

# Weight Reduction Technology

Commitment to Continuous Improvement in EV Performance

**NISSAN**



# CFRP for Light Weight Improves Range, Acceleration and Visibility

- Only half the weight of steel, CFRP extends cruising range and improves the Nissan IDS Concept's acceleration
- By allowing slimmer structural elements, CFRP also increases visibility



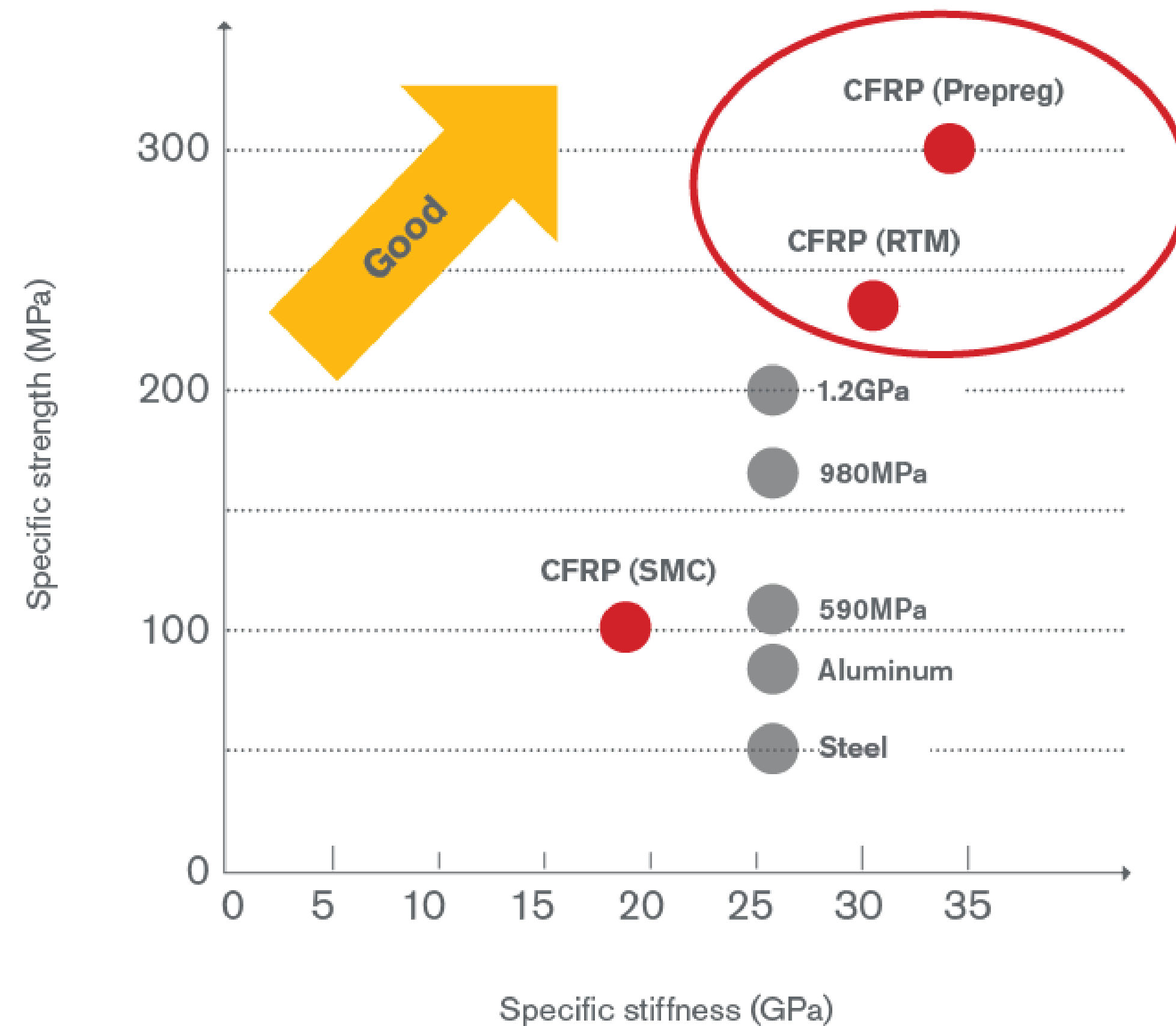
**CFRP**



**STEEL**

# CFRP Features High Rigidity and Strength

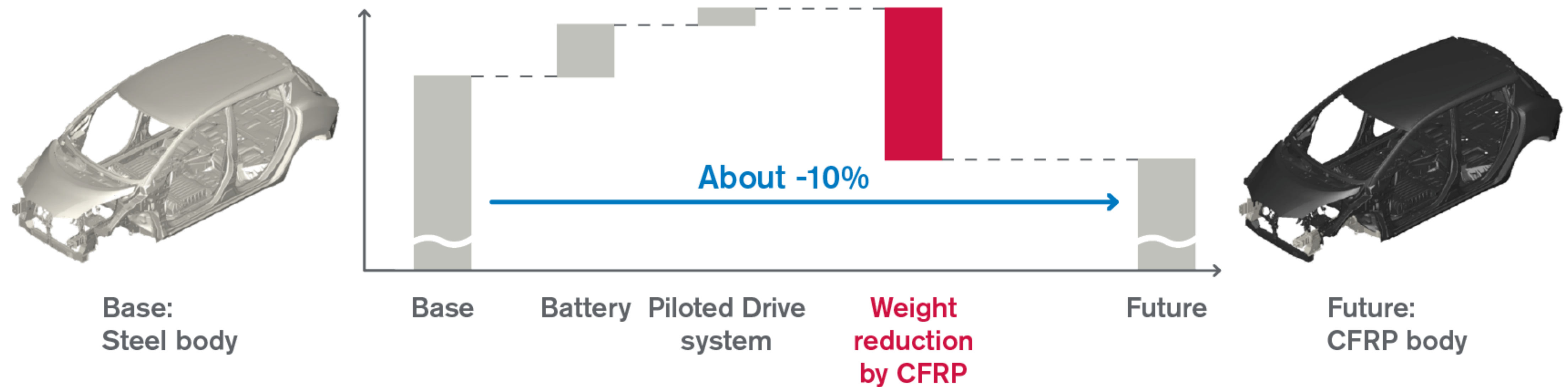
- CFRP (Carbon Fiber Reinforced Plastic) is **an advanced material featuring high rigidity and high strength**
- Specific strength: more than twice that of aluminum; 1.2 to 6 times that of sheet steel
- Specific stiffness: about 1.3 times that of aluminum or sheet steel





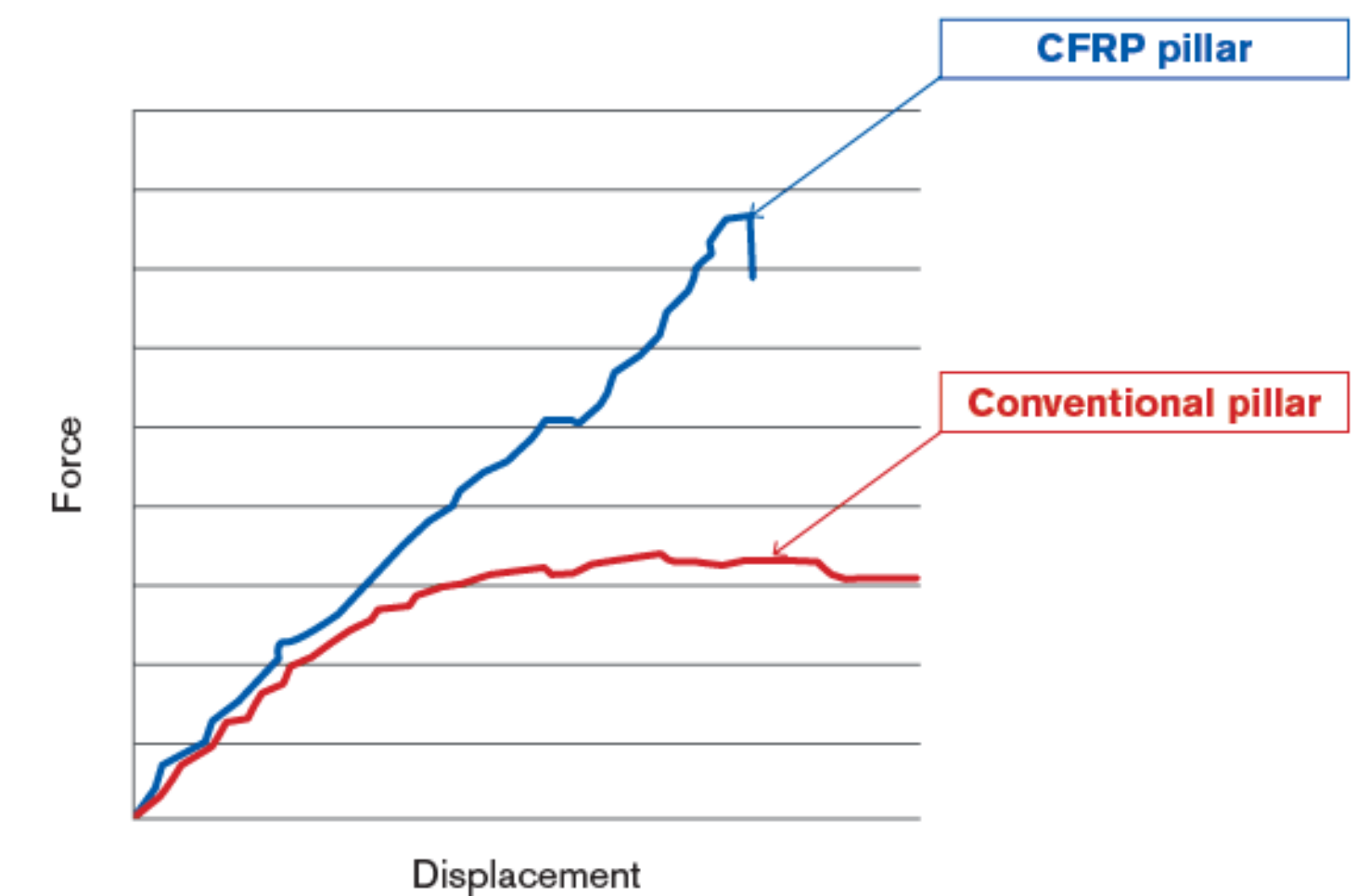
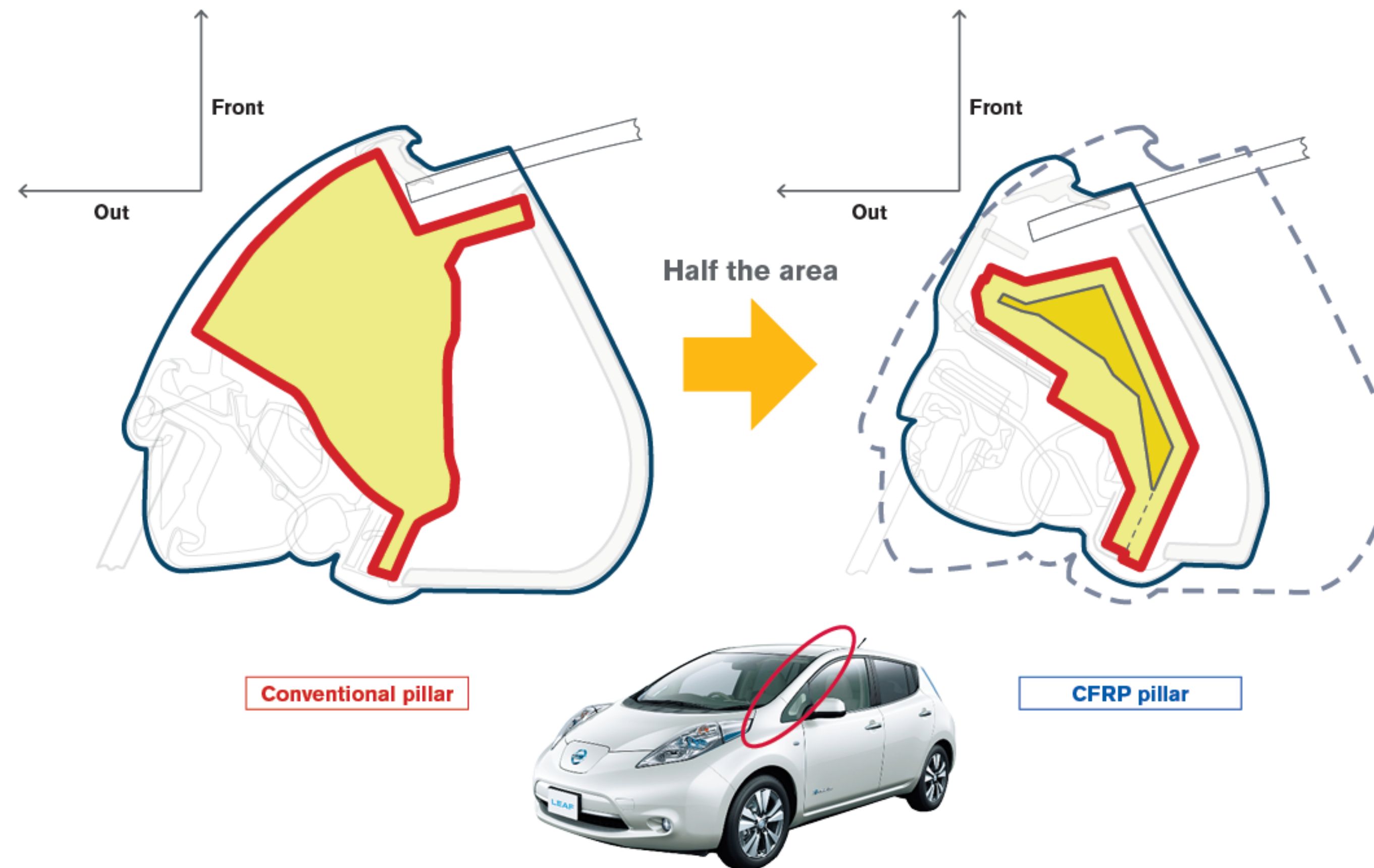
# Advantages of Light Weight

Ultra-light and stiff CFRP reduces weight to compensate for mass added by the Piloted Drive system and increased battery capacity



# CFRP Allows Thinner Structural Members

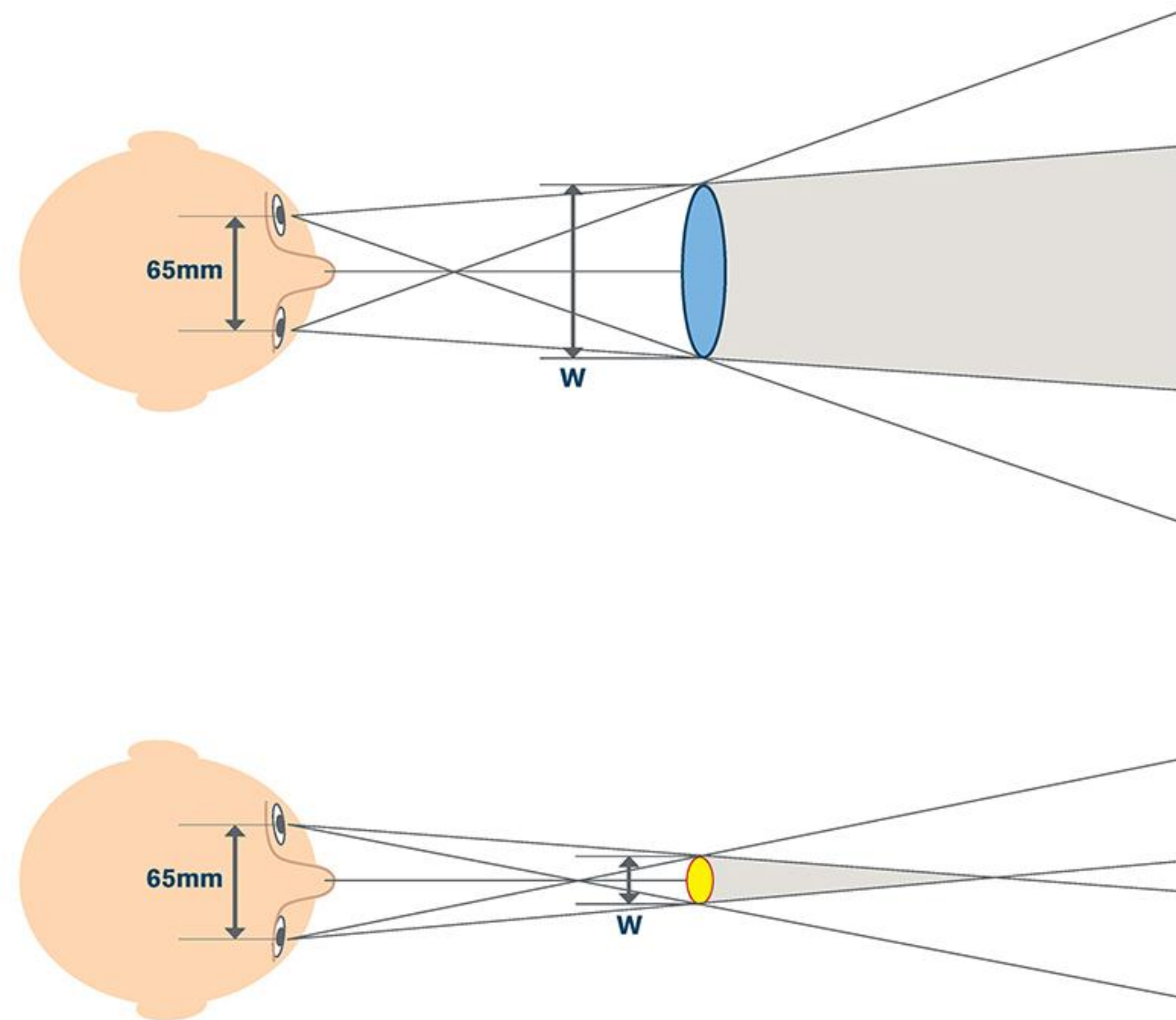
- CFRP offers a better strength-to-weight ratio than high-tensile sheet steel or aluminum
- CFRP can be shaped into slimmer frame members without compromising strength
- Compared to conventional pillars of sheet steel, CFRP pillars can be made half as wide and twice as strong, while simultaneously reducing weight





# Improved Forward Visibility with Slim A Pillars

- Using CFRP, the 'A' pillars can be made thin enough to see around with both eyes
- Erases blind spots at edges of windshield
- Such thinness is not achievable using conventional materials.



Normal pillar



Blind free pillar



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