

GREAT DESIGNS IN STEEL

**Presentations will be available for
download on SMDI's website on
Wednesday, May 22**

GREAT DESIGNS IN **STEEL**

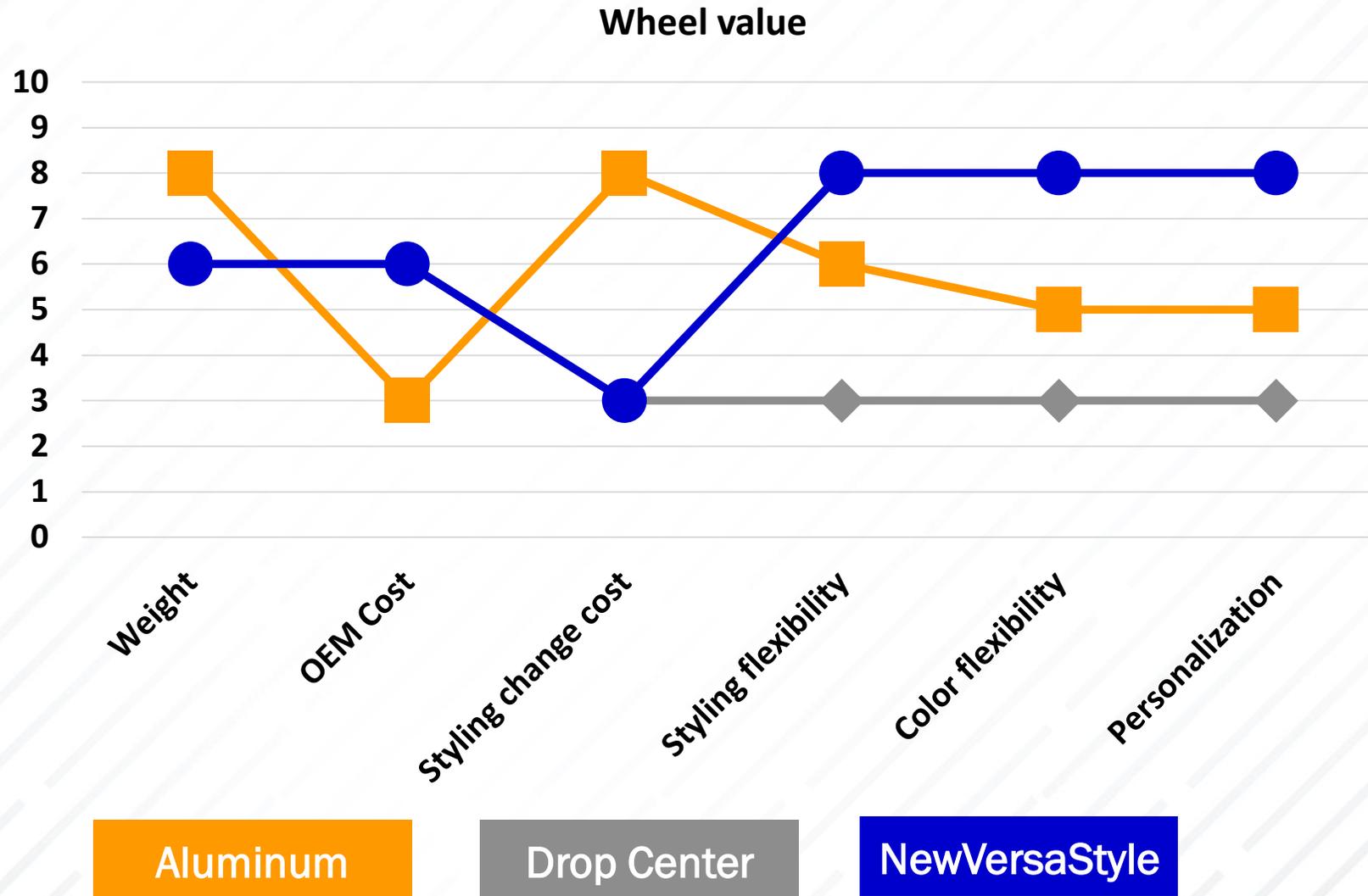
**NEW VERSASTYLE GENERATION: A STYLIZED
AND COST EFFECTIVE HIGH-STRENGTH STEEL
WHEEL OPTION OVER ALUMINUM**

Spagnol, Nicholas [Product Design Eng. Supervisor]

AGENDA

- ❑ Introduction
 - ❑ Benefits of the NewVersaStyle option
 - ❑ NewVersaStyle penetration at US market
- ❑ Optimization skills
- ❑ Structural analysis
- ❑ NewVersaStyle v DropCenter v Aluminum
- ❑ NewVersaStyle application
- ❑ NewVersaStyle video
- ❑ Summary

INTRODUCTION



Aluminum

Drop Center

NewVersaStyle

Better versatility options over aluminum/drop center options

INTRODUCTION

Compact
(C)

Mid-fullsize
CUV (D)

SUV
Pickups

Mini-van
Van



US Light Vehicle platforms

NewVersaStyle to Compact/Mid-Fullsize and SUV/Pickup levels as stylized and cost effective solution

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Mid-fullsize
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Van



Aluminum Take-Rates

NewVersaStyle to Compact/Mid-Fullsize and SUV/Pickup levels as stylized and cost effective solution

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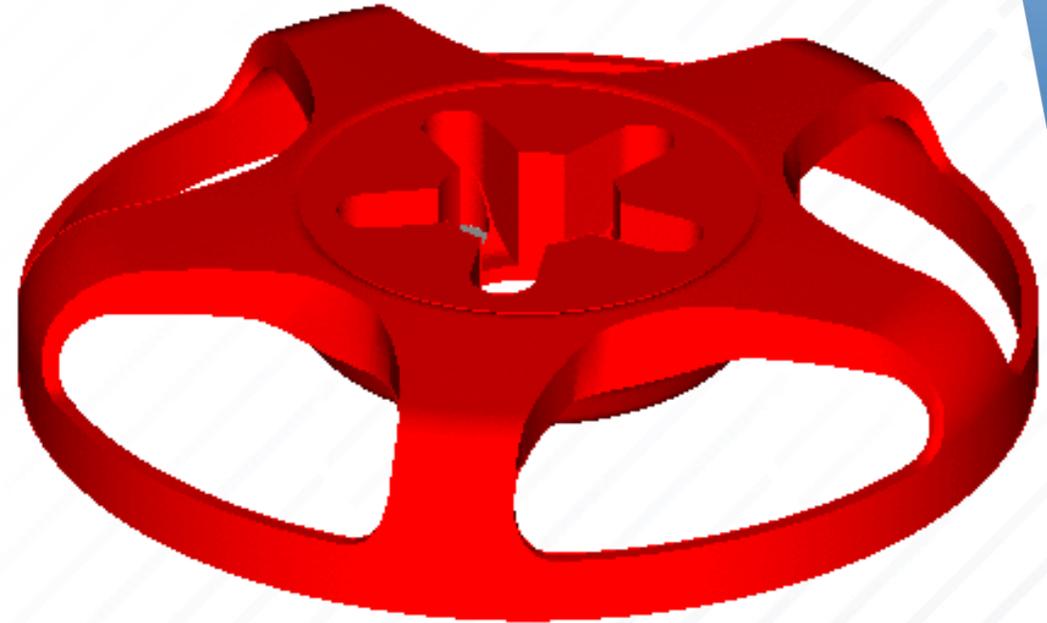
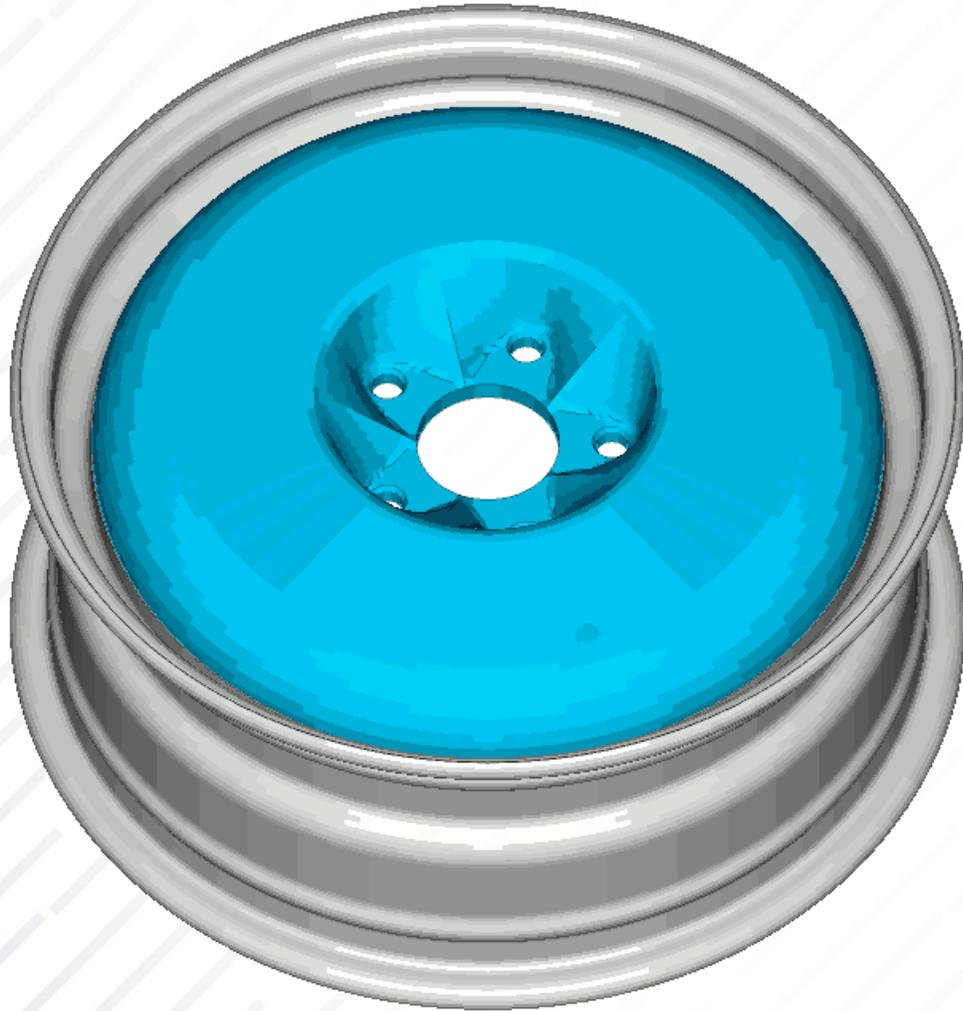


NewVersaStyle penetration

Goes up to ~60%

NewVersaStyle to Compact/Mid-Fullsize and SUV/Pickup levels as stylized and cost effective solution

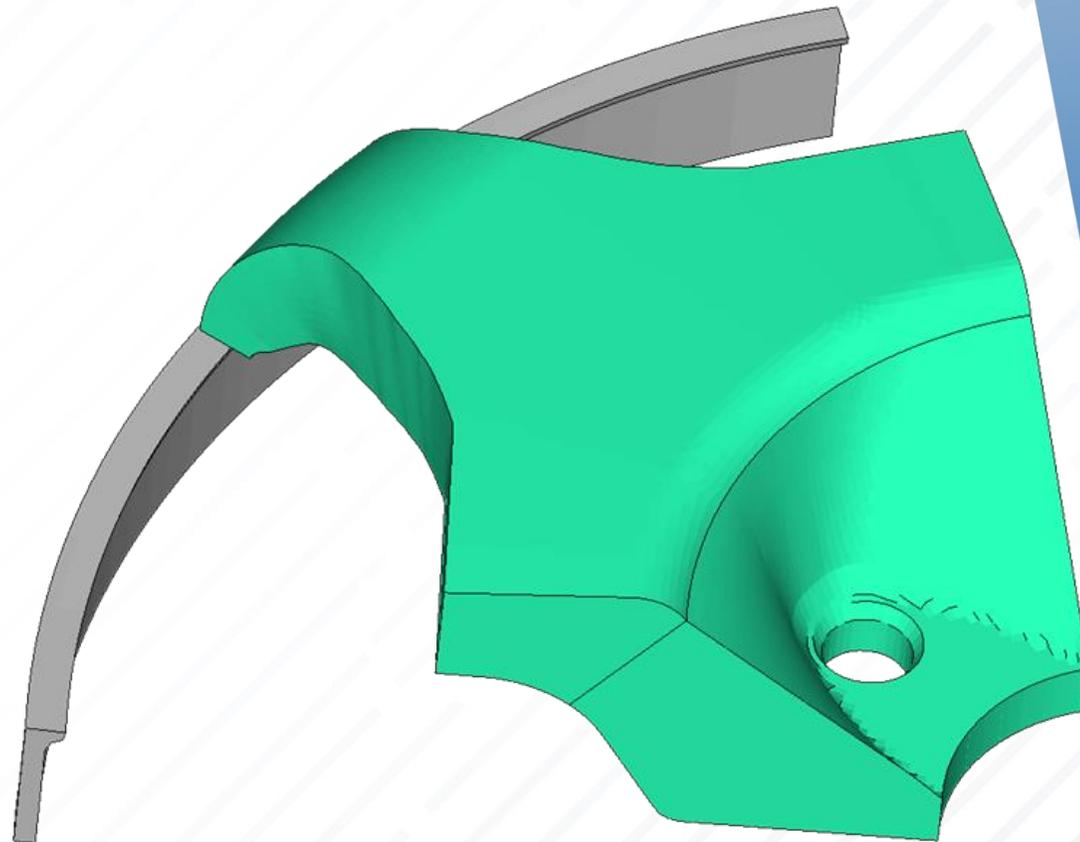
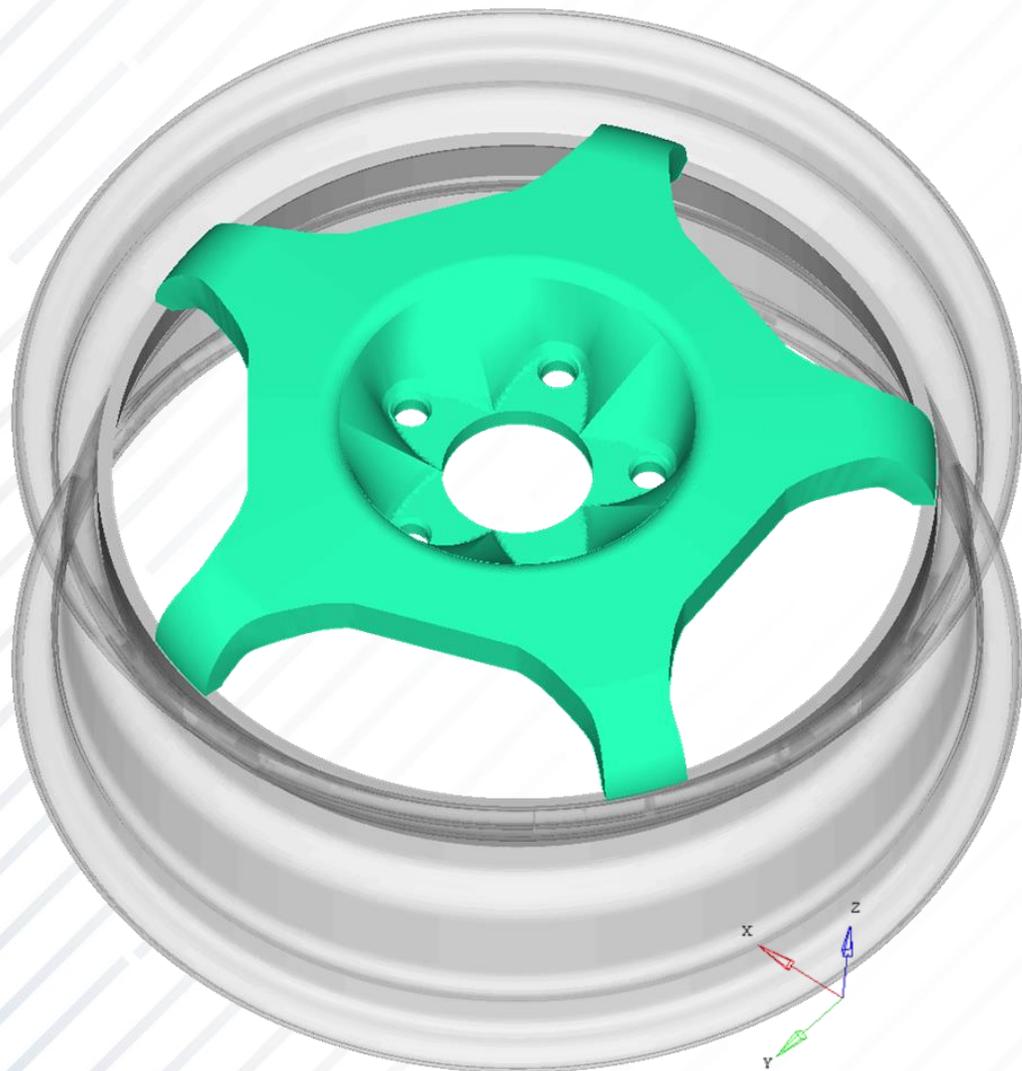
OPTIMIZATION SKILLS



Enhanced optimization flow to achieve the best results

OPTIMIZATION SKILLS

1: Model
Derived Load Case 3 : Iteration 0 : Frame 1



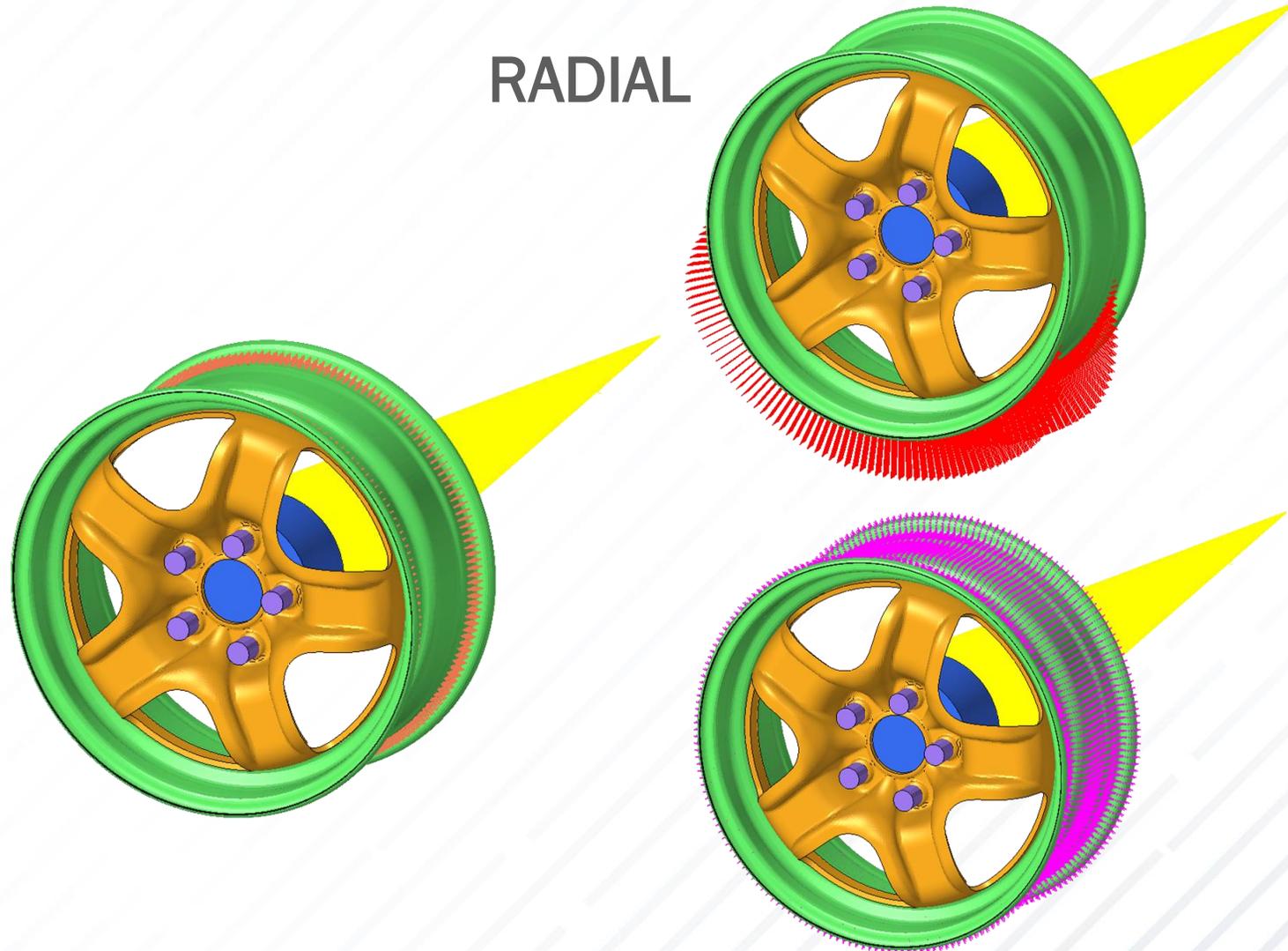
Enhanced optimization flow to achieve the best results

STRUCTURAL ANALYSIS

ROTARY

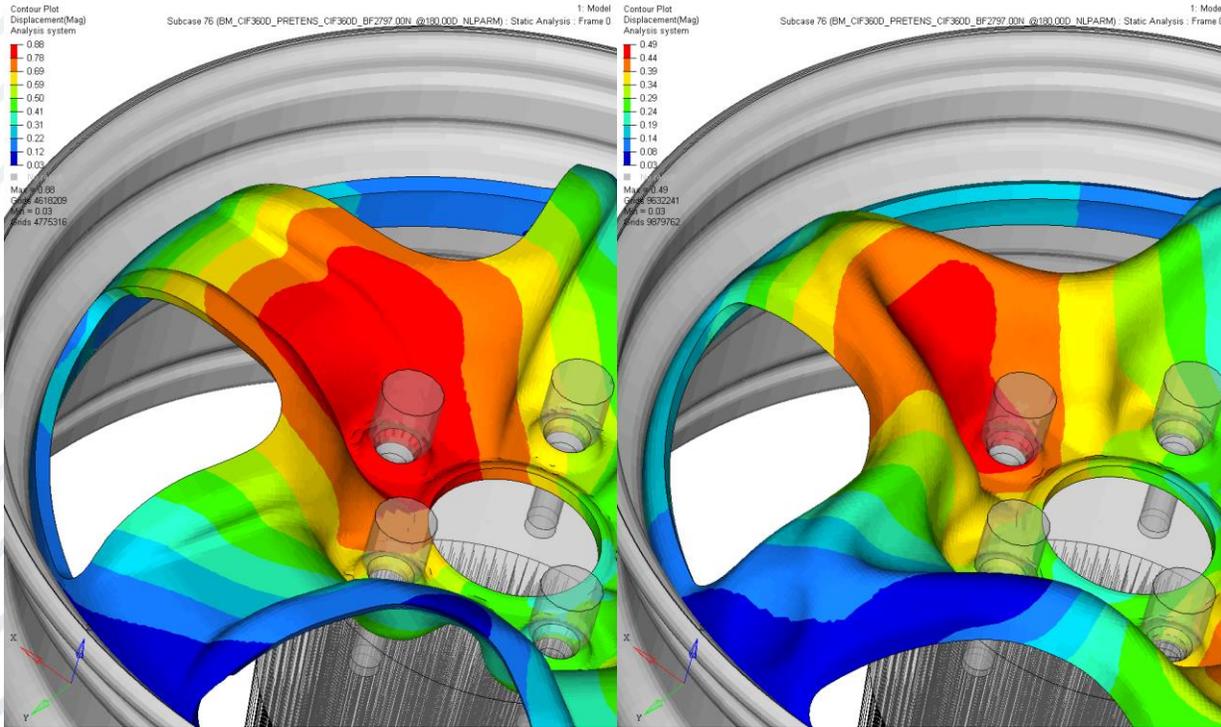


RADIAL

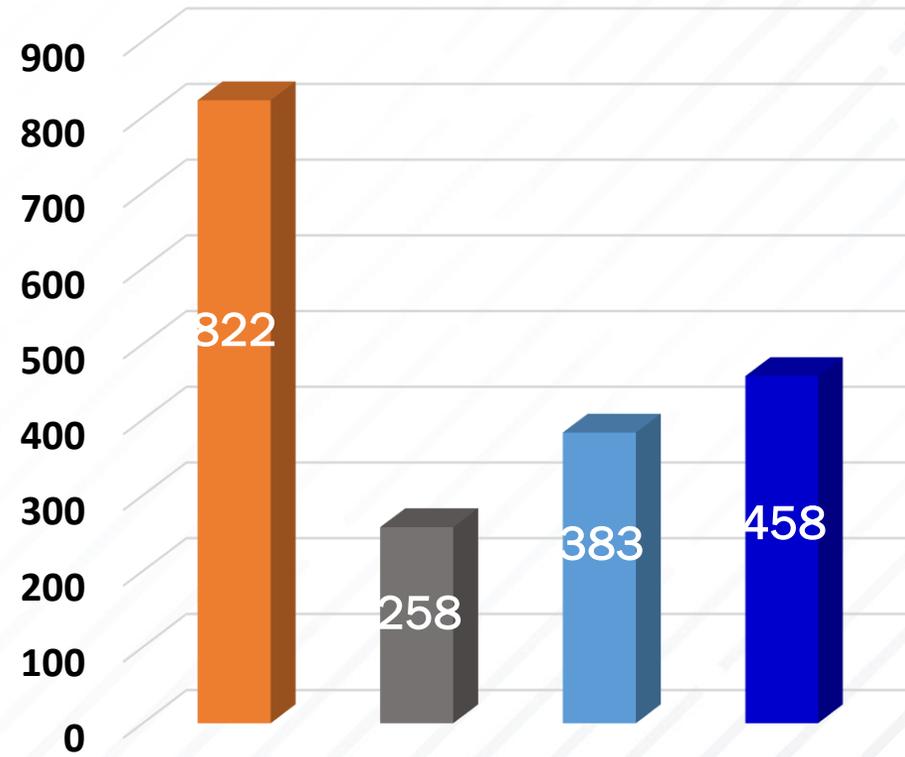


STRUCTURAL ANALYSIS

ROTARY



Torsional stiffness (kNm/rad)



Aluminum

Drop Center

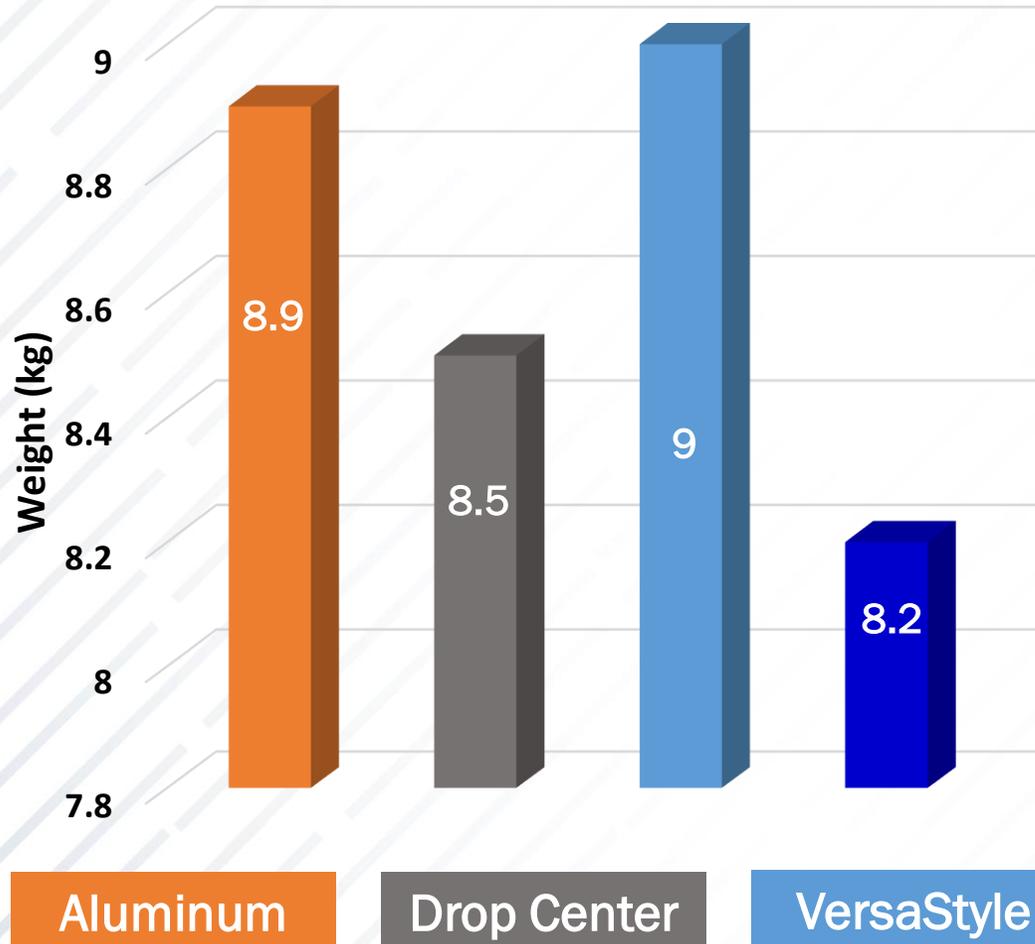
VersaStyle

NewVersaStyle

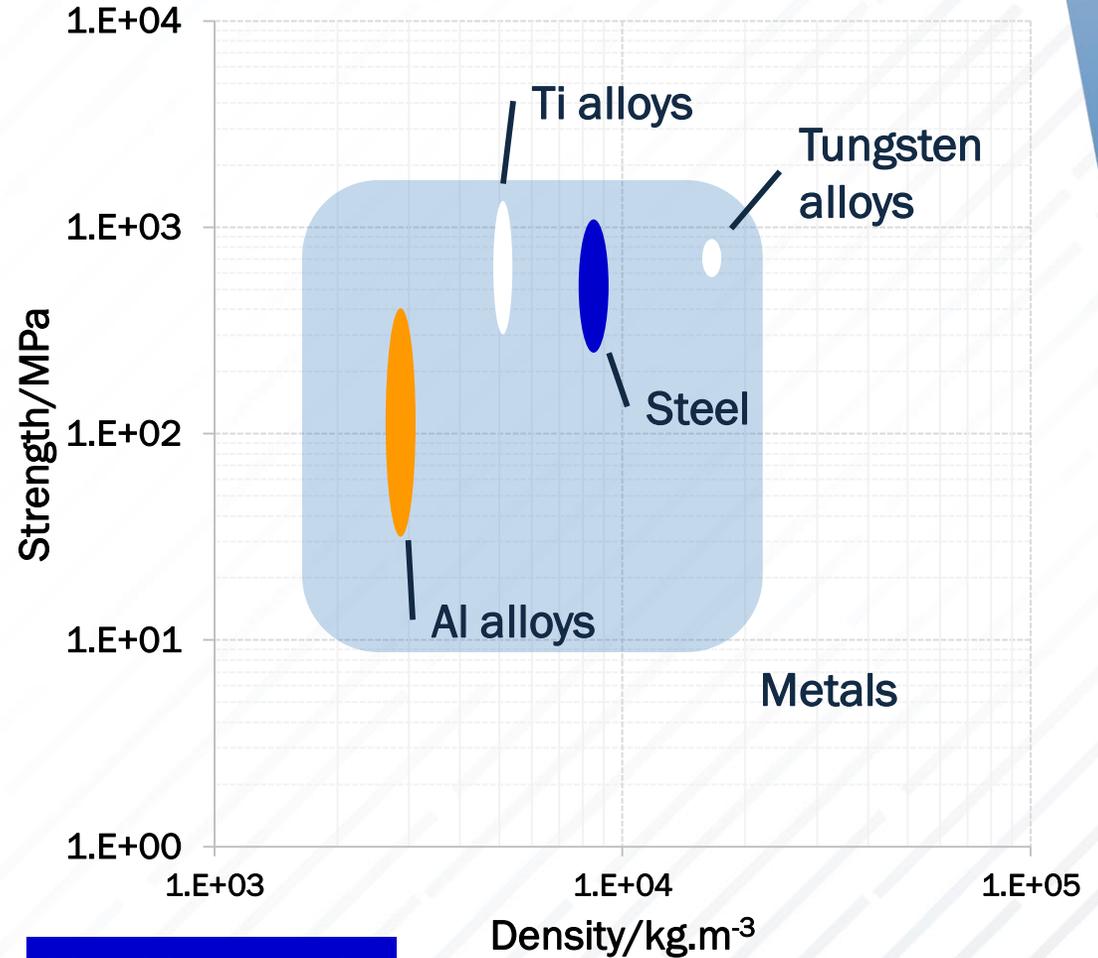
20% higher torsional stiffness than current VersaStyle (40% lower than Al)

VERSASTYLE V ALUMINUM V DROP CENTER

Weight comparison



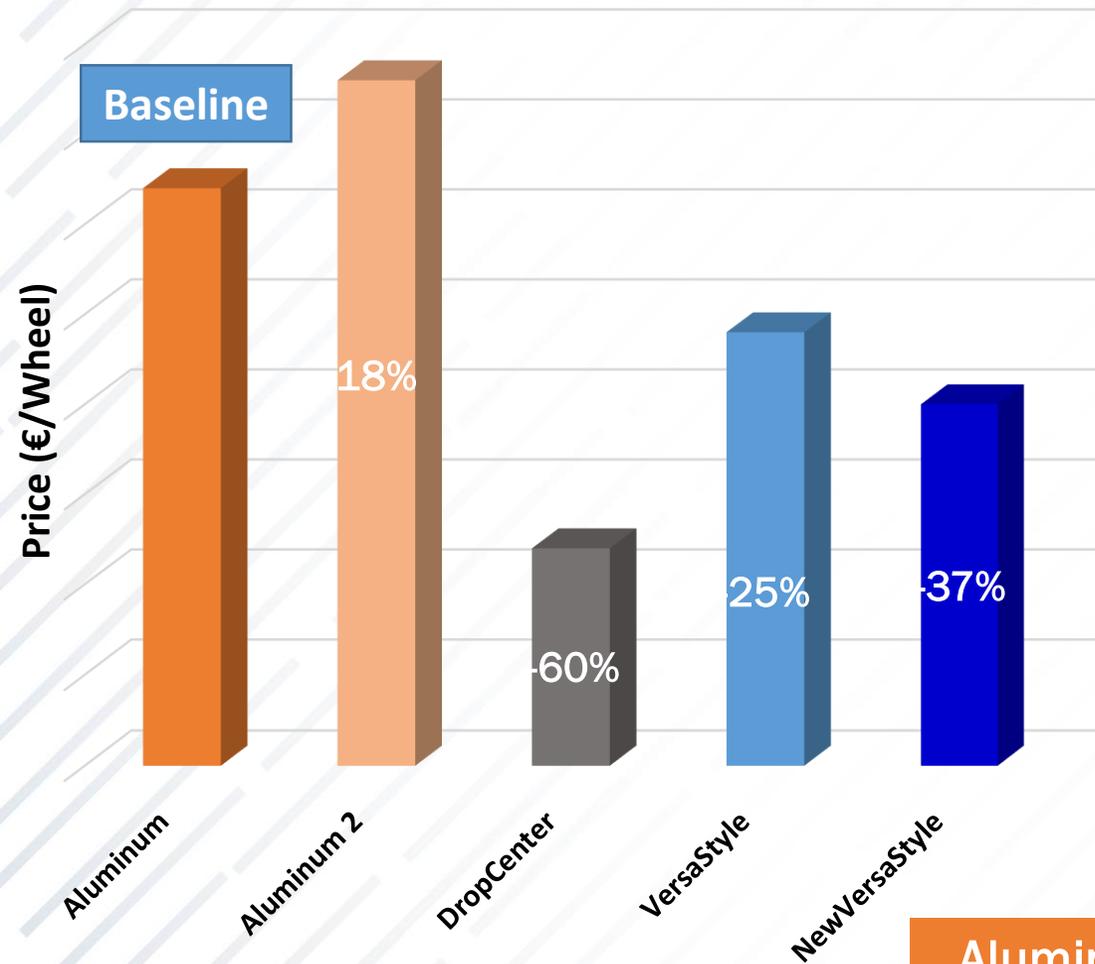
Density / kg.m⁻³



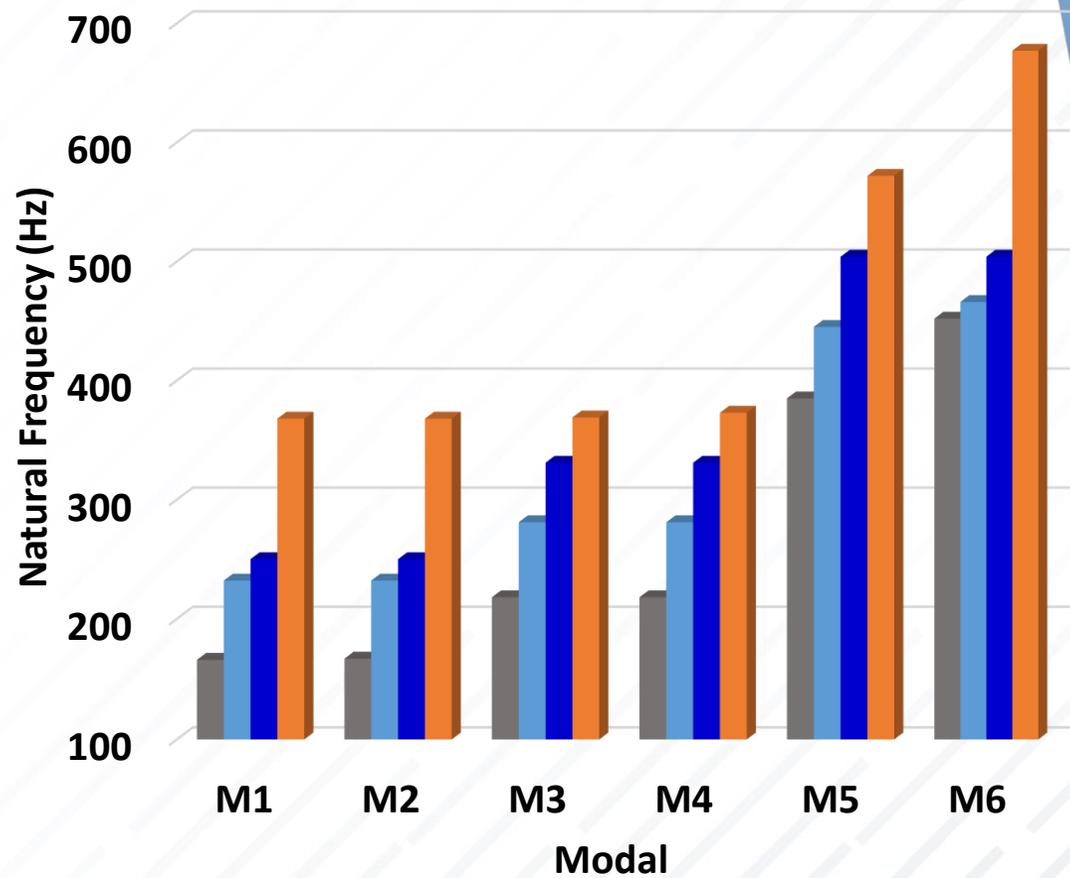
Weight advantages over aluminum

VERSASTYLE V ALUMINUM V DROP CENTER

Price (€/Wheel)



Natural Frequency (Hz)



Aluminum Drop Center VersaStyle NewVersaStyle

Lower price over Aluminum & higher Natural frequency over DC and VS steel wheels

NEW VERSASTYLE APPLICATION



State of art + versatility + brand strengthening

NEW VERSASTYLE APPLICATION



ONE WHEEL, MANY FINISHING VARIATIONS



State of art + versatility + brand strengthening

NEW VERSASTYLE APPLICATION



ONE WHEEL, MANY FINISHING VARIATIONS



State of art + versatility + brand strengthening

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State of art + versatility + brand strengthening

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State of art + versatility + brand strengthening

NEW VERSASTYLE APPLICATION



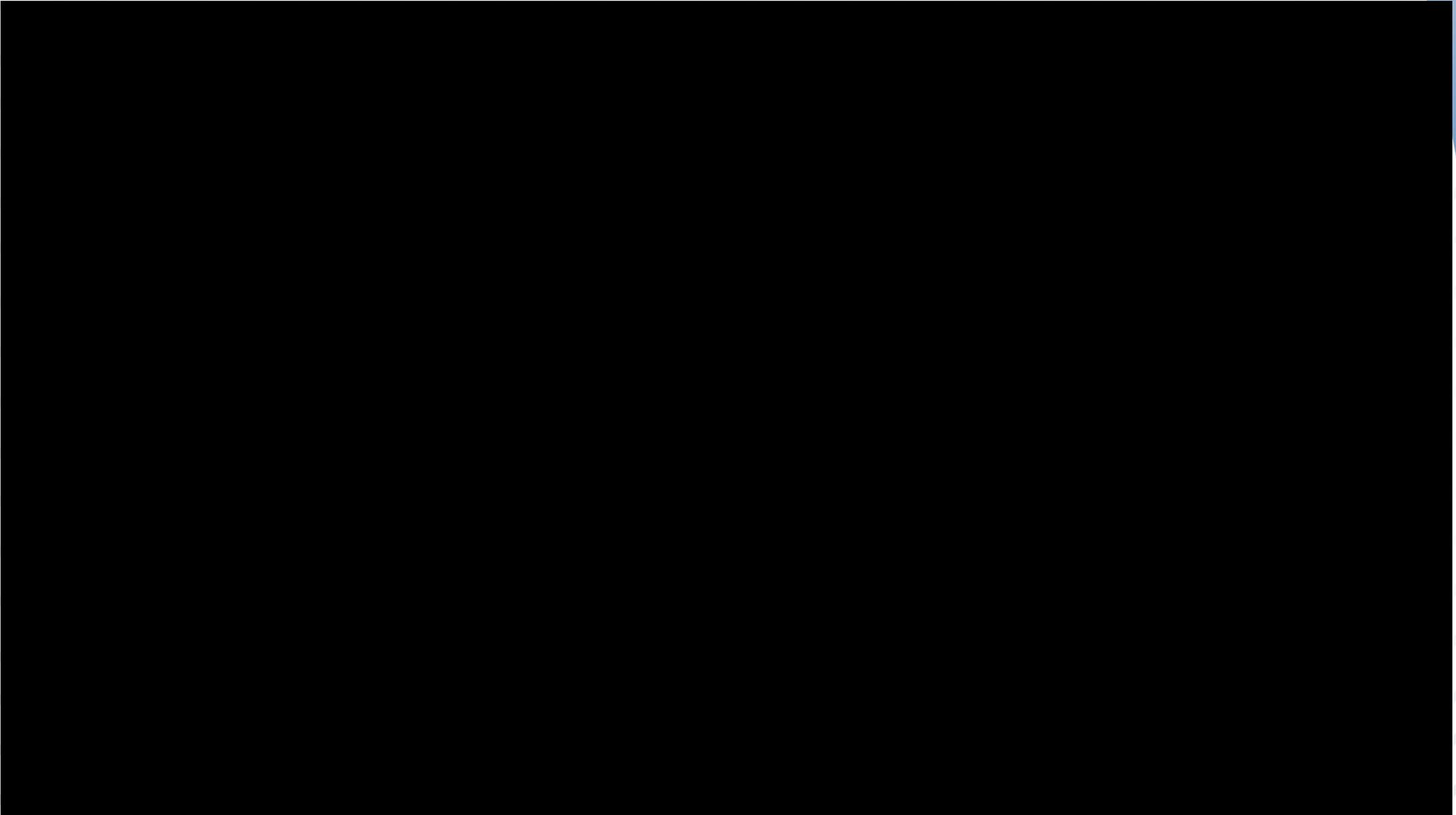
State of art + versatility + brand strengthening

NEW VERSASTYLE APPLICATION

EAAP current products



State of art + versatility + brand strengthening



SUMMARY

- ❑ Limitless styling of steel wheels
 - ❑ Fit any car you might build
- ❑ 20% higher torsional stiffness over VS
- ❑ Higher natural frequency over steel wheels
- ❑ Meets or exceeds Al wheel weight
- ❑ Lower price over Aluminum
- ❑ Highest advantages at ø15" up to ø17"
 - ❑ Can be used at higher wheel dimensions

MAXION WHEELS MATTER

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