



| FORD **PERFORMANCE**

*Ford*

**Todd Soderquist**  
Chief Program Engineer  
Ford Performance



Go Further

**FORD PERFORMANCE VISION:**

Creators of world's leading performance portfolio...  
accessible to all.

**FORD PERFORMANCE MISSION:**

Fuel innovation and passion for Ford,  
on and off the road



FORD PERFORMANCE

# PARTS & ACCESSORIES



Motorsports serves as a test-bed for technology and pride point for fans

# MOTORSPORTS



Expansion of parts, accessories, merchandise



Go Further

Rapid integration of race-proven technology to market faster

# PERFORMANCE VEHICLES



Captures new, younger customers as performance segment grows

# PERFORMANCE EXPERIENCES











FORD PERFORMANCE

# F-SERIES RAPTOR

Up to  
**500 lbs.**  
Lighter than last Generation



Fox Racing  
Shox



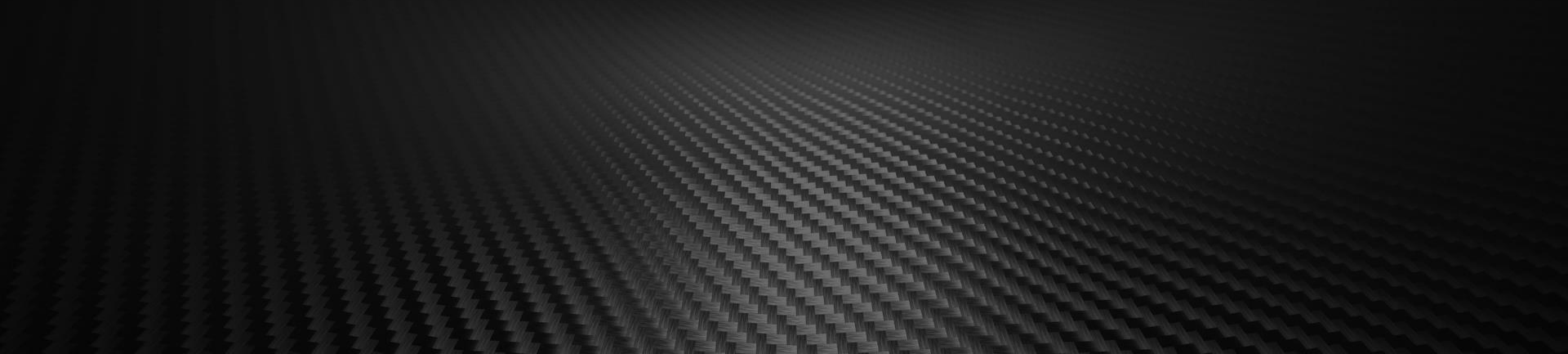
**6**  
Terrain  
Modes

Off Road  
Status





GT







FORD PERFORMANCE

# FORD GT RACING LEGEND

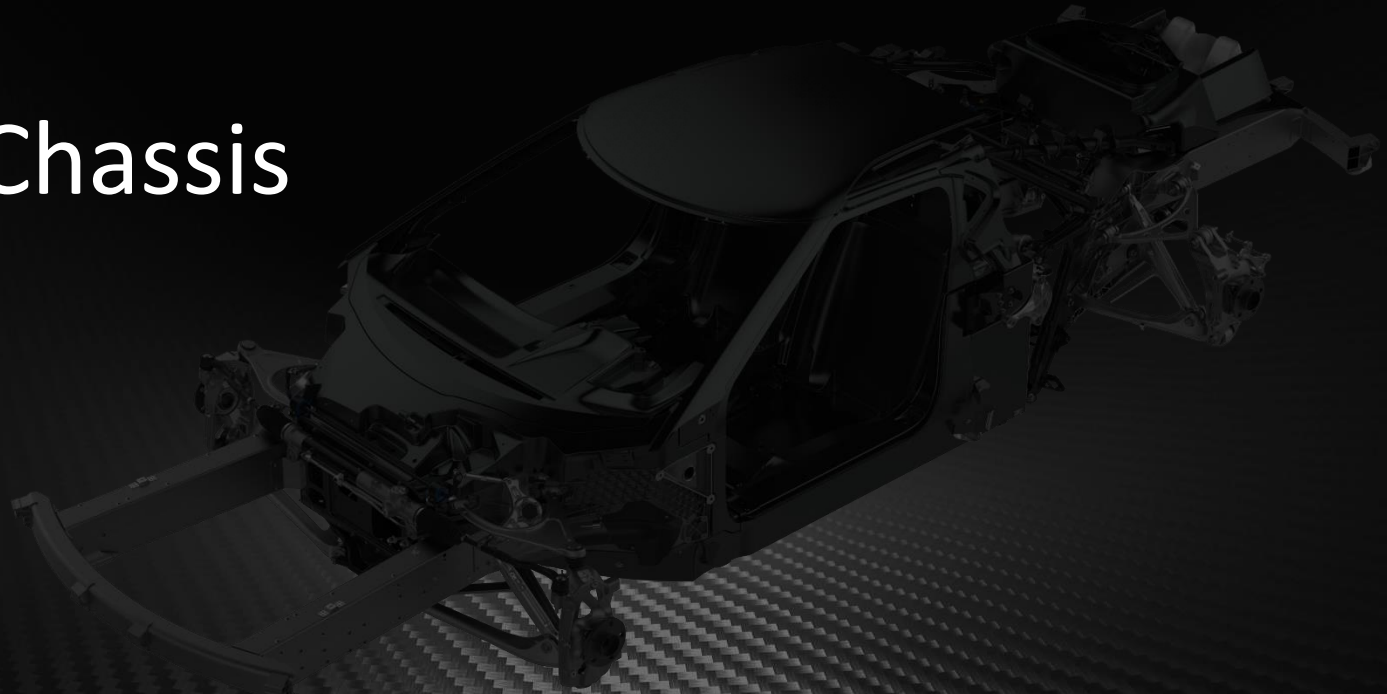


Ford's 1<sup>st</sup> LeMans Win 1966, Recreated in 2016

Third Generation of the Ford GT Super Car Returned in 2017



# The Chassis



# The Chassis

The Ford GT's innovations begin with its chassis:

- A unique carbon tub architecture
- Investment cast front and rear suspension structures
- A tubular chromoly upper cockpit structure
- A fully integrated IP

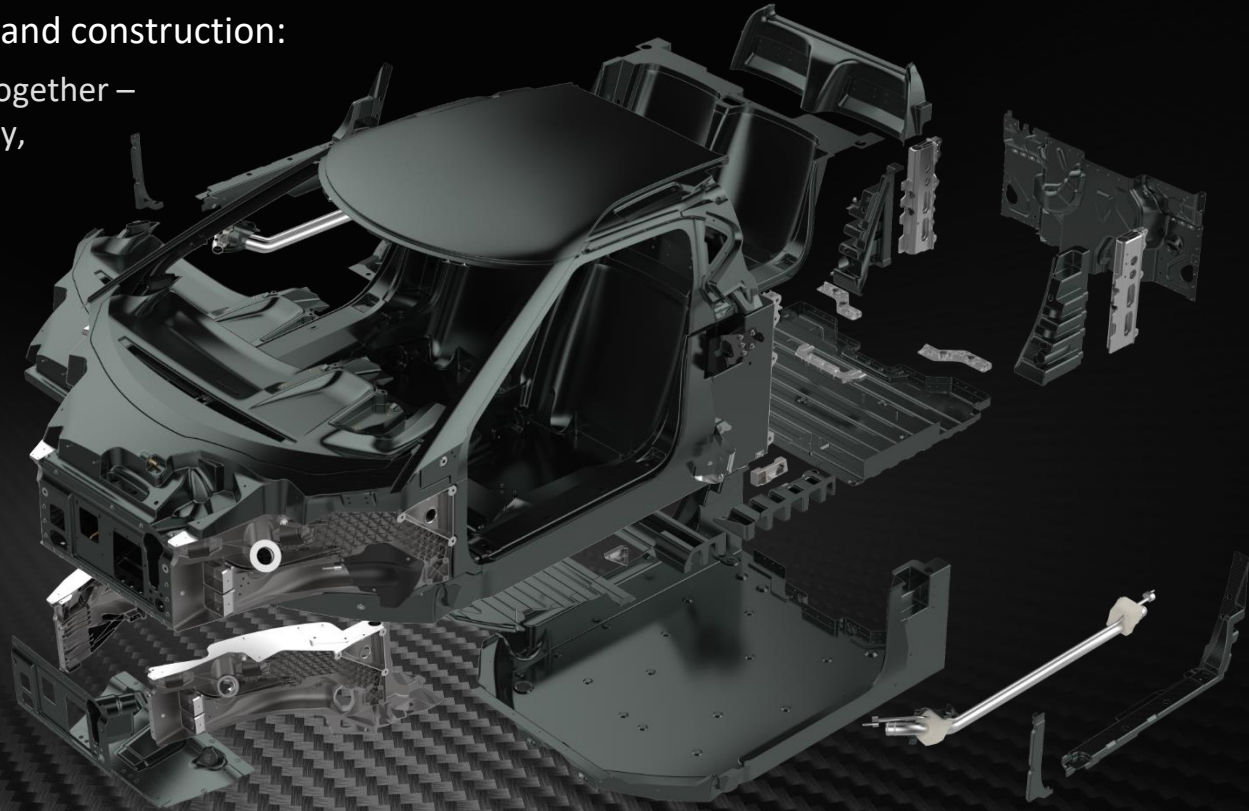




# Chassis – Carbon Tub

The carbon tub is of unique design and construction:

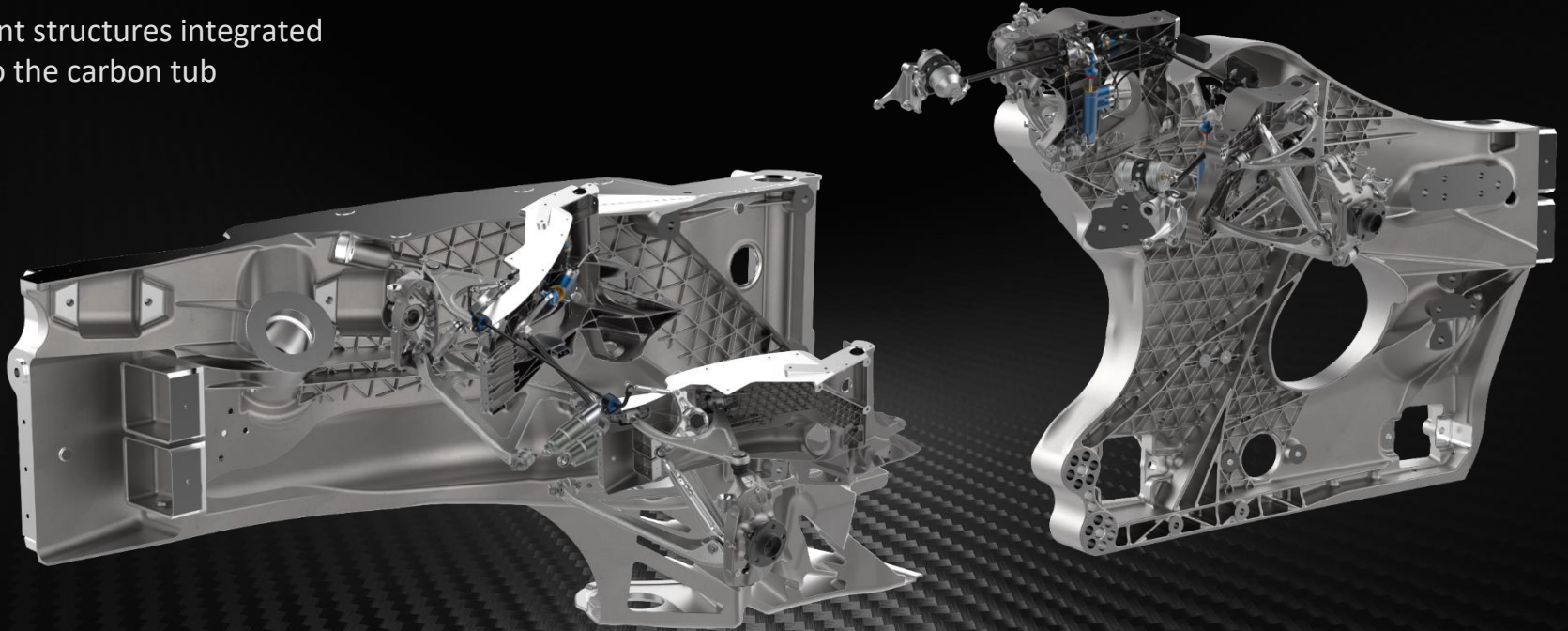
- Monolithic mouldings are bonded together – analogous to a conventional unibody, but in “black”



# Chassis – Cast Structures

At both front and rear are aerospace-quality investment cast aluminum suspension structures:

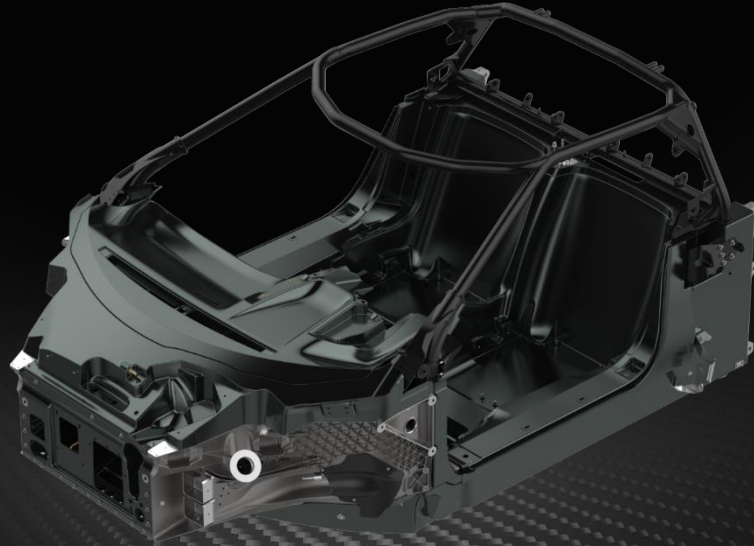
- Front structures integrated into the carbon tub



# Chassis – Integrated Cage

Tubular high-strength steel (15CDV6 CrMo)  
forms the upper cockpit structure:

- Creating a roll cage that meets both FIA and global road car safety requirements
- Only add-on components required for race car version

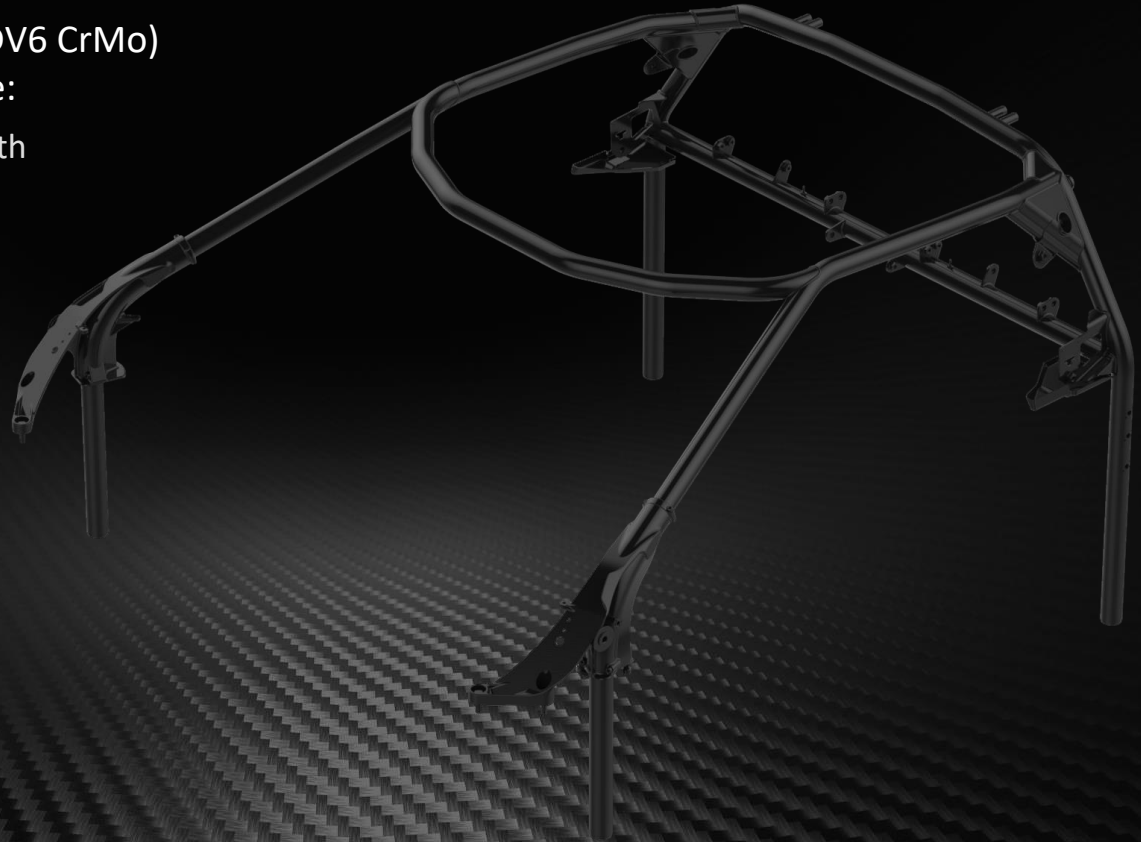




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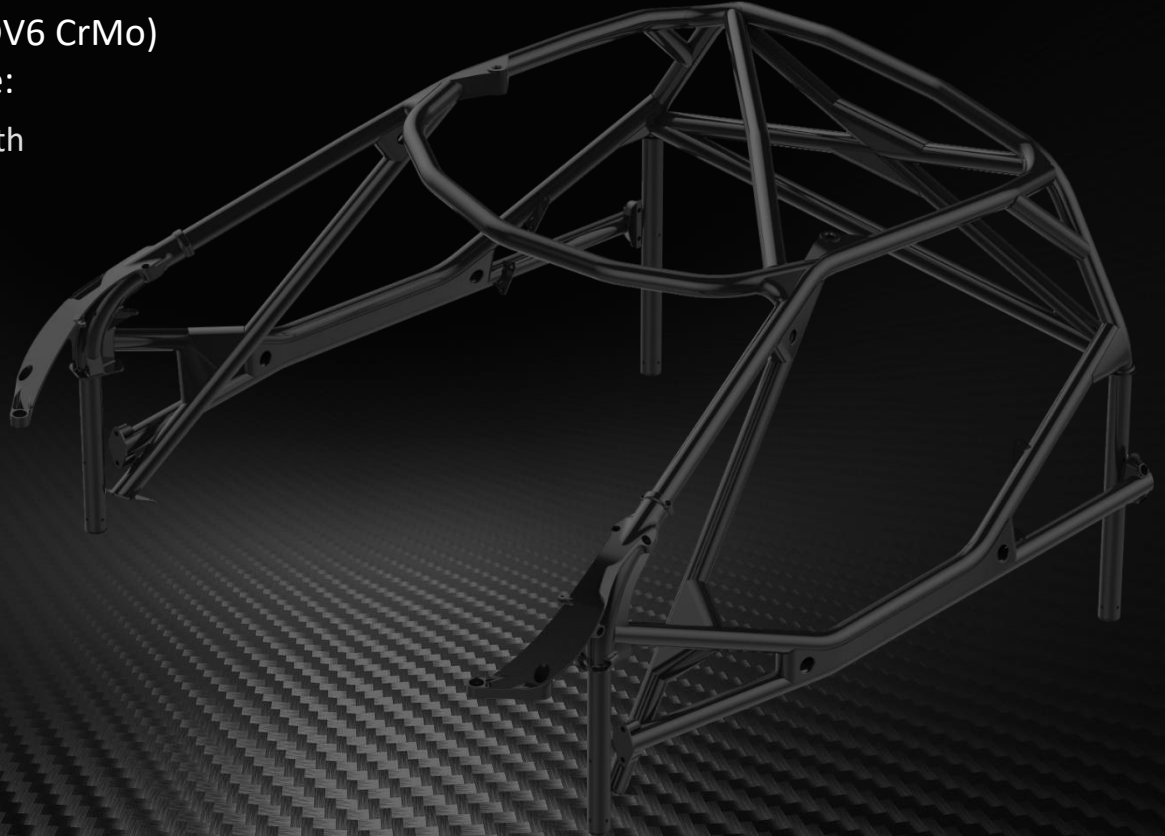
Road car

Race car

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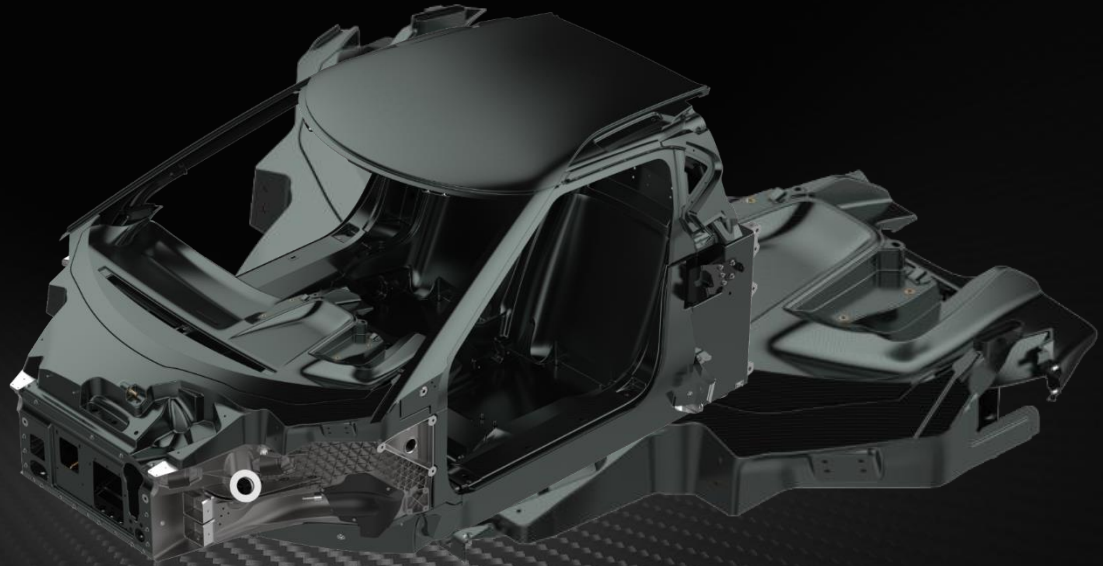
Road car

Race car

# Chassis – Integrated IP

Instrument panel (IP) structure is integrated into the main CFRP tub moulding:

- HVAC ducting is incorporated into the IP structure



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GT

# The Body



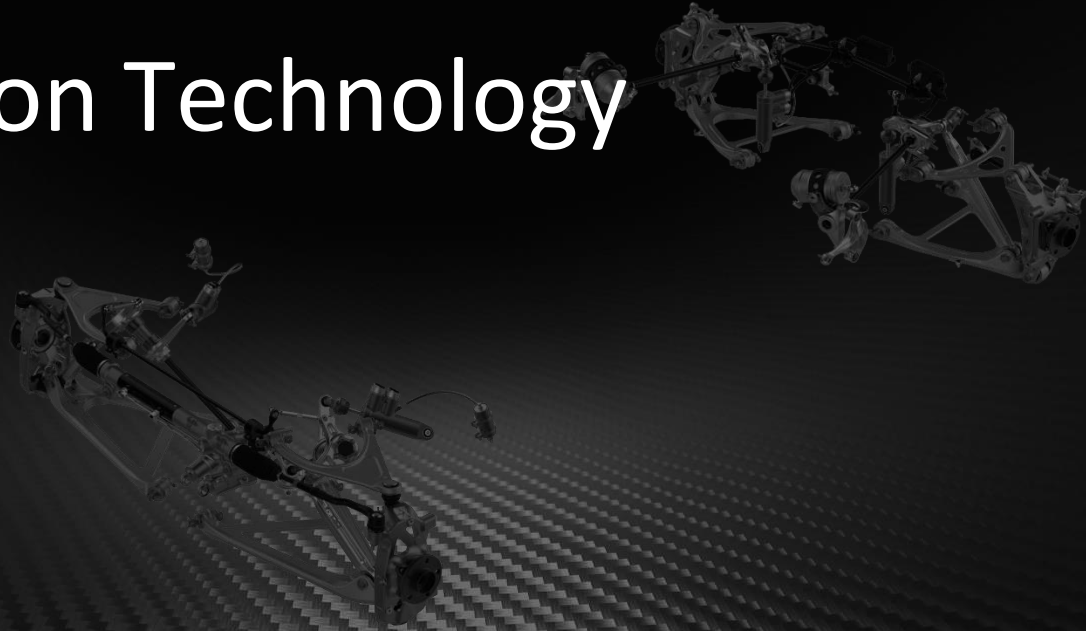
# Carbon Bodywork

Both the road and race cars feature  
all carbon fibre bodywork





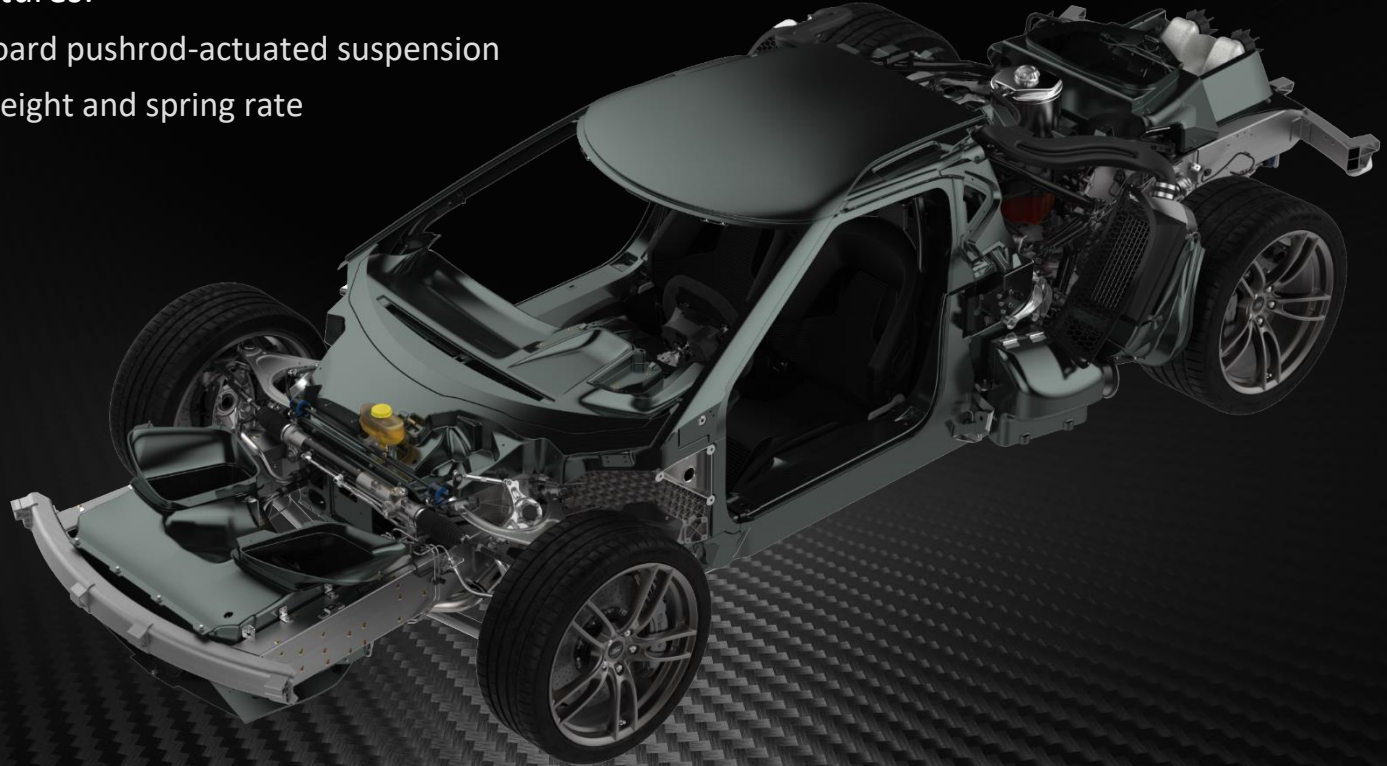
# Suspension Technology



# The Suspension

Key suspension features:

- An innovative inboard pushrod-actuated suspension
- Changeable ride height and spring rate
- Active dampers

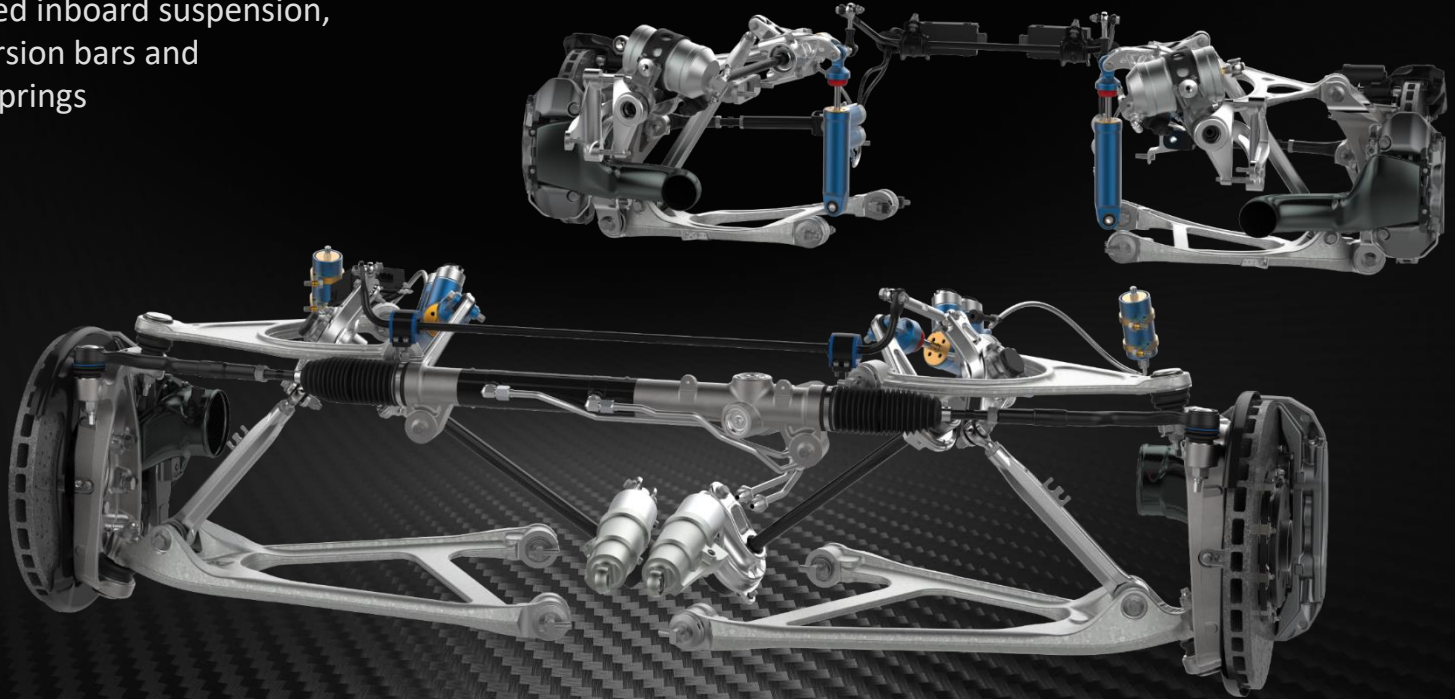




# Suspension – Innovative Architecture

The GT rides on:

- Pushrod-actuated inboard suspension, with primary torsion bars and secondary coil springs



Front

Rear

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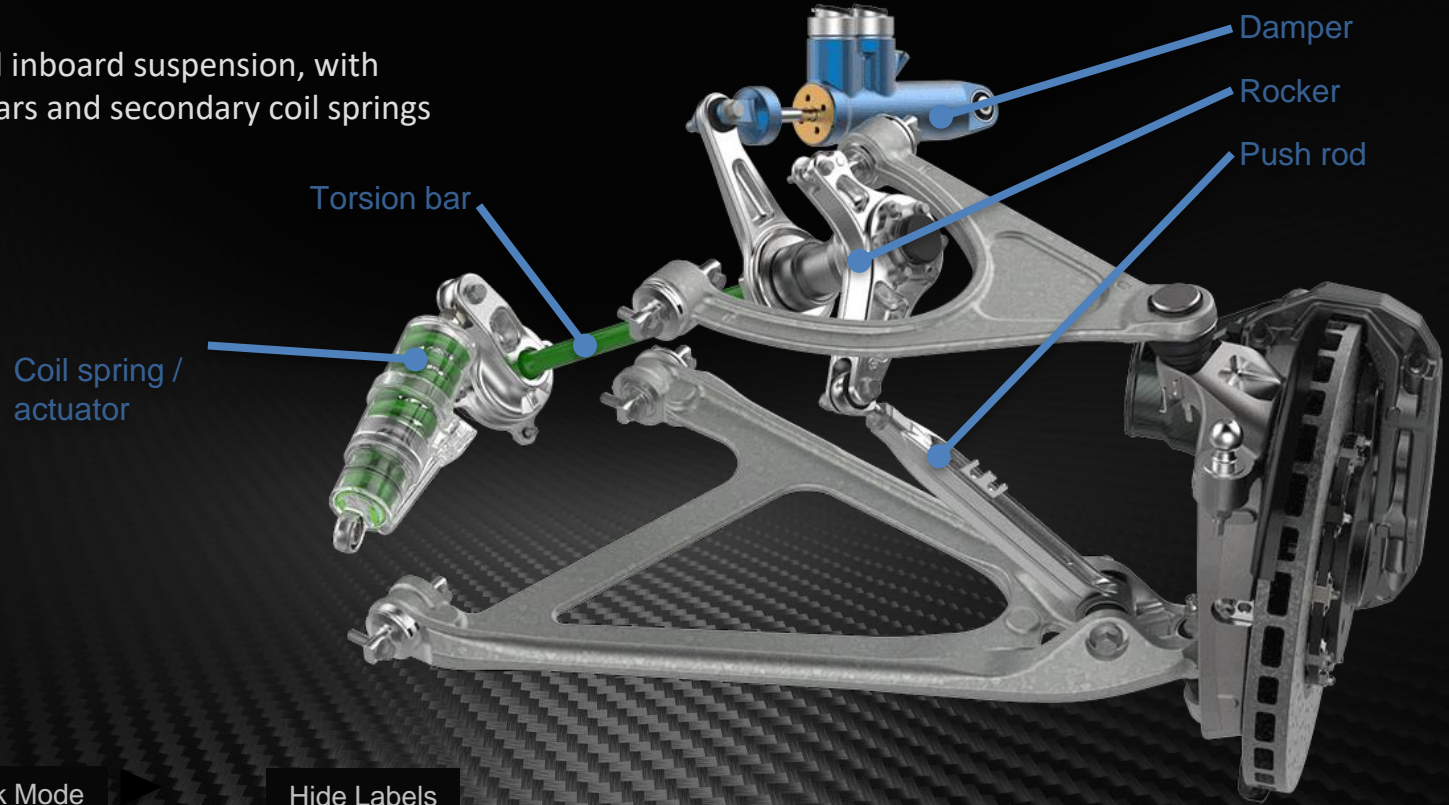
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Normal Mode

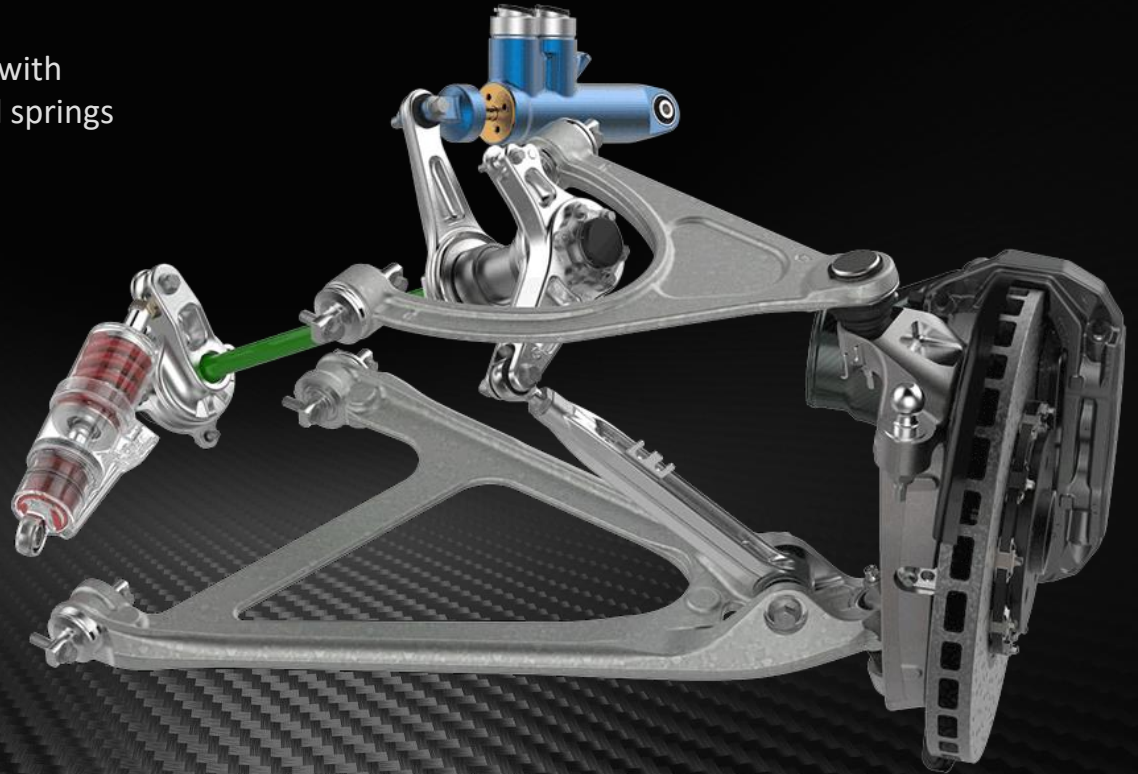
Track Mode

Hide Labels  
Labels

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Normal Mode

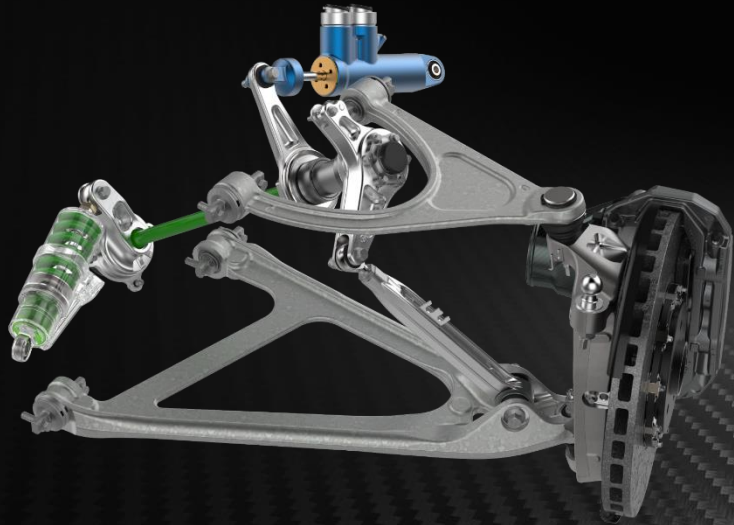
Track Mode



# Suspension – Height & Rate Adjustment

A dual ride height and spring rate system operates in conjunction with the GT's active aero package:

- Hydraulically actuated coil spring lockout



Normal

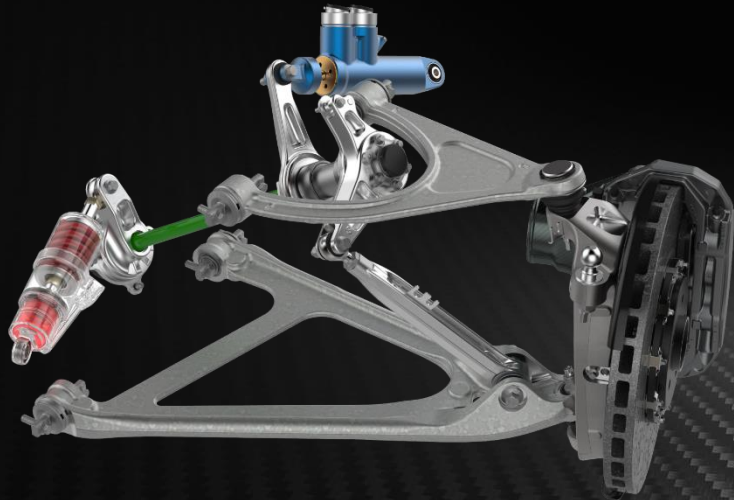
Track

Nose Lift

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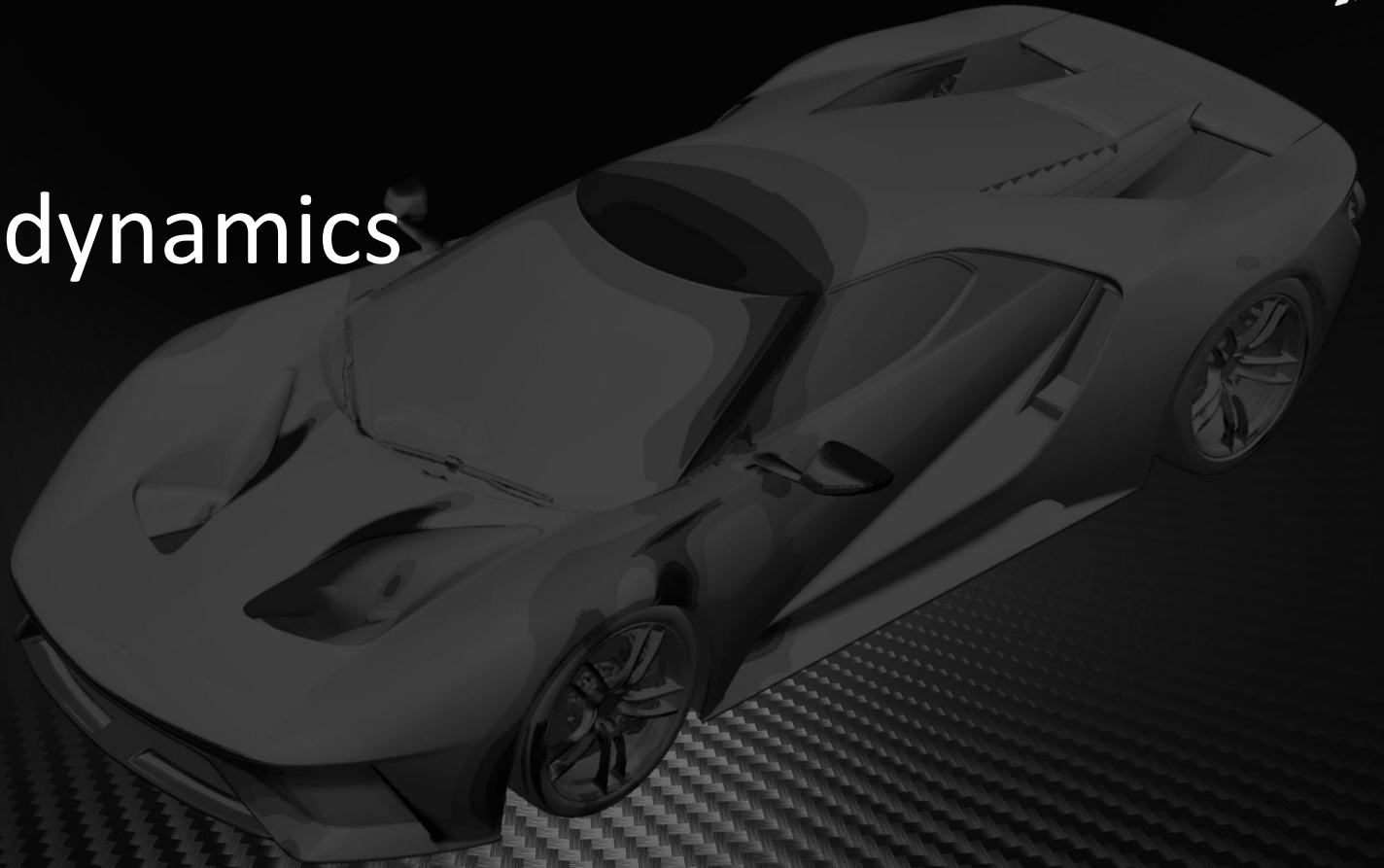
Normal

Track

Nose Lift

GT

# Aerodynamics

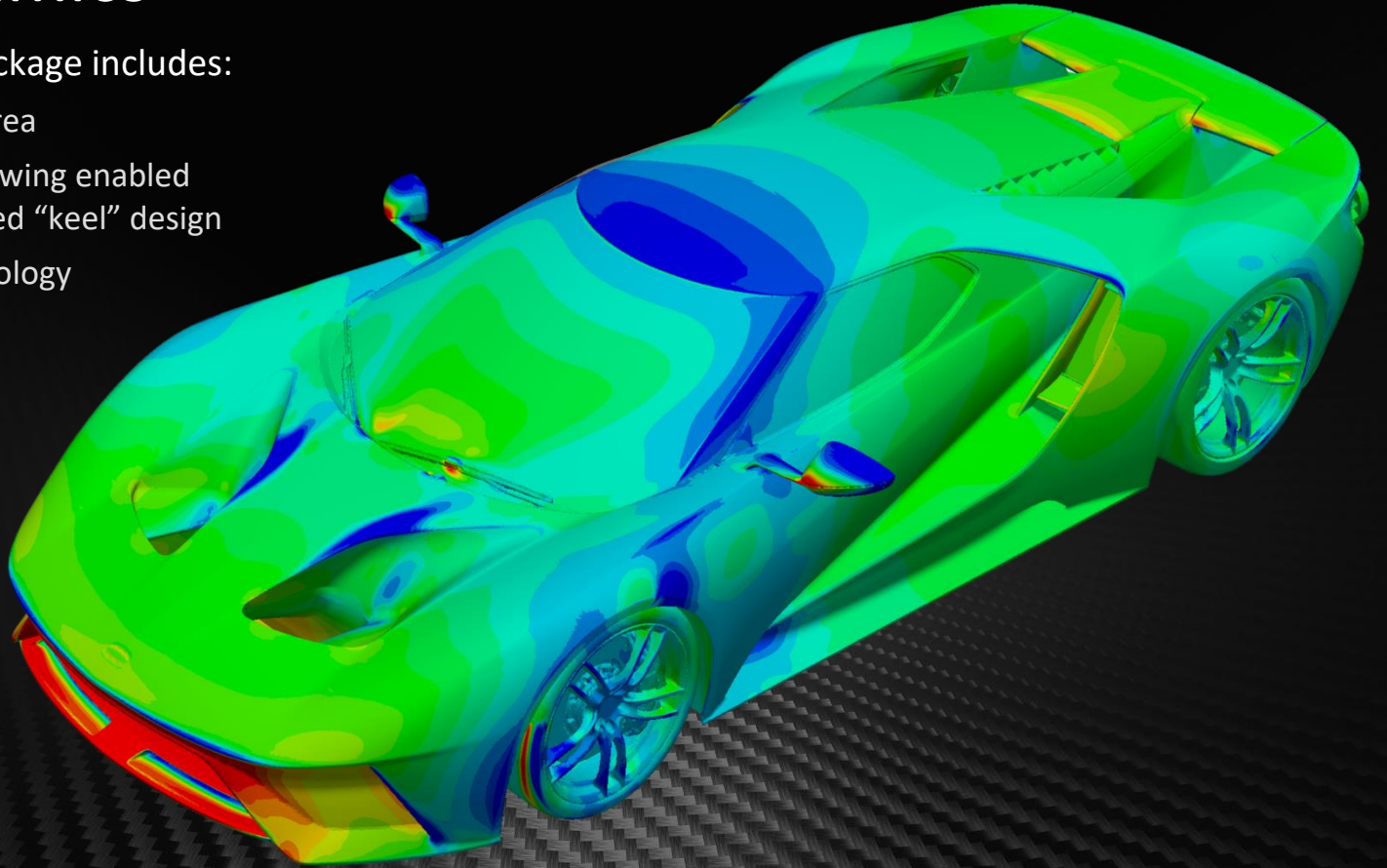




# Aerodynamics

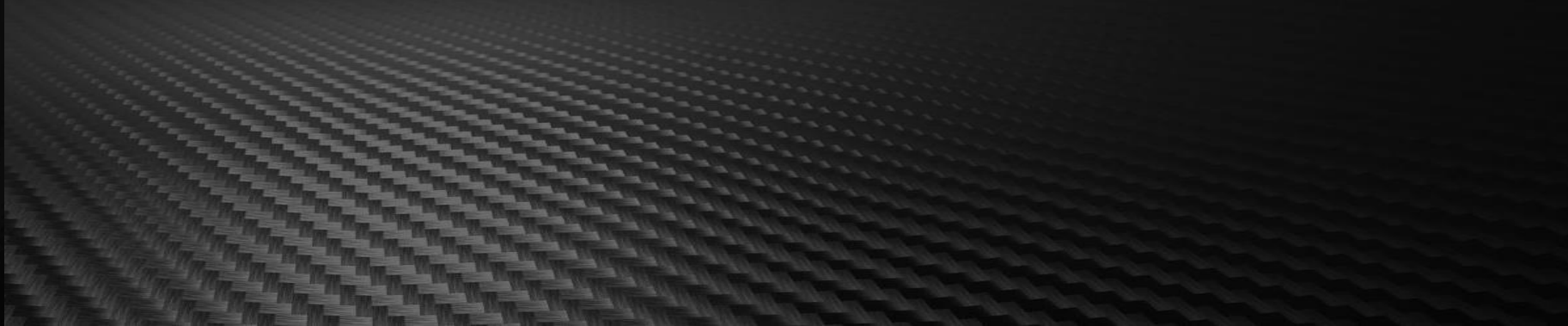
Optimized aero package includes:

- Minimal frontal area
- Novel front underwing enabled by race car-inspired “keel” design
- Active aero technology



# Aerodynamics – Frontal Area

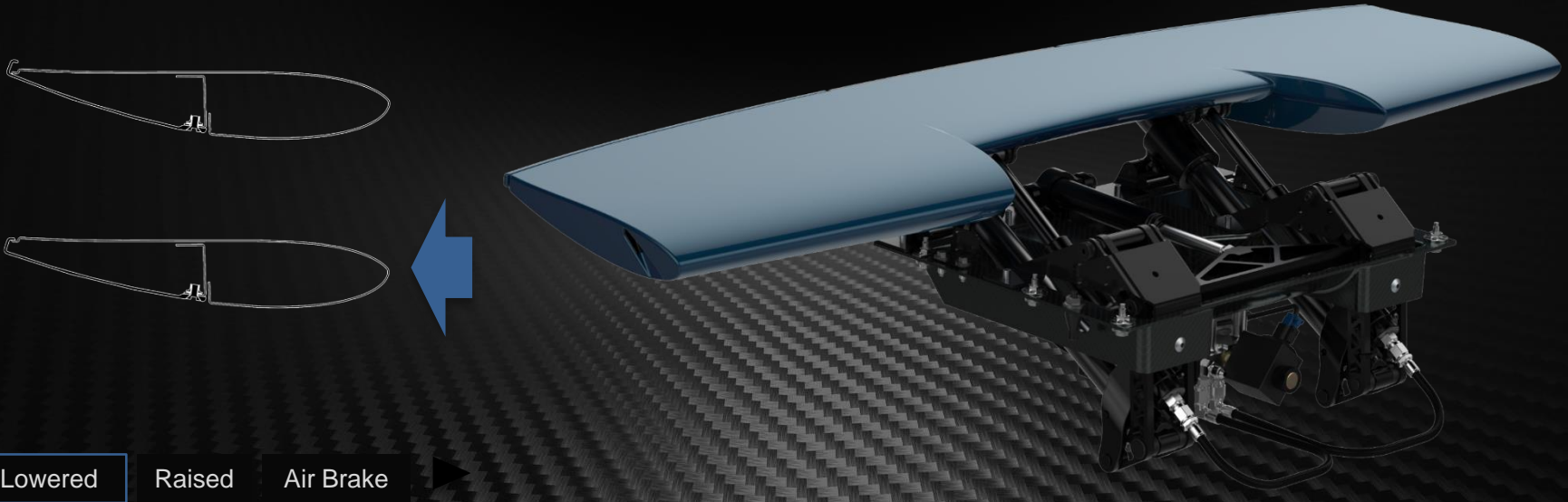
The overall design achieves the lowest frontal area in its class.



# Active Aerodynamics – Rear Wing

The Ford GT's active aerodynamic package includes:

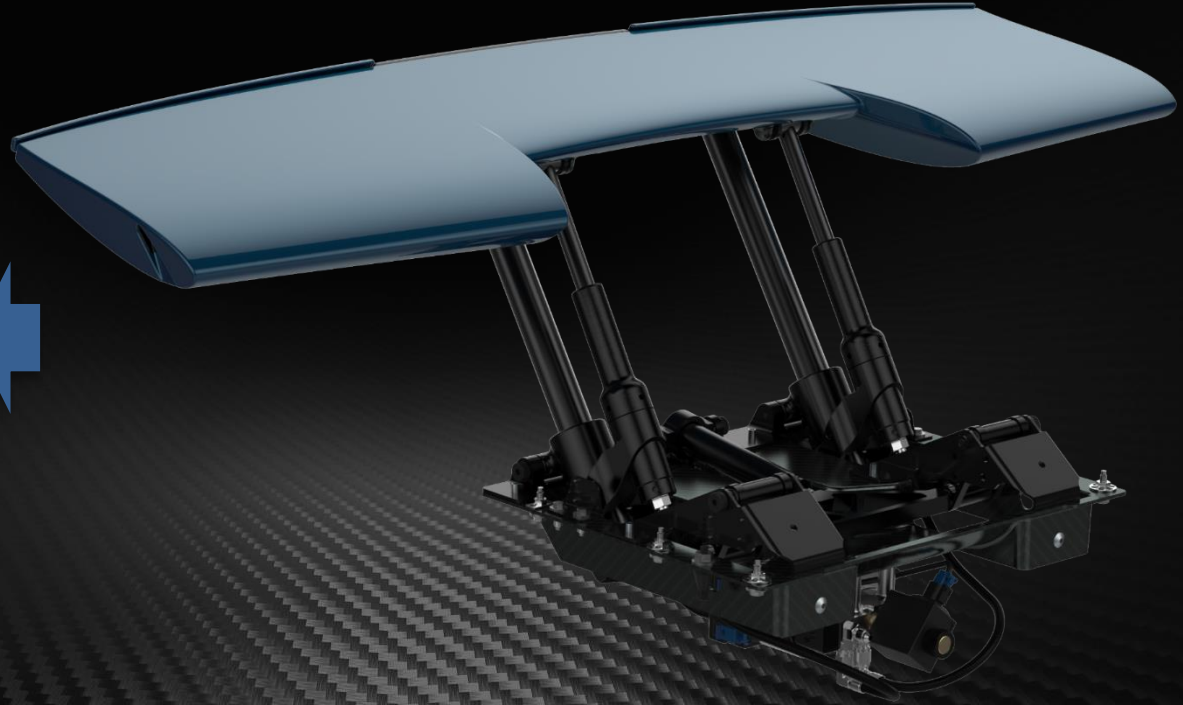
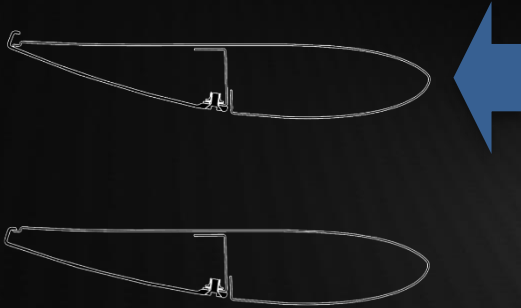
- Deployable rear wing with morphing profile and airbrake



# Active Aerodynamics – Rear Wing

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- Deployable rear wing with morphing profile and airbrake



Lowered

**Raised**

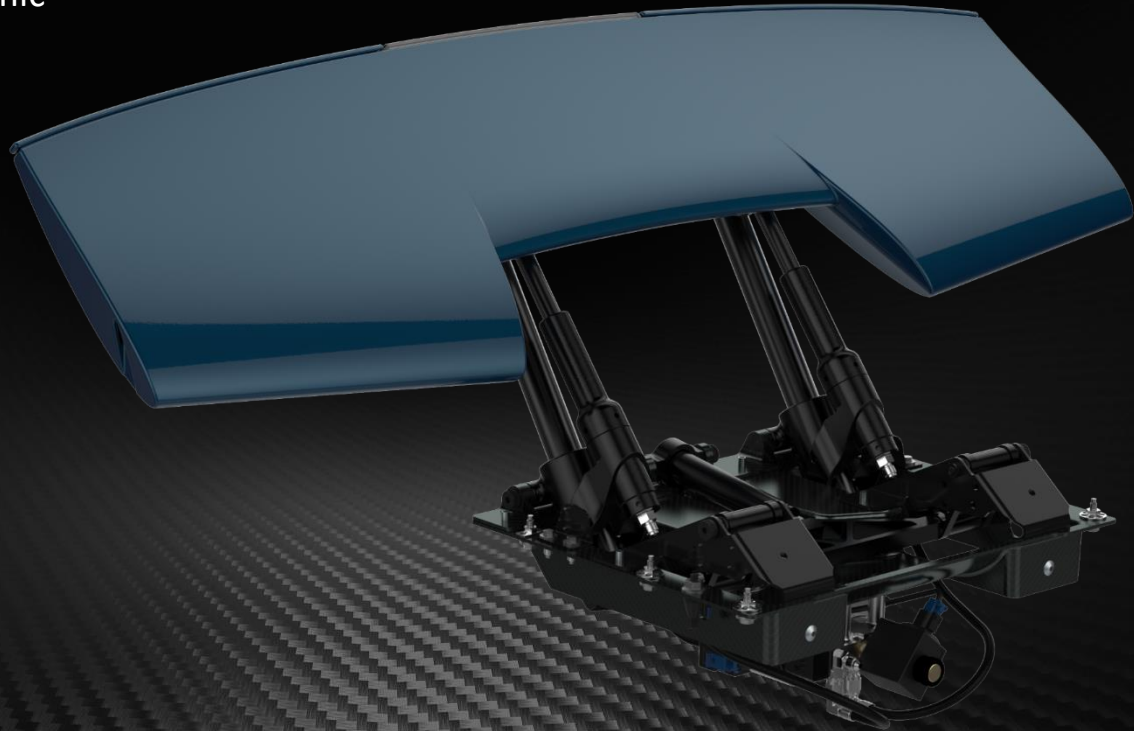
Air Brake



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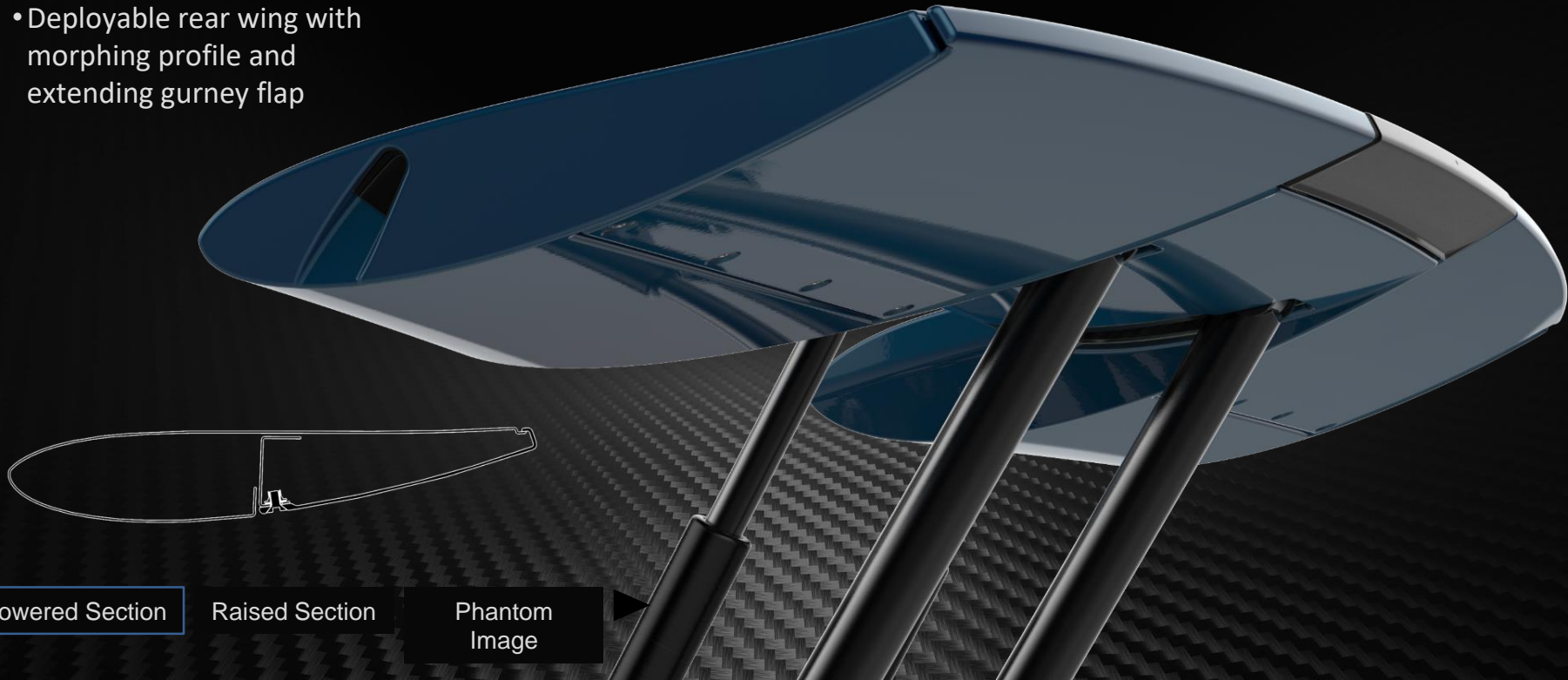
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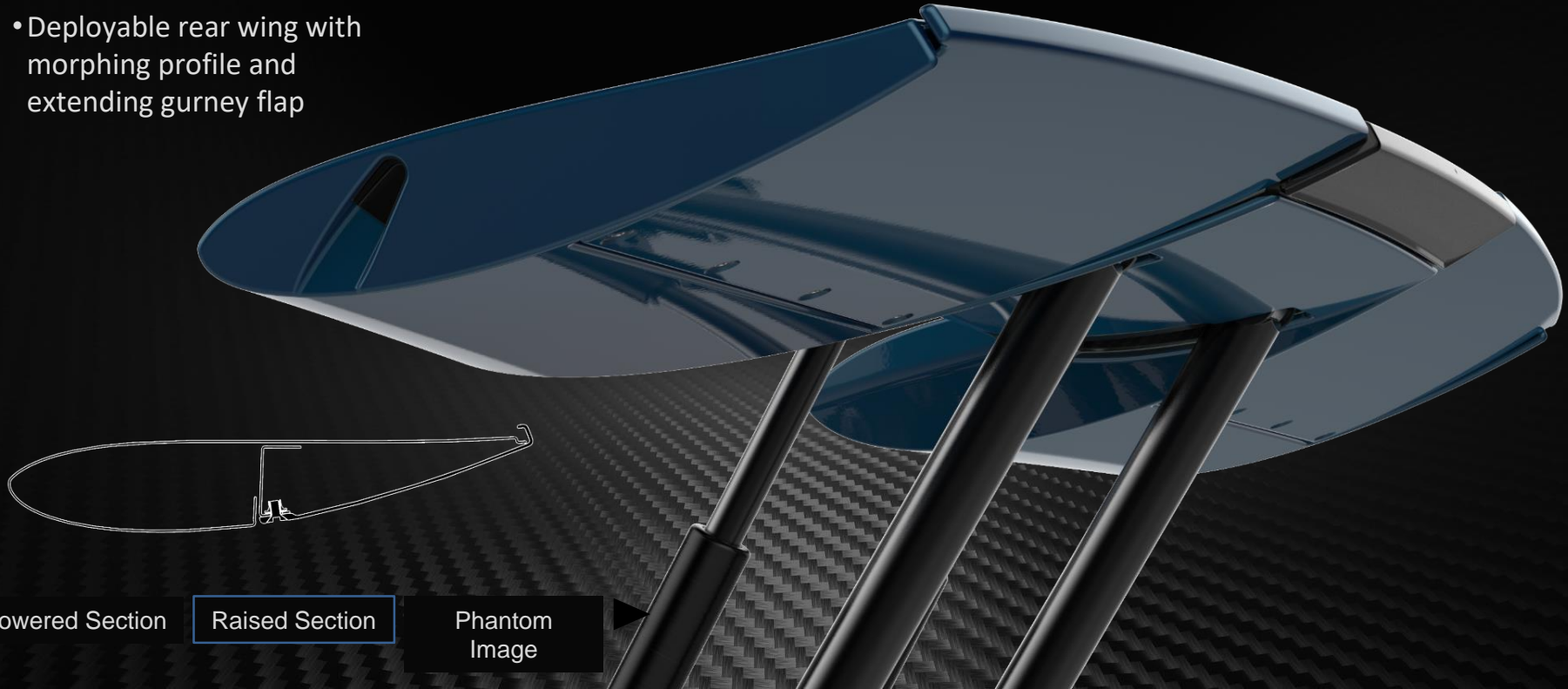
- Deployable rear wing with morphing profile and extending gurney flap



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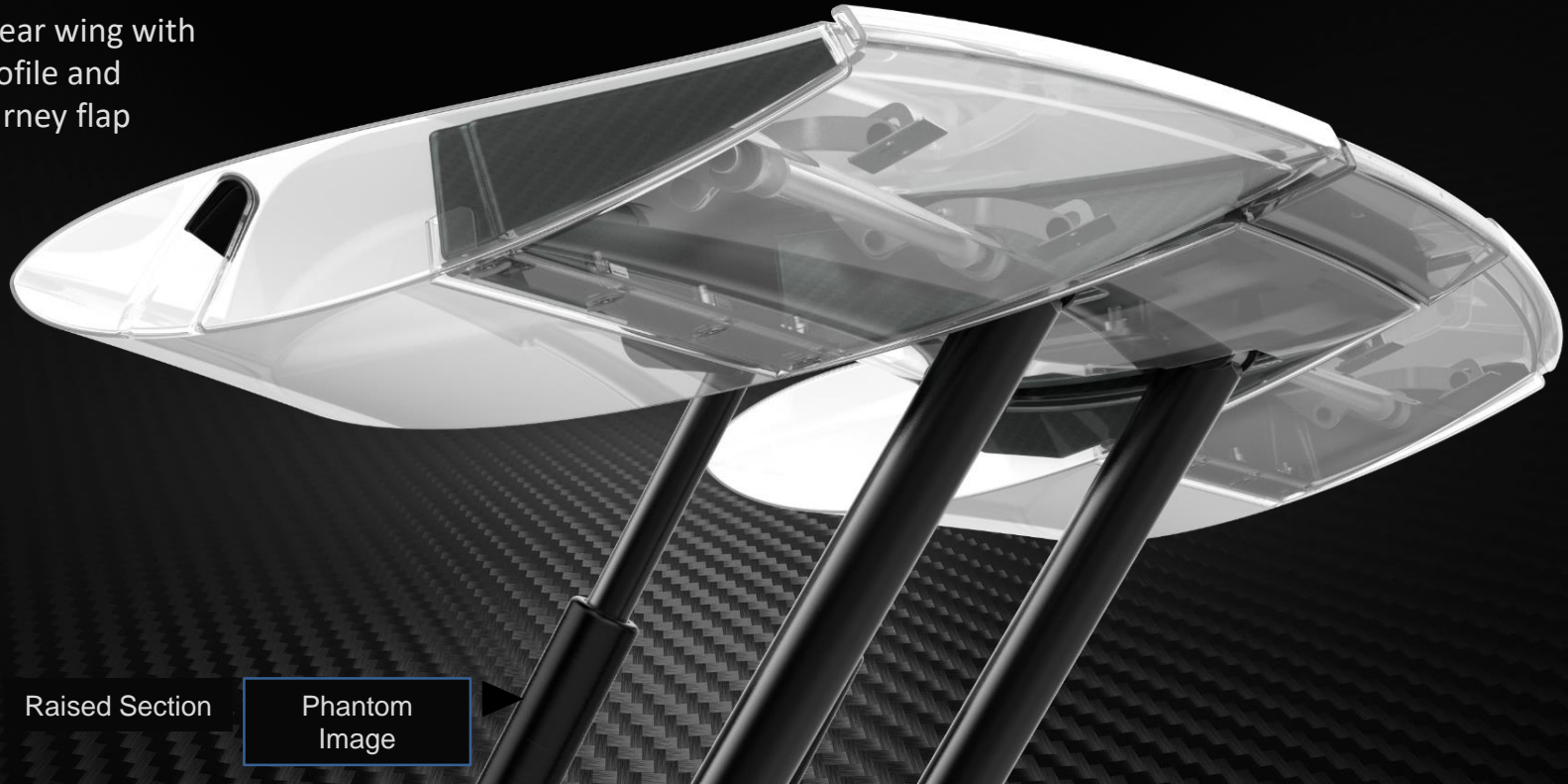
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Lowered Section

Raised Section

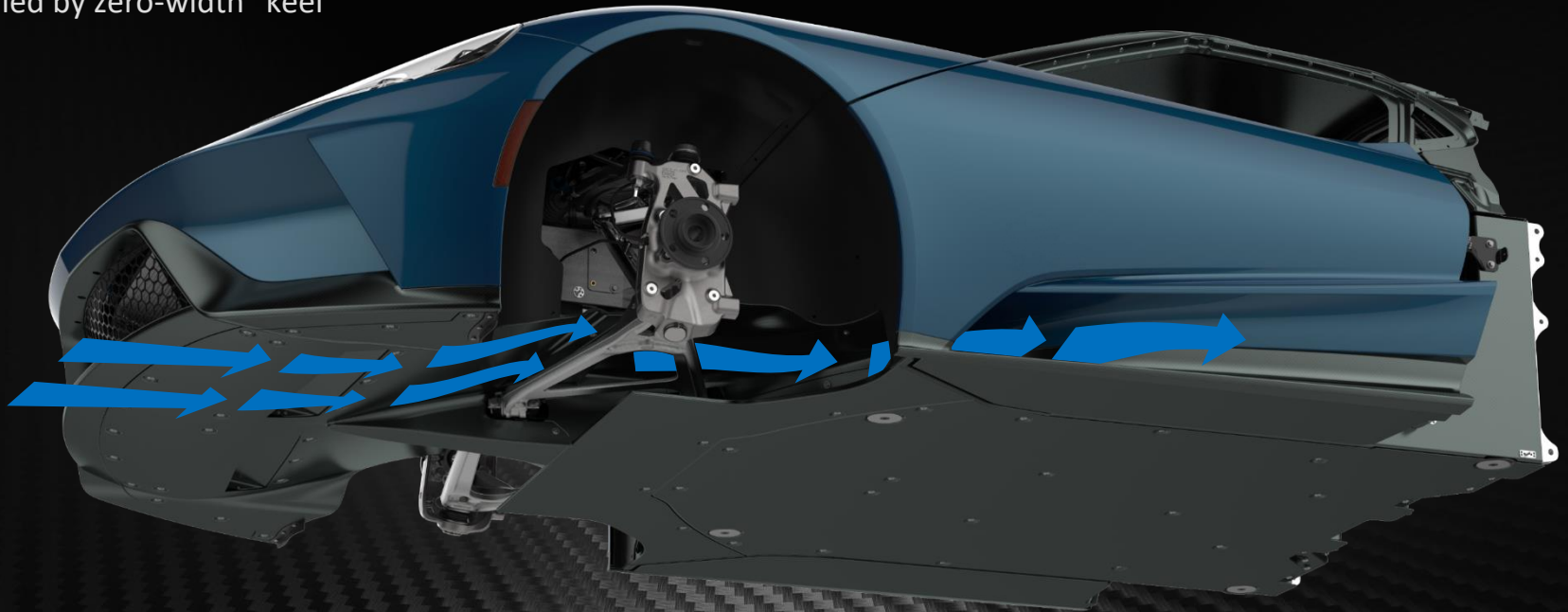
Phantom  
Image



# Aerodynamics – Nose & Keel

Aerodynamics are enhanced with:

- Full-width, high-downforce front underwing enabled by zero-width “keel”



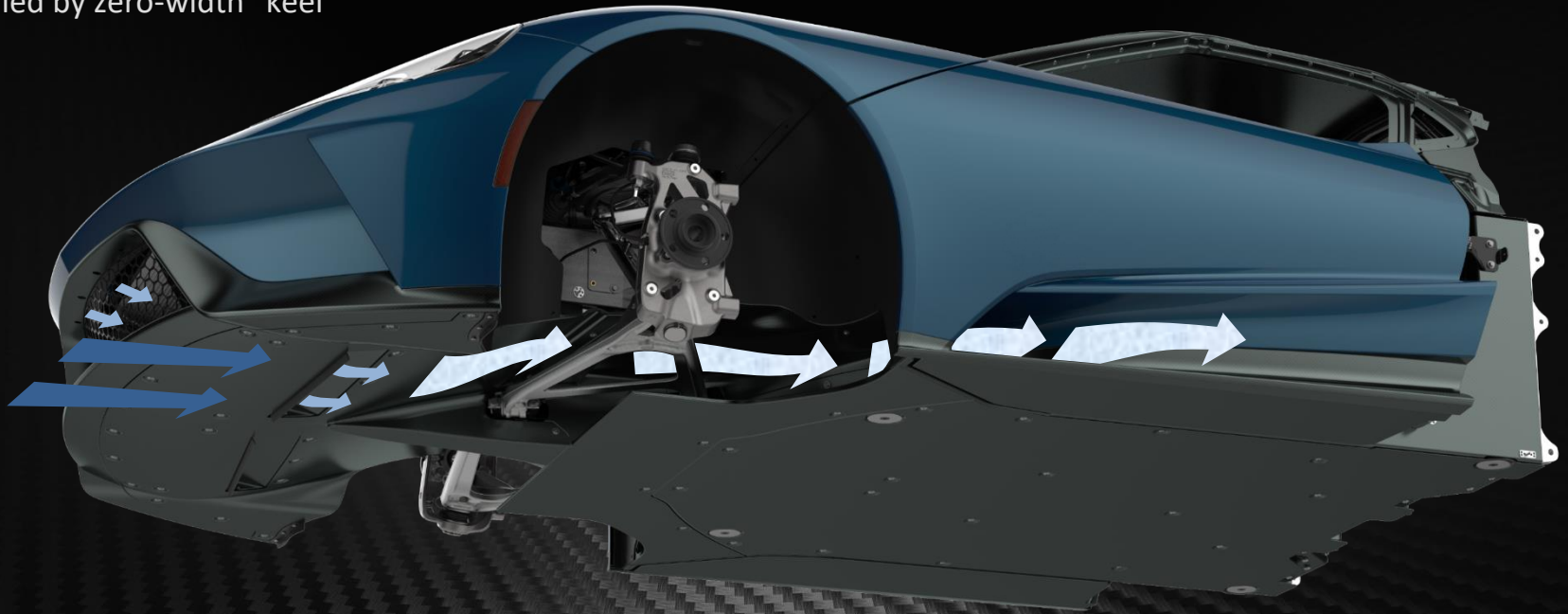
High  
Downforce

Low Downforce

# Aerodynamics – Nose & Keel

Aerodynamics are enhanced with:

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High  
Downforce

Low Downforce

# Aerodynamics – Active

Working in concert with selectable ride height, the Ford GT's active aero package includes:

- Blown front underwing defeat
- Deployable rear wing with morphing profile and airbrake



Lower  
Downforce

High  
Downforce

# Aerodynamics – Active

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- Blown front underwing defeat
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Lower  
Downforce

High  
Downforce





[PLAY VIDEO: Ford Performance Racing Simulator](#)



FORD **PERFORMANCE**

# INDUSTRY DISRUPTION

**The Automotive Industry is Facing Unprecedented Disruption Due to Technology**

**ELECTRIFICATION**

**AUTONOMY**

**CONNECTIVITY**

**ALTERNATIVE MOBILITY SOLUTIONS**

**This is a time of great risk and great opportunity**



# INDUSTRY DISRUPTION RATE FACTORS:

## ELECTRIFICATION

- **Battery Prices**
- **Regulatory Emission Restrictions**
- **Consumer Demand**

## AUTONOMY

- **Regulatory Challenges**
- **Technical Solutions Safe & Reliable**
- **Consumer Acceptance and willingness to pay**

## CONNECTIVITY

- **Global Car 2 Car Solutions**
- **Consumers regularly using in car paid content**

## ALTERNATIVE MOBILITY

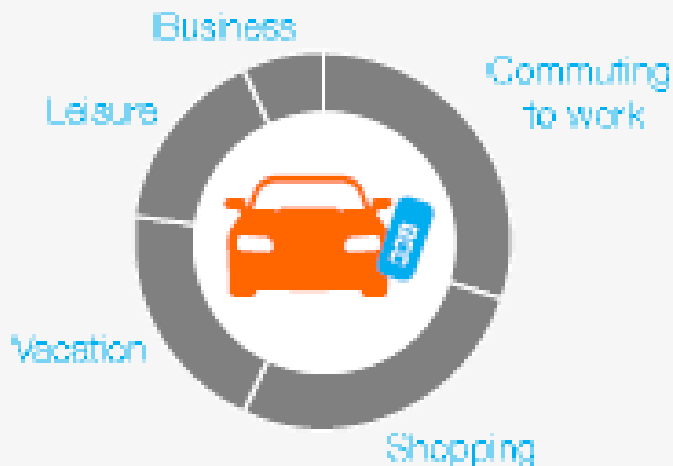
- **City Policies Discouraging Private Cars**
- **On Demand Business Models**
- **Modal Shift in Consumer Behavior**

# INDUSTRY DISRUPTION

Today:

One vehicle for every trip purpose

Avg. share of annual driving time



2030:

A solution for each specific purpose<sup>1</sup>

