

Cab Design

A failsafe design approach to make trains safer and more cost effective

BACKGROUND AND CHALLENGE

Poor standardisation of parts and reuse of existing cab structures were plaguing the client. Similarly, there were challenges around the cab desk design, access to equipment, failure to meet weight targets, and structural integrity.

SCOPE OF WORK

- Create cab exterior skin, its mountings, and the Class B surface
- Design and integrate exterior systems and cab desk design
- Design cab back wall, side wall, and ceiling panel
- Integrate driver and co-driver seating system
- Develop the wash wipe system pipe work

SOLUTION

- Standardised fixtures for multiple panels and hinged light panel design
- Created a foldable cab desk design and optimised space for equipment
- Used cross sections for extrusion parts and redesigned wiper parking position
- Redefined profiles for interior and exterior trim interfaces



IMPACT

- Simplified windscreen support structure, resulting in 30% reduction in weight and cost
- Simplified interconnected metal work and improved sightlines
- Reused and optimised existing interior and exterior systems and improved ergonomics