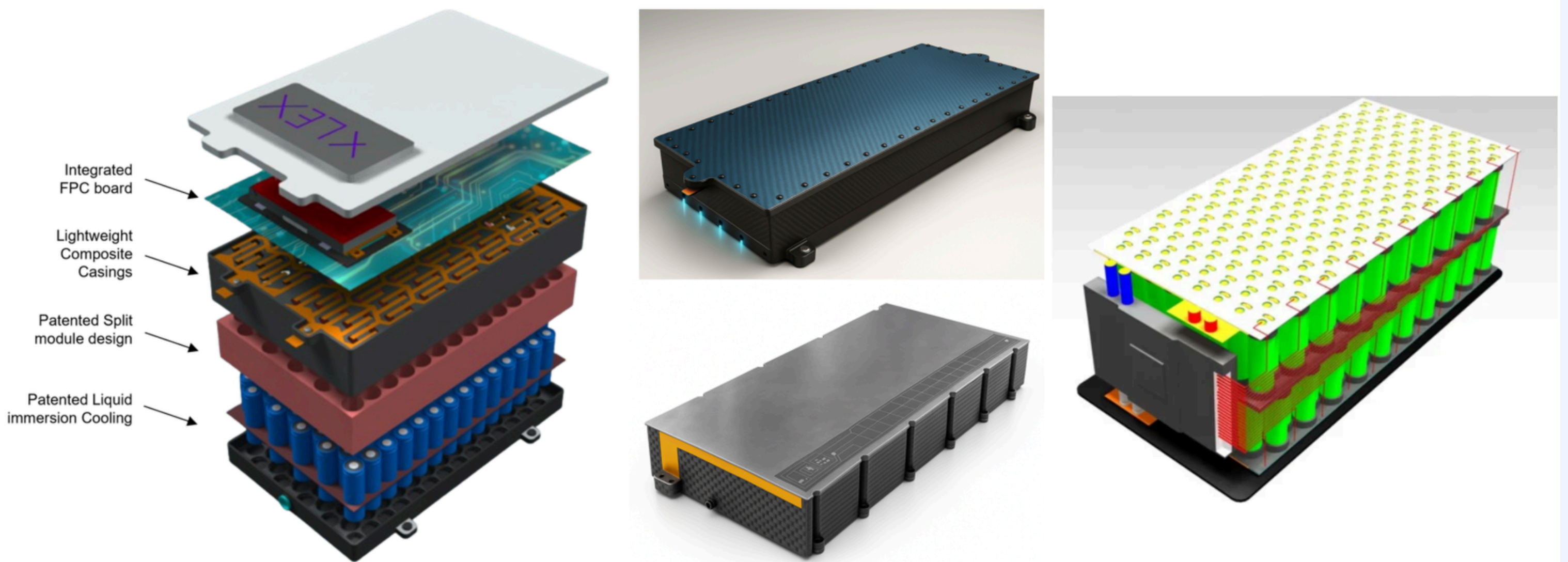




# A SCALABLE SMART BATTERY PACK TECHNOLOGY FOR EVS, DRONES, ROBOTICS, AND DEFENCE PLATFORMS.



**XLEX Batteries Private Limited**



## Problem Statement

High R&D costs, long development cycles, and dependence on imported battery technologies create significant barriers for sectors such as EVs, drones, robotics, aerospace, defence, and energy systems. Existing battery packs often lack customization and thermal stability required for diverse applications. India therefore needs indigenous, compact, and thermally stable battery solutions to reduce costs, bridge technological gaps, and accelerate the deployment of advanced electric technologies.



**Surbhi Pandya**

## Technology

The project develops a biomimicry-inspired thermal battery architecture that integrates custom-designed cell holders, in-house busbars, and a smart Battery Management System (BMS) for uniform heat dissipation and enhanced safety. The design enables lightweight, compact, and thermally stable battery packs with optimized performance. Key components are indigenously designed and manufactured, supporting scalable deployment across EVs and other high-performance applications.



**Pranav Nagaveykar**

## Highlights

The technology can be applied across EVs, drones, robotics, marine systems, aerospace, defence, energy storage, and smart medical devices. It enables lightweight, compact, and thermally stable battery packs with improved safety, longer operational life, and high-power performance. Indigenous design and manufacturing reduce import dependency while enabling customized and scalable energy solutions for emerging technologies.