

SESSION ID: CA1515B

# Accelerating Digital Design via the Cloud

**SPEAKER(s):**

**NICOLAS PERRIN**

FOUNDER OF PERRINN 424

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# GOALS

Bring awareness to PERRINN 424

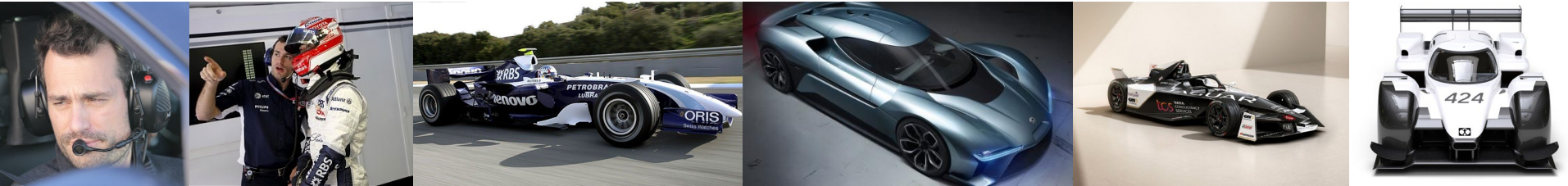
How you can follow and participate

How Onshape has made this possible



# PERRINN 424: Why

- Obsession for performance, speed and records
- Extensive experience at the top level of motorsport
- Commitment to advancing innovation



# PERRINN 424: The Challenge

1983  
PORSCHE 956  
6:11.13

2018  
PORSCHE 919  
5:19.546

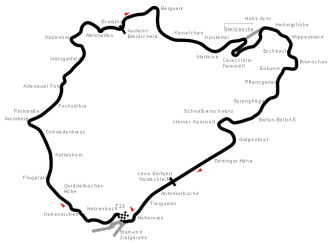
202x  
PERRINN 424  
5:07.5 (digital)



Petrol era

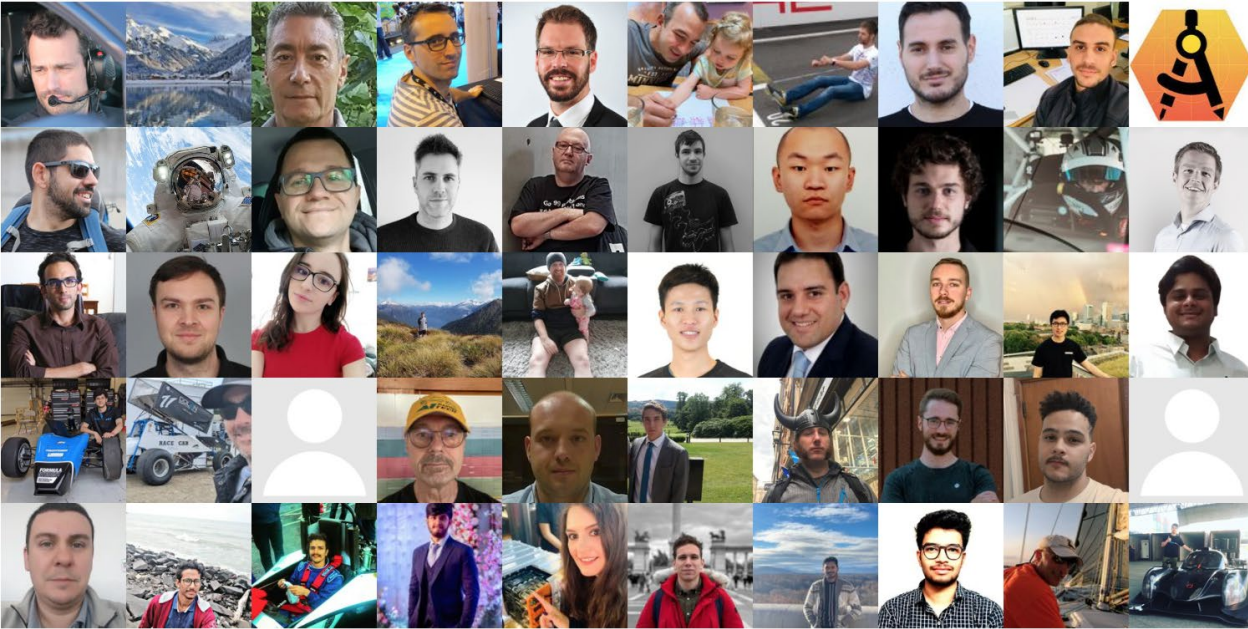
Hybrid era

Electric era



# PERRINN 424: How

A network of talented **people** + **software** companies



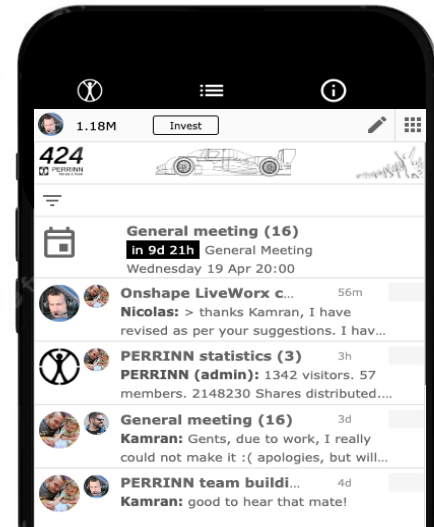
# PERRINN 424: Support and Invest



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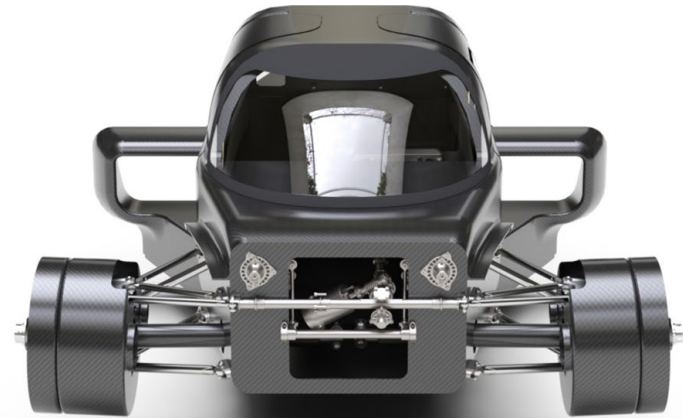


# 424 TECHNICAL SPECIFICATION

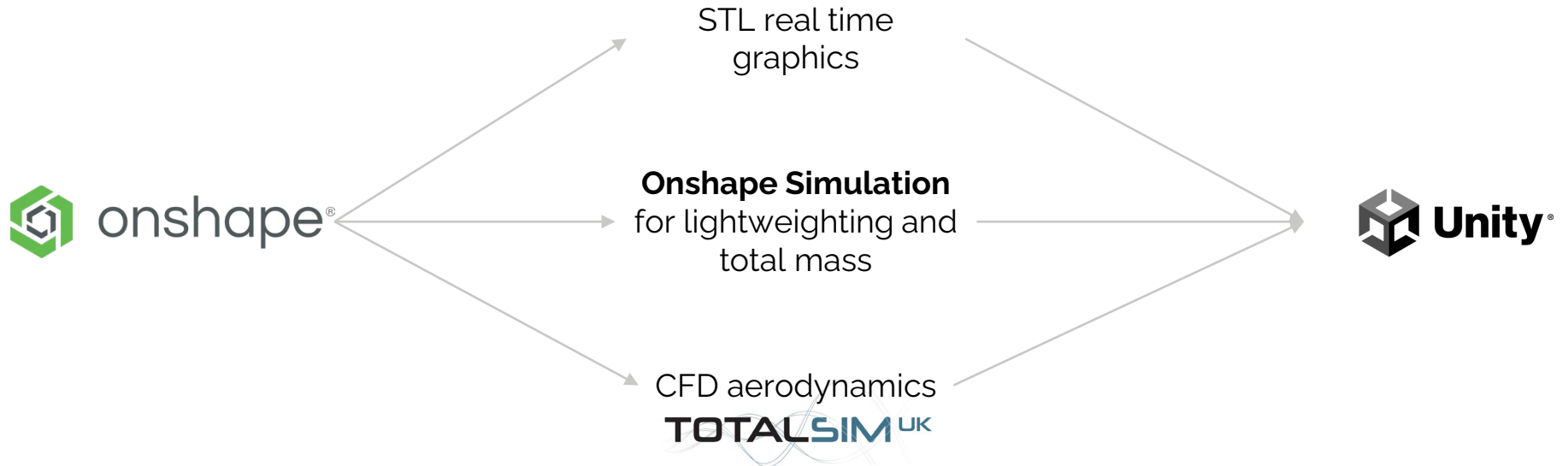
"424 has to become and remain the fastest electric car in the world."

## TECHNICAL SPECIFICATION:

- Chassis made entirely of composite material
- Weight: 1,000kg (500kg chassis & 500kg powertrain)
- 3 Formula E motors (one front, two rear)
- Power: 750kW (250 front, 500 rear)
- Transmission: Four-Wheel-Drive, single speed
- Battery: 50 kWh, centrally mounted
- Acceleration: 0 - 100kph in 2.0 sec
- Top speed: 360kph
- Advanced aerodynamics (DRS)

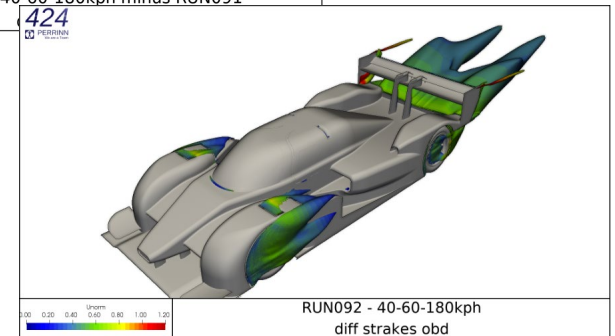
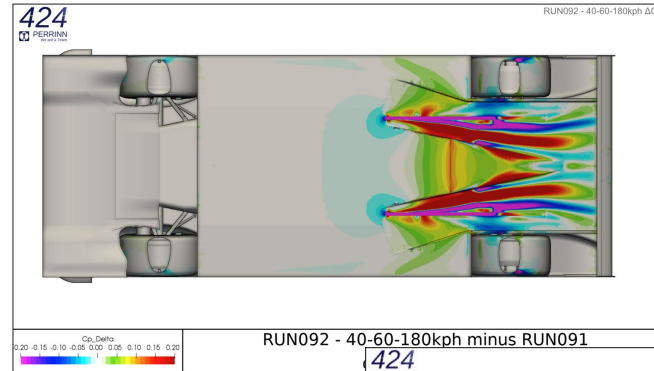
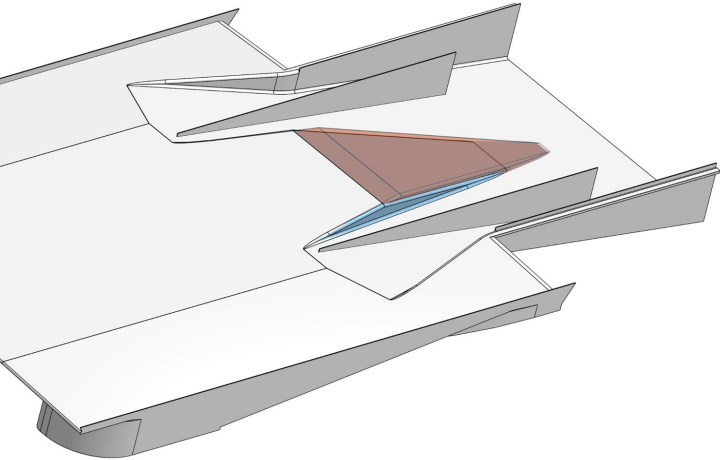


# DIGITAL TWIN





# DIGITAL TWIN: Aerodynamic development

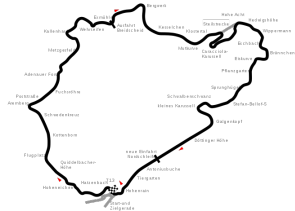


424 generates aerodynamic efficiency of

5.5:1

6.5:1 with DRS activated.

# DIGITAL TWIN: Real time driving simulation



→ **Laptime**  
**5:07.50**

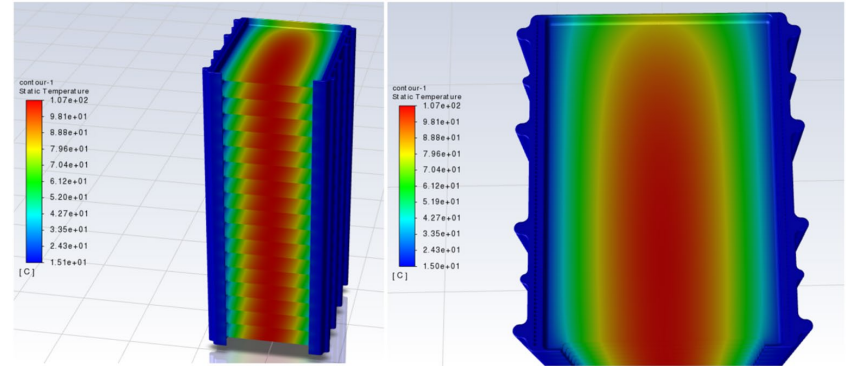
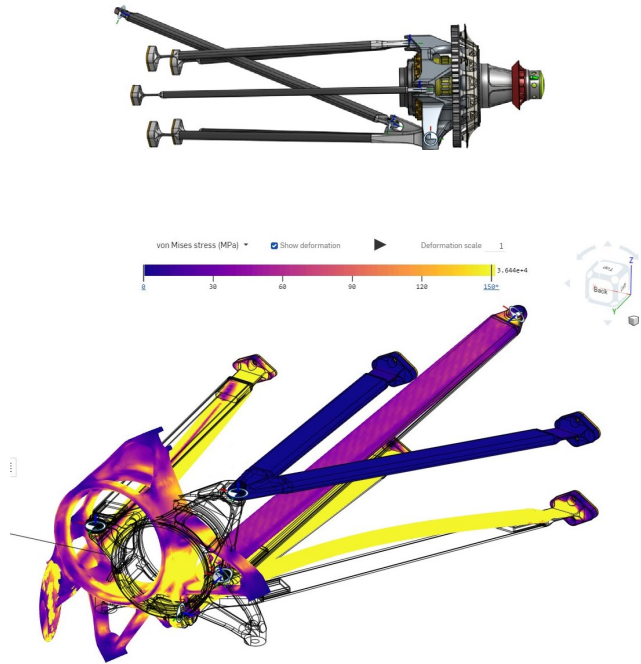


What happens when we push the limits

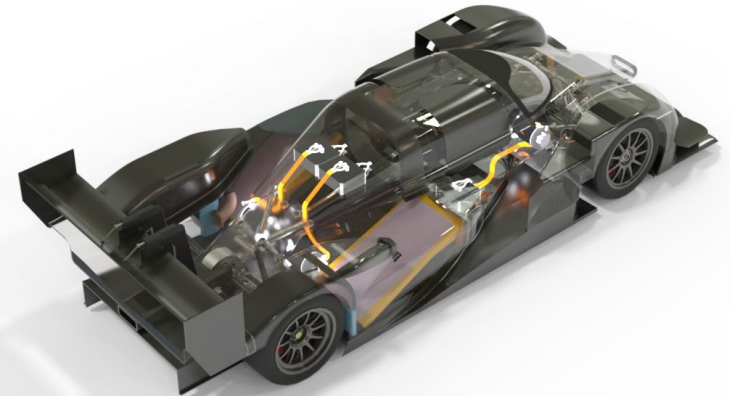
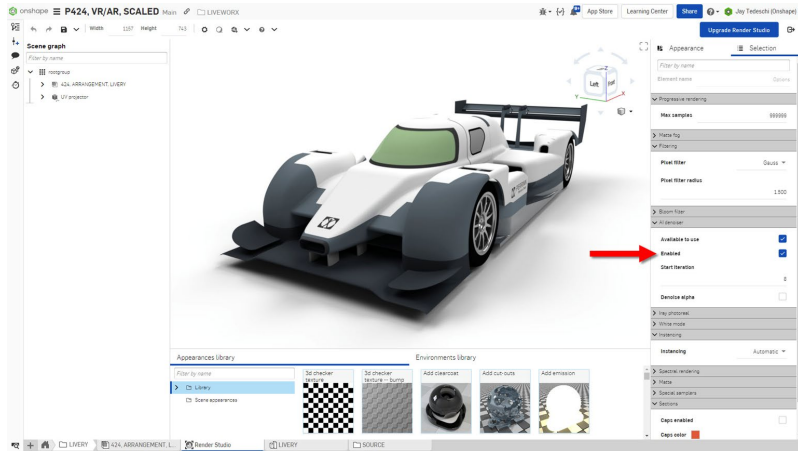
# DIGITAL TWIN: Aerodynamic instability



# DIGITAL TWIN: Engineering simulations



# DIGITAL TWIN: Rendering studio

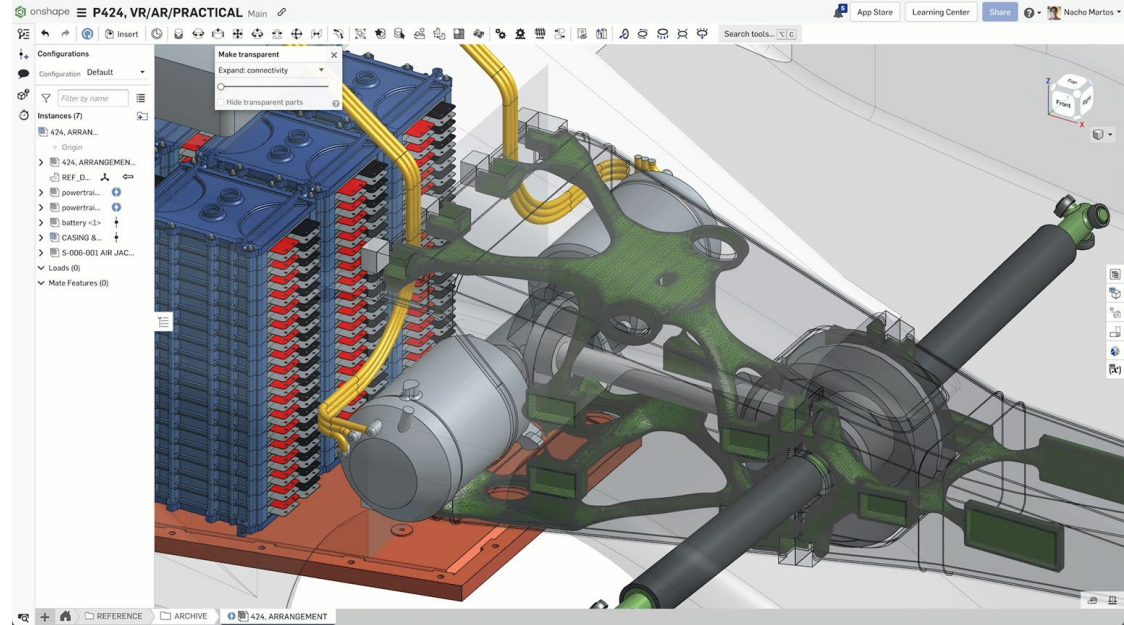


# DESIGN IN THE CLOUD

Rear casing stiffening  
brace has been designed  
by

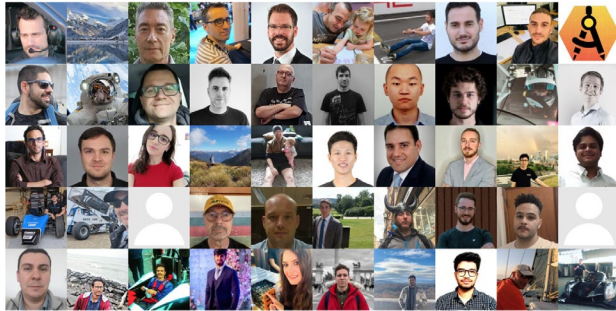
4 people



Located on 3 continents



# DESIGN IN THE CLOUD

PERRINN  
We are a Team



Name	
	PERRINN 424 architecture
	♀ Main

♀ Main



Onshape empowers our distributed team.

- Collaboration tools
- Branching and merging
- Public data sharing

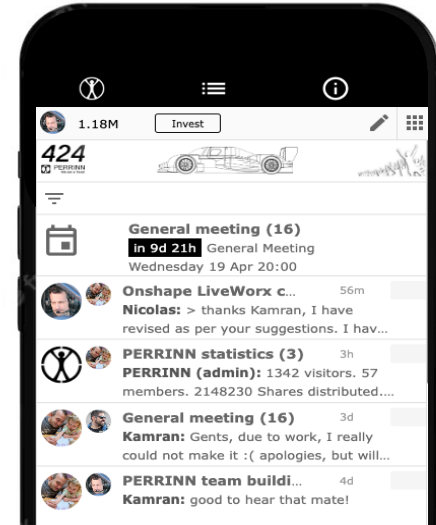
# PERRINN 424: Support and Invest



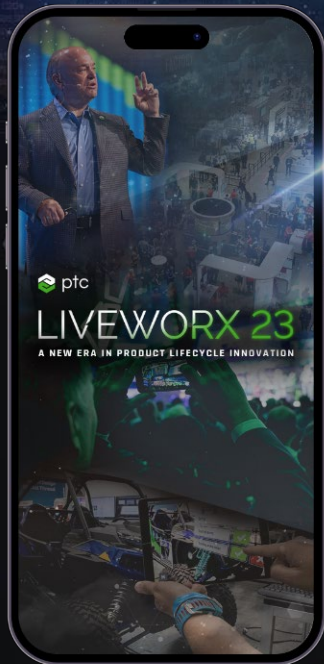
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