

Development of Thermoplastic Aileron



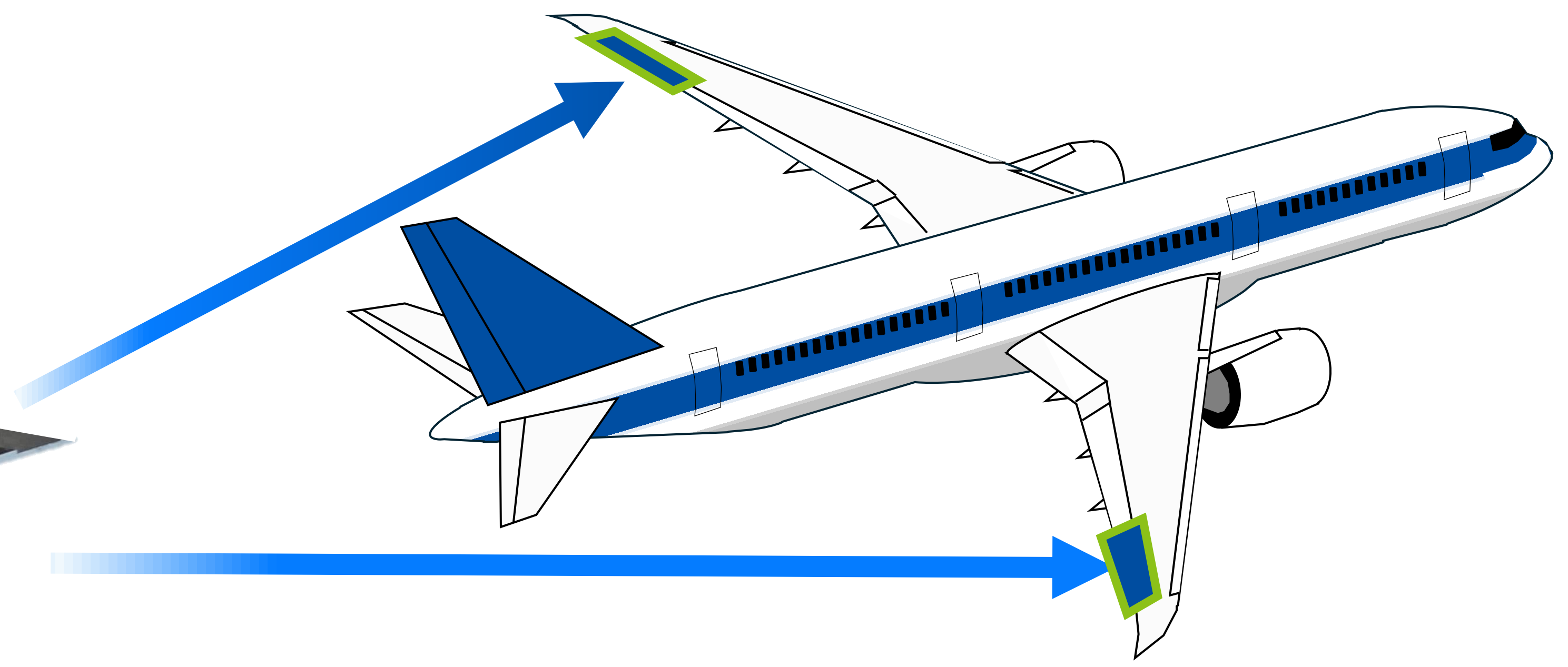
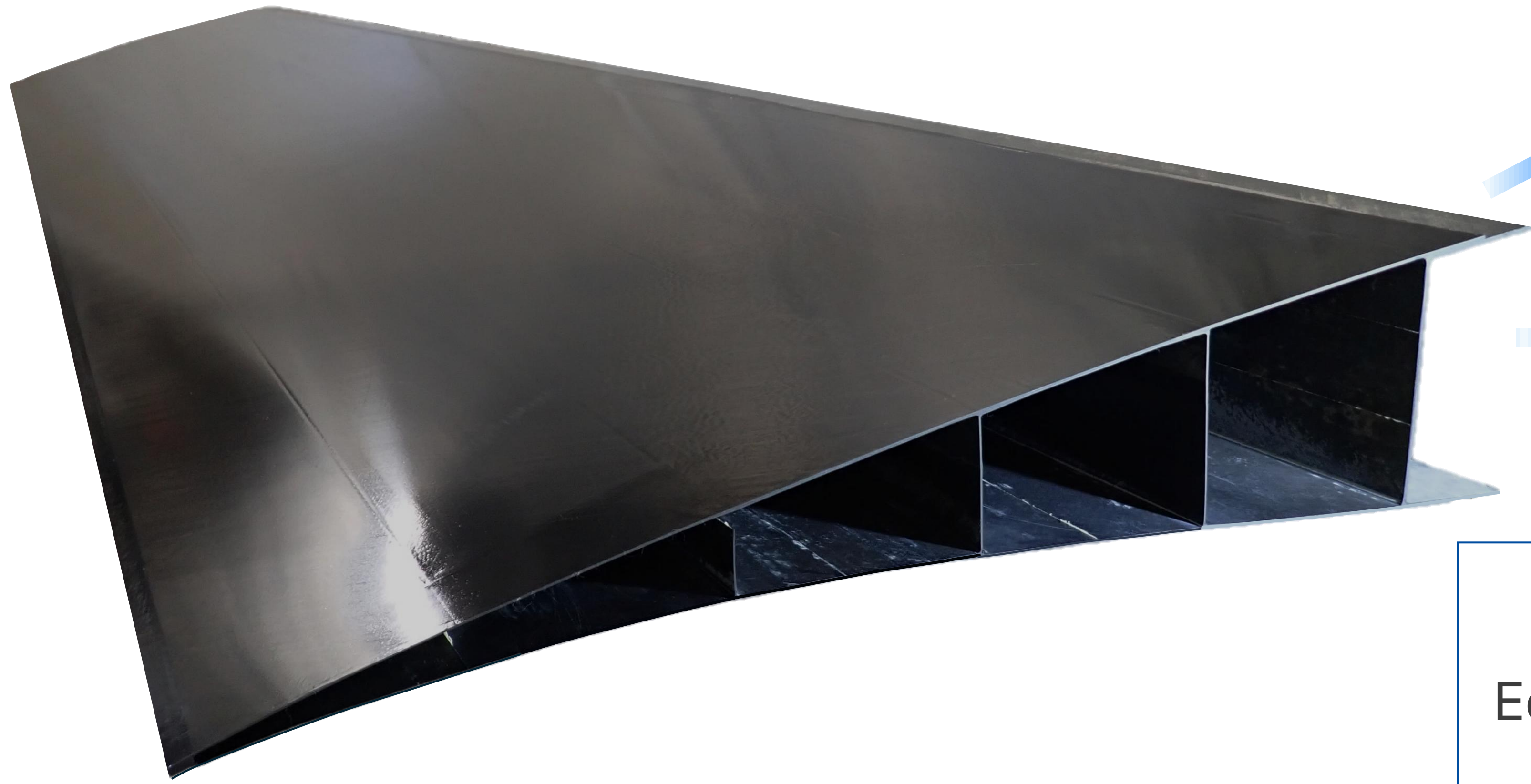
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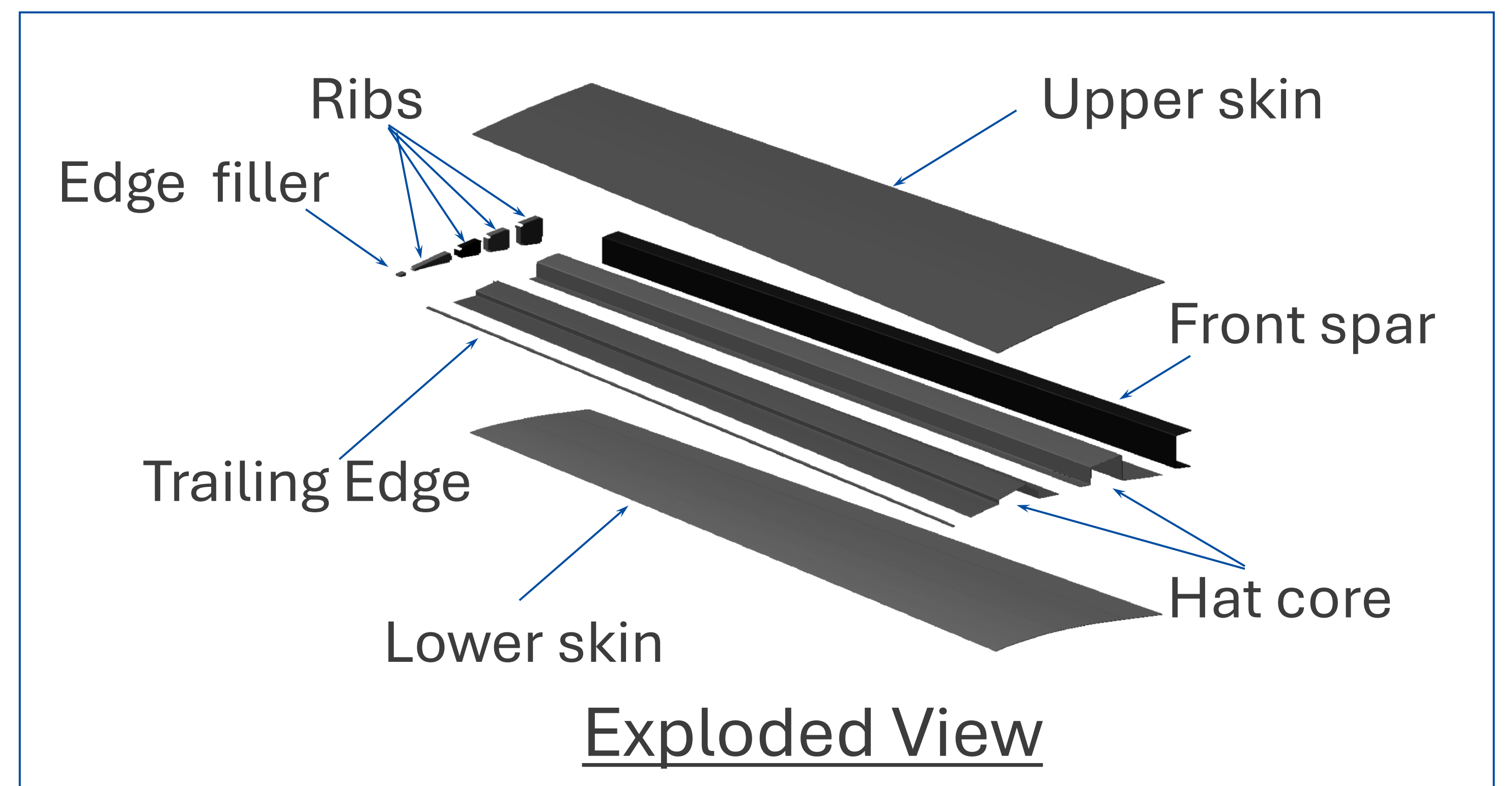
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● Main Target

Aileron for Next-generation Aircraft



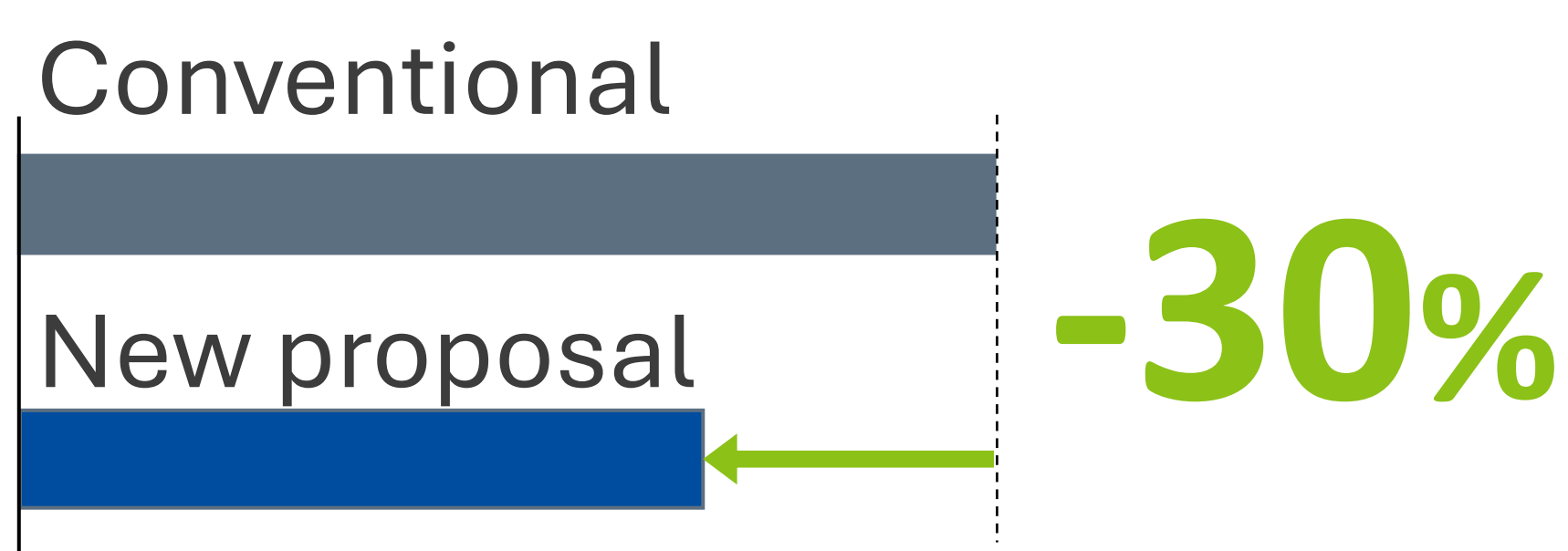
- Thermoplastic Aileron
Material: Toray Cetex® TC1225
(Thermoplastic UD Tape)
Size: 2500 mm × 700 mm × 150 mm



● Technical Advantages

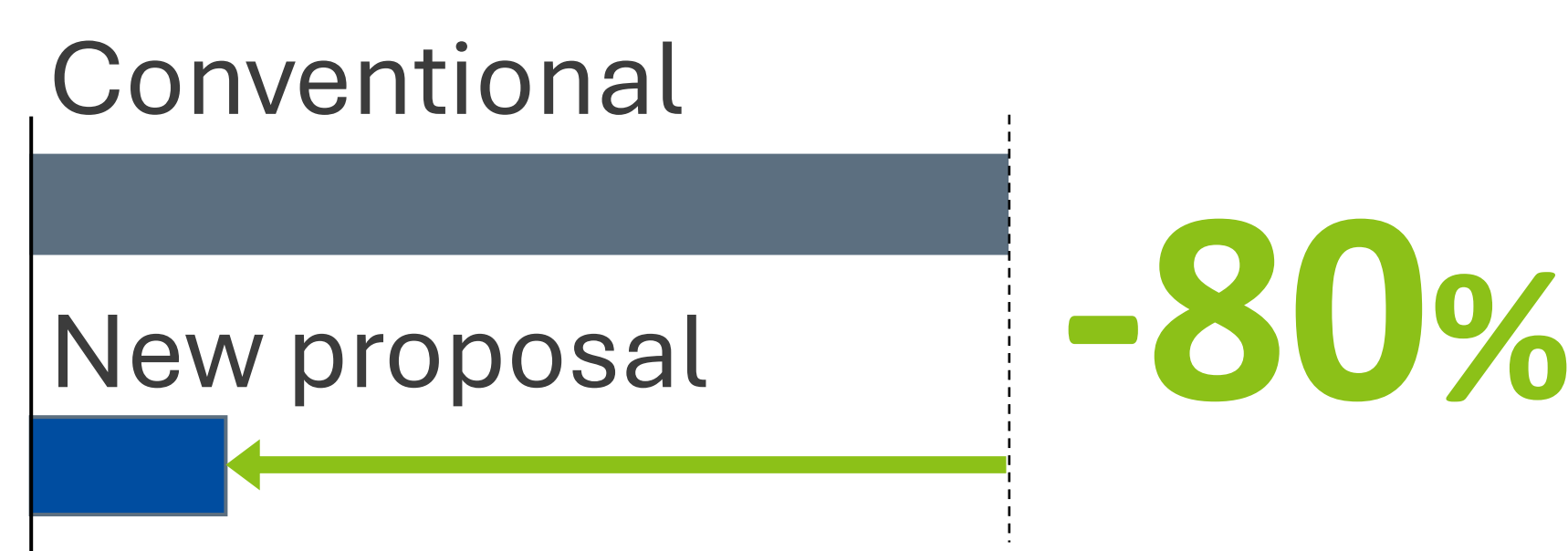
Conventional		New proposal
<p>Metal Aileron</p> <p>✓ Integrated by numerous rivets</p>	<p>Replace</p>	<p>Thermoplastic Aileron</p> <p>✓ Integrated by welding (No rivets)</p>

➤ Weight



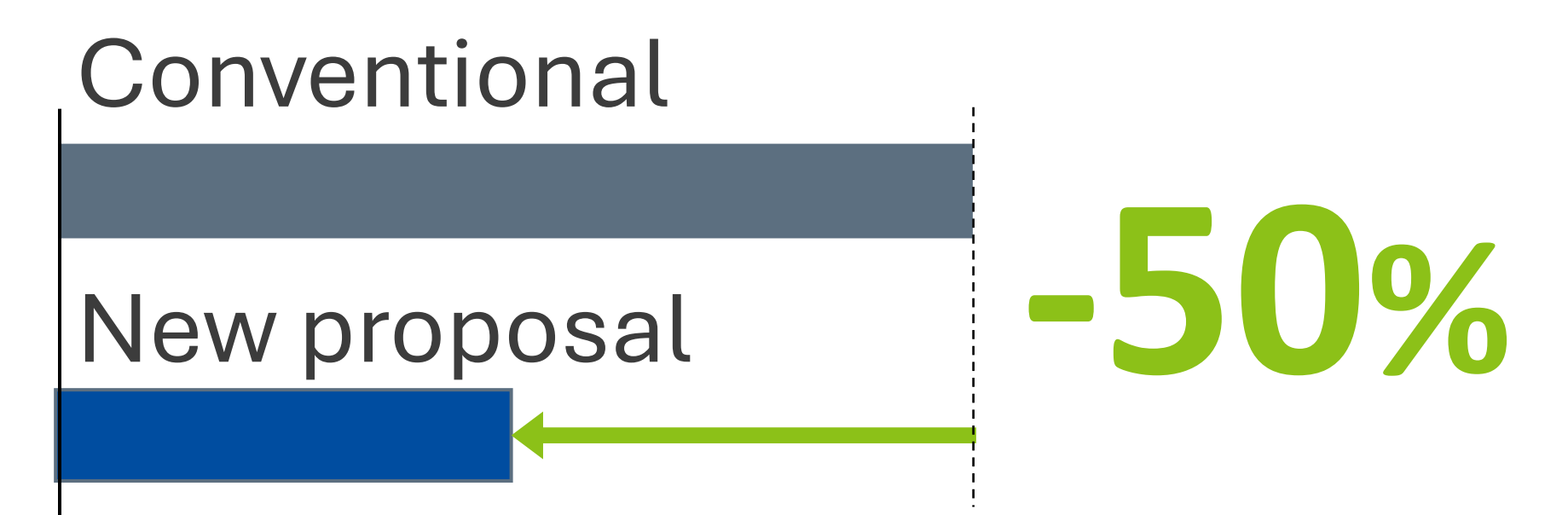
- ◆ Replacing metal with CFRTTP
- ◆ Complex ply drop-off

➤ Cycle time



- ◆ No drilling and fastening
- ◆ Reducing the number of parts

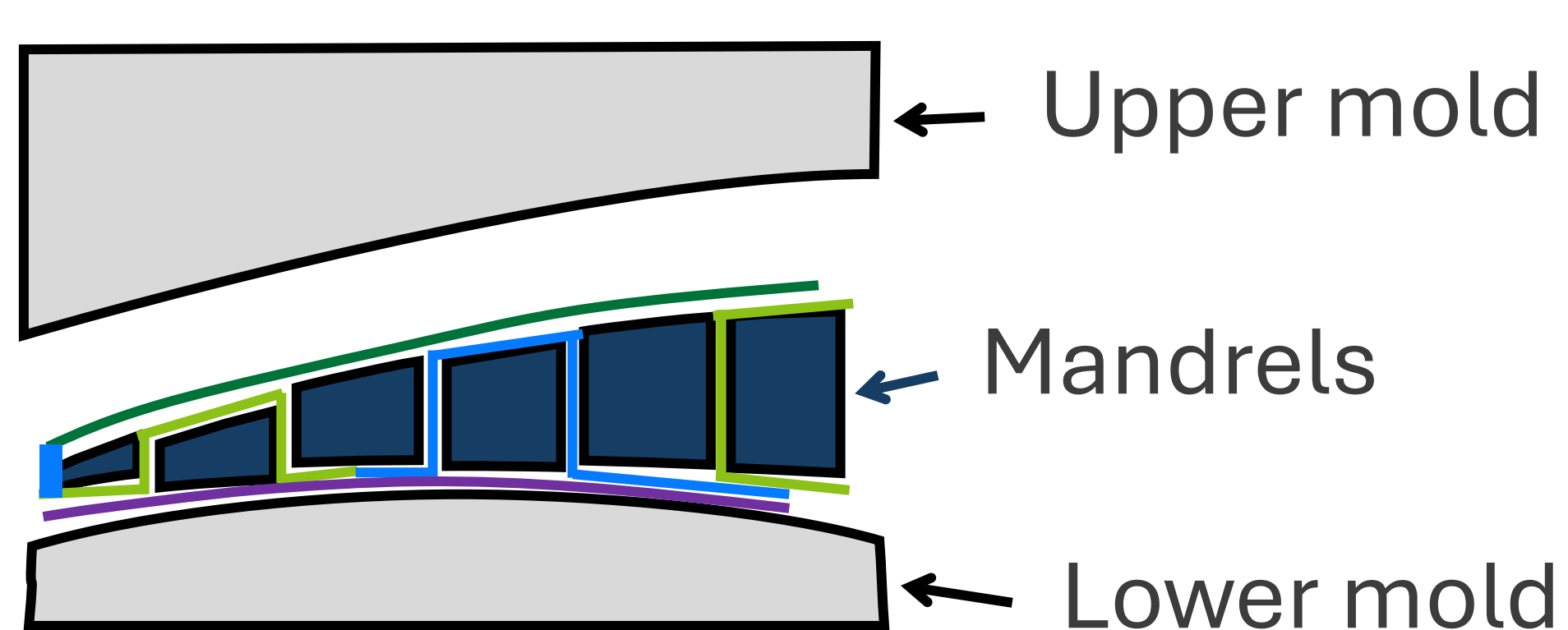
➤ Cost



- ◆ No rivets, adhesive and fay seal

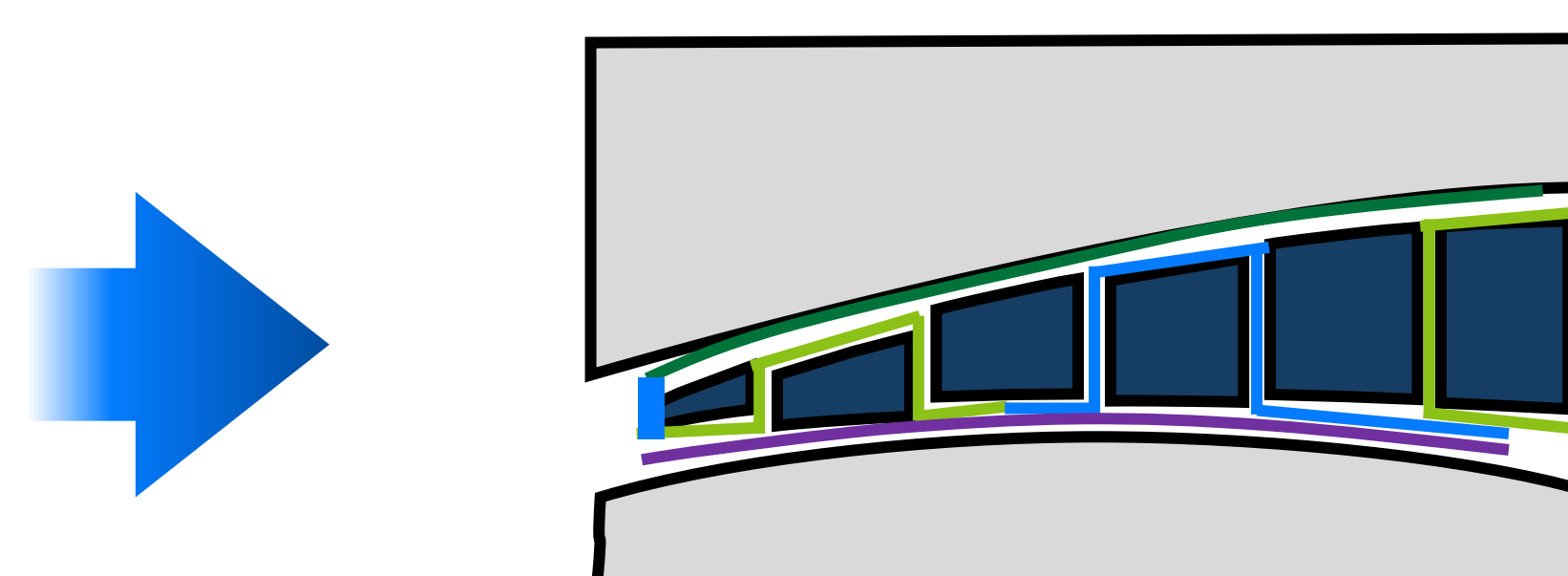
● Manufacturing process

1) Setting



2) In mold welding

Heat and cool mold press



3) Demold mandrels

