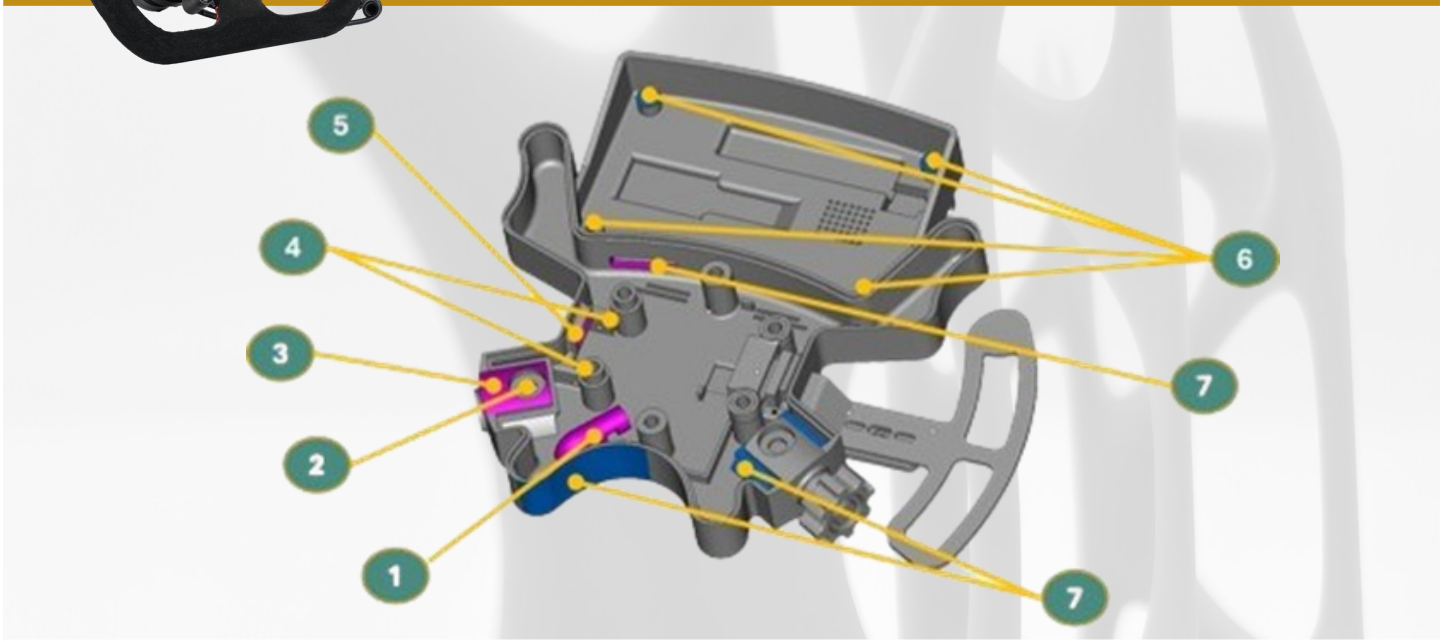
CASE STUDY | O-Rouge

Design for Additive Manufacturing (DfAM)

This steering wheel for professional sim racing teams contains many different parts such as push buttons, an LCD-display and micro switches. The whole assembly consists of seven printed parts; a housing, two micro switches, two shifter handles and two encoder turn buttons, combined with two milled carbon fibre plates.



Optimized design was applied for following functions:

1) Strain relief: the cable entry has been drawn from the back and enters with a curve. A recess has been provided in the channel to tighten the cable with a tension strap and the cable relief is integrated into the design.
2) Positioning slot: a encoder is mounted on the inside and is always aligned in the right position by applying a recess in the inside.
3) Overhang: the design includes overhangs eliminating the need to create two separate parts.
4) Flipper Axe Holes: Additive Manufacturing makes it possible to integrate the axe holes and produce in one time whereas it has to be created separately for injection moulding or milling.
5) Magnet holder:Magnets are glued into this very accurate ‘chamber’.
6) M4 threads: threads were created as parts of the design.
7) Cable hole:the cable hole entry is easy to produce through Additive Manufacturing compared to conventional technologies.
8) 45° Slope angle: by applying a 45 degree angle, support structures for printing are not necessary, resulting in less finishing afterwards.
9) Integrated push buttons have been designed with integrated symbols and guidance for perfect alignment and assembly.

Get in touch with us to know more about DfAM..

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