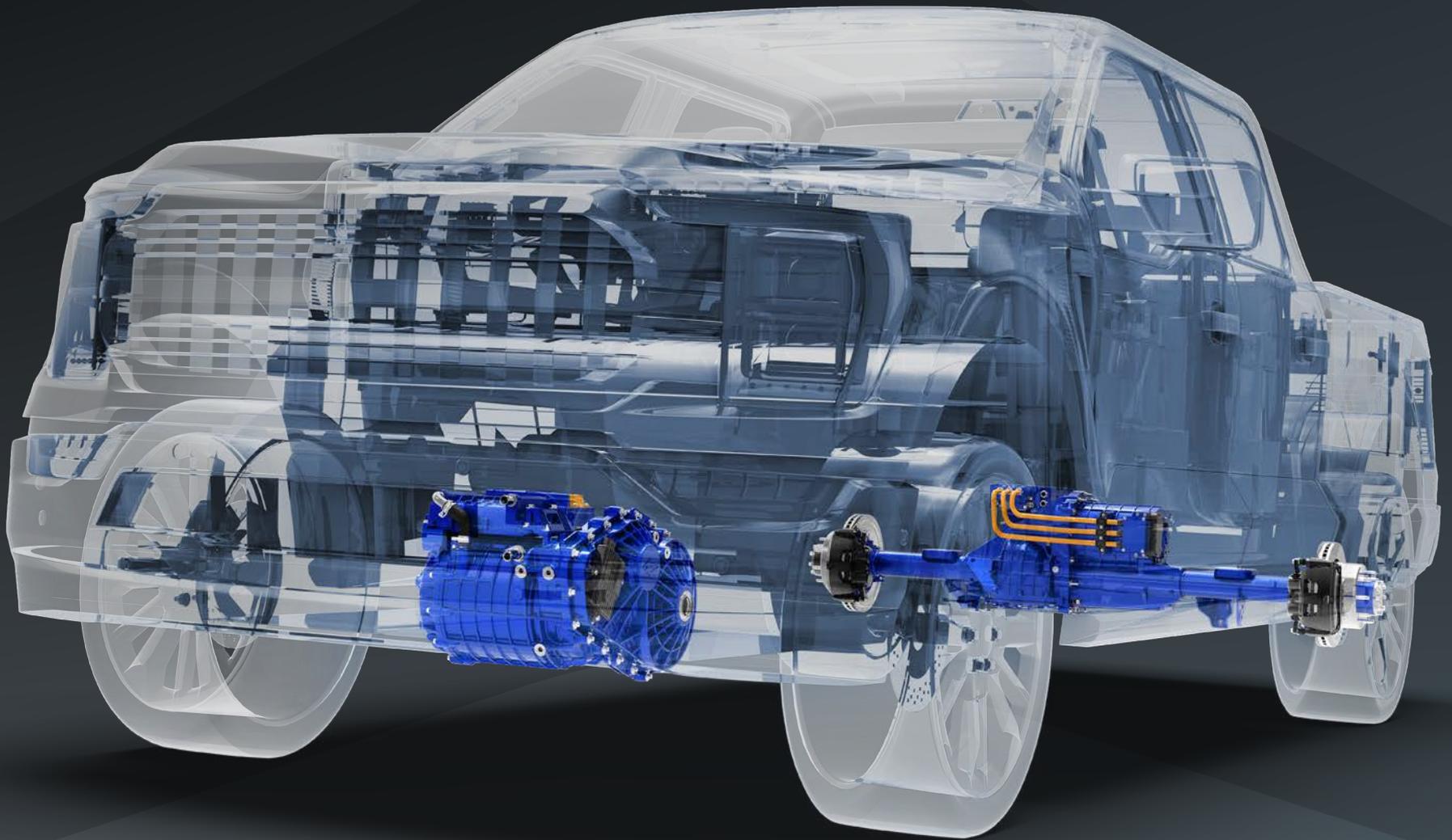
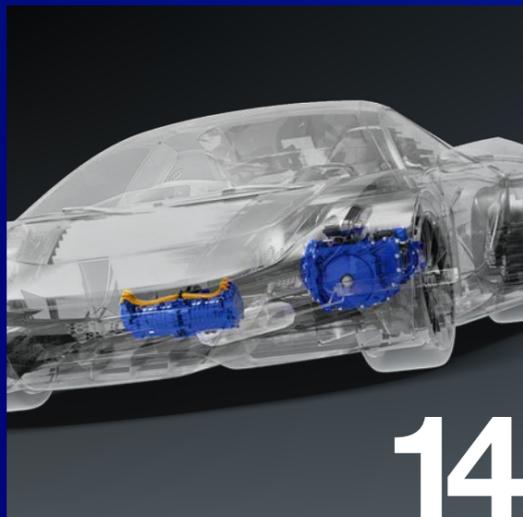
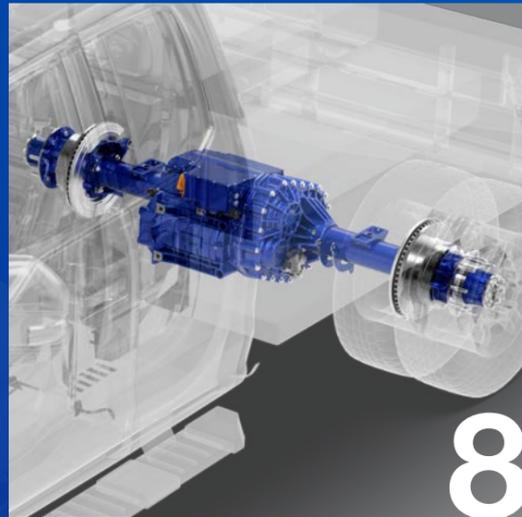
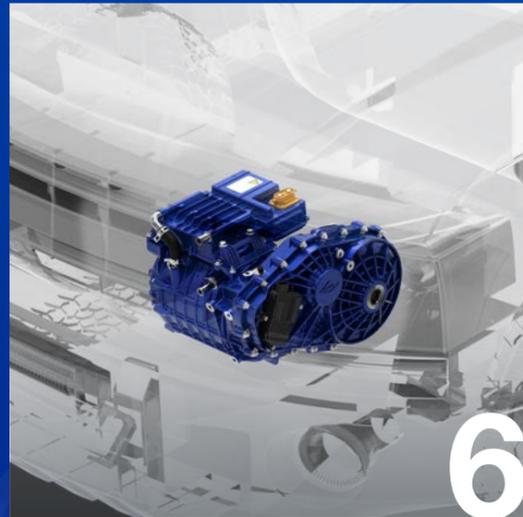
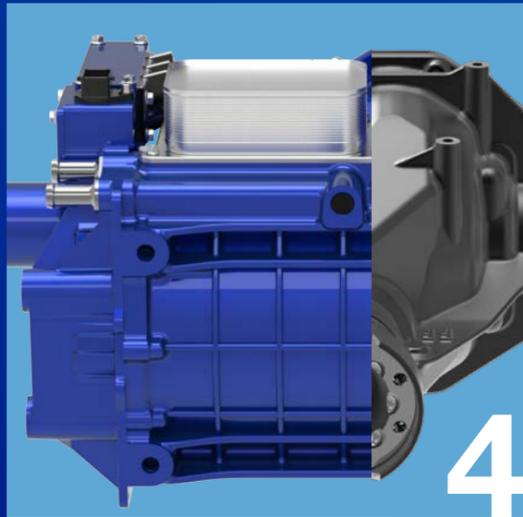


# Refining the Road Ahead

Light Vehicle Drive Systems



Electrification.  
**Delivered.**<sup>®</sup>



Continuous **Performance.**  
Maximum **Efficiency.**  
Relentless **Dependability.**

**No one does powertrains like Dana**

For 12 decades and counting, Dana has been a global mobility leader and a pioneer of powertrain technology for traditional and electric applications. Co-innovating with those who think without limits from day one.

Our solutions are born of the best engineers, most sophisticated technology, and the tenacious testing and refinement it takes to produce products that deliver for your platform.

No matter what your powertrain needs, Dana is your trusted partner. Our integration solutions are developed in house and are on the road today. And we won't rest until you and your customers are enjoying the ultimate driving experience on the refined road ahead.



## Electrification Solutions That Help Your Customers and the Environment

- Systems-based approach
- Complete in-house solutions
- Seamless integration
- Dependable technology

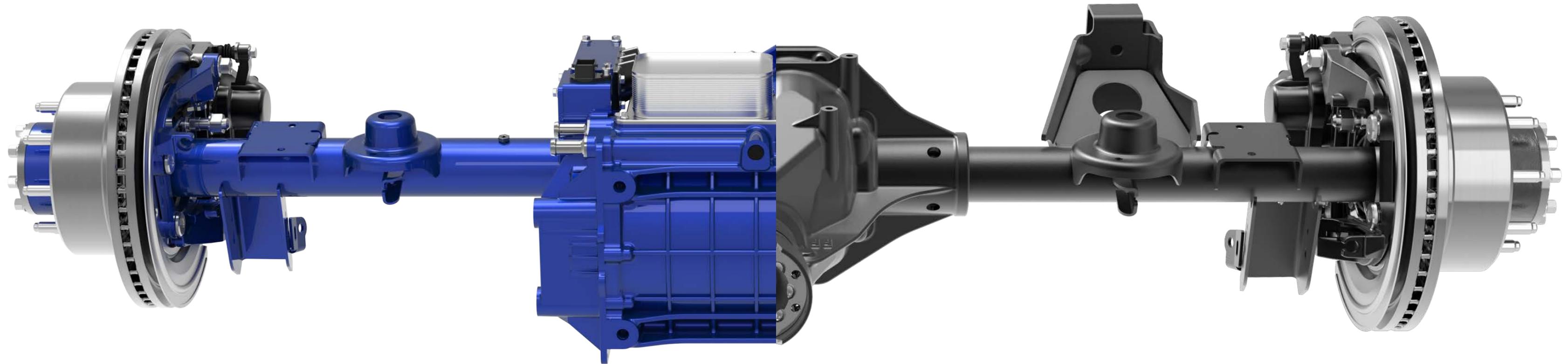
Each of these principles are backed by deep electrification expertise, a 360° whole system solution approach, and in-house knowledge and integration solutions that make a positive difference for your integration strategy, your product outcome, your customer, and your bottom line.



## Traditional Driveline Solutions Powering Today's Economy

Dana continues to advance light-duty drive systems for fuel-powered vehicles from performance to heavy-duty applications. Our solutions provide OEMs the fuel economy, durability, and performance gains through:

- Innovative design
- Virtual validation
- Optimization
- Versatility



## Championing a **Better World**

We are committed to providing OEMs sustainable solutions through materials, process, and manufacturing considerations at the product level for each and every project.

### Weight Optimization

Supports additional payload and / or battery capacity

### Efficiency

For maximum range

### Packaging

Improved vehicle integration for optimal packaging space

### Cooling Solutions

Integrated thermal management for best-in-class efficiency

# Meet the Dana 4-in-1 Electrified Beam Axle Family

## Unyielding power, precision, and the widest range of output torque

Dana 4-in-1 e-Beams deliver performance and efficiency without compromising torque or towing.

- |  |  |
|--|--|
| <p><b>For You</b></p> <ul style="list-style-type: none"> <li>▪ Simplified implementation and interfaces</li> <li>▪ Efficiency improvements (process and product)</li> <li>▪ Ease of integration into the vehicle platform</li> <li>▪ Weight and packaging optimized</li> <li>▪ Overall production savings</li> </ul> | <p><b>For Your Customer</b></p> <ul style="list-style-type: none"> <li>▪ No compromise to towing capacity or load-carrying capacity</li> <li>▪ Ability to deliver and modulate more torque smoothly and seamlessly</li> <li>▪ High continuous power</li> <li>▪ Market-leading performance</li> <li>▪ Greater efficiency</li> </ul> |
|--|--|

### Winning with Dana

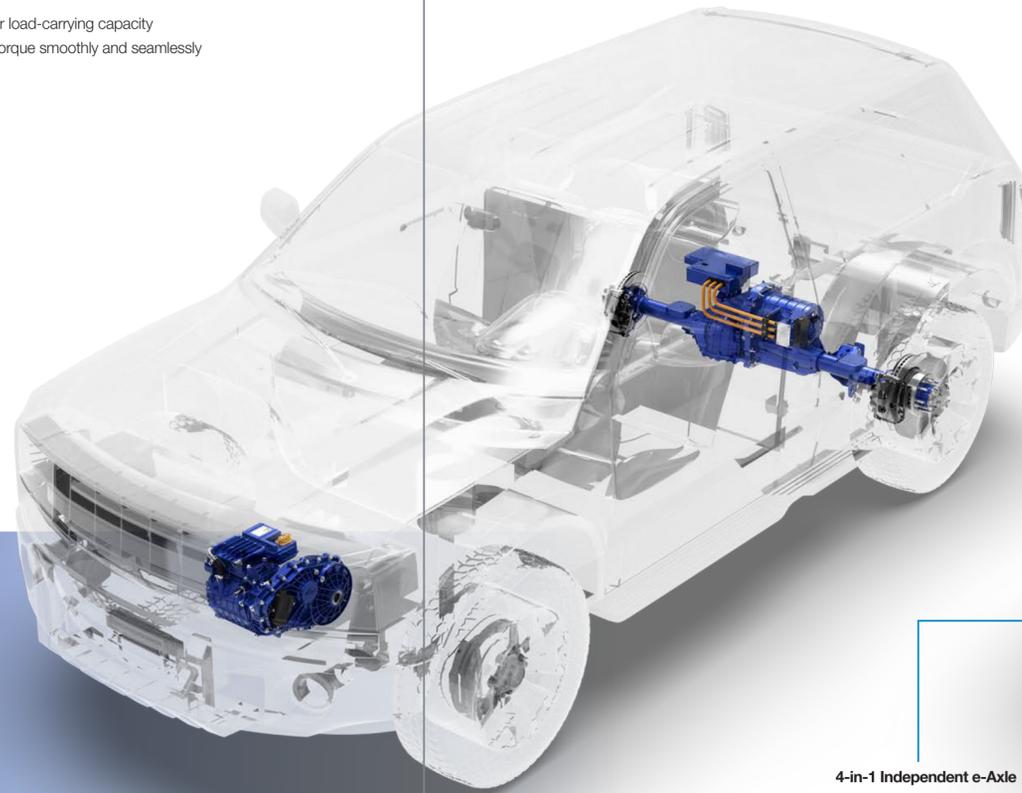
#### Our longevity and know-how in the beam axle market is our superpower

We understand the axle structure and the science of optimization, so we realize that shifting from a traditional axle to an e-Beam is never plug and play. Our 4-in-1 system optimizes traction, power, and torque for your applications.

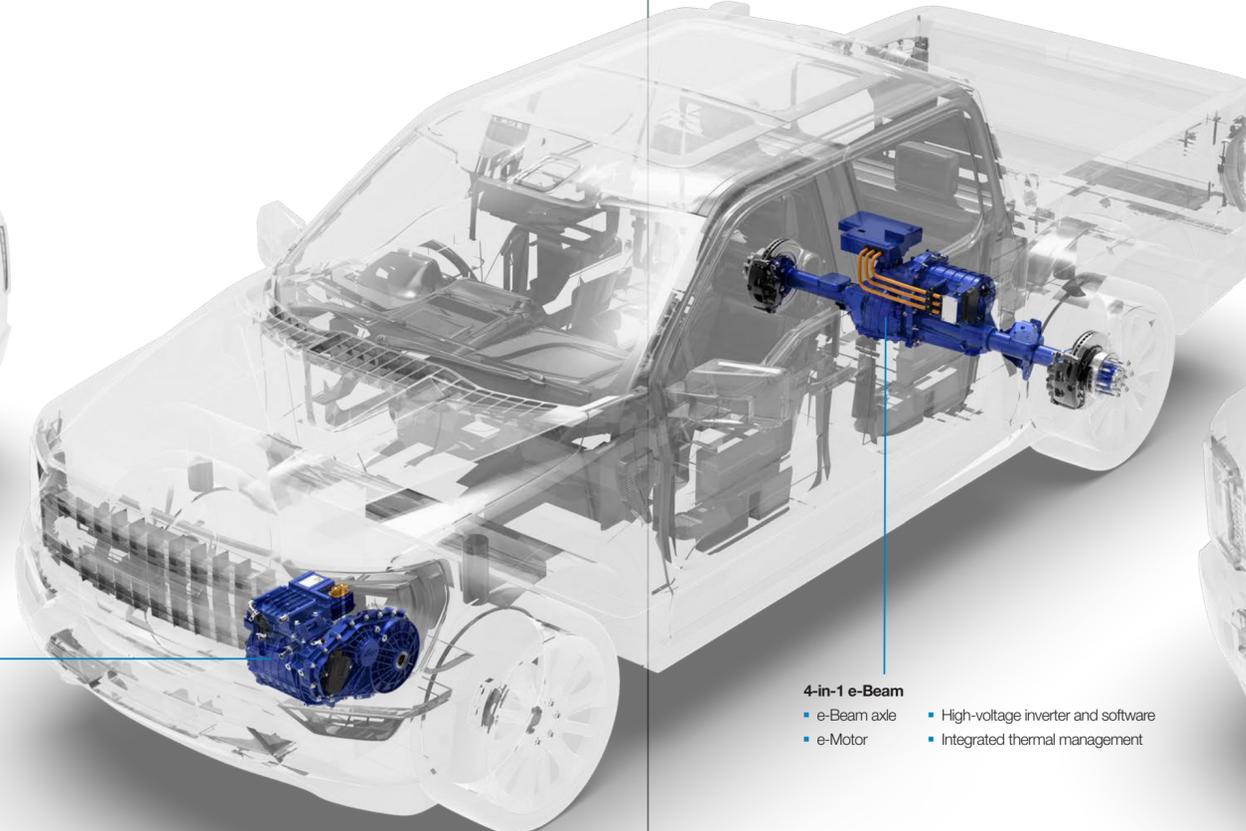
It's legendary Dana technology — evolved for the electrified vehicle market.

#### What makes integrated thermal management so cool?

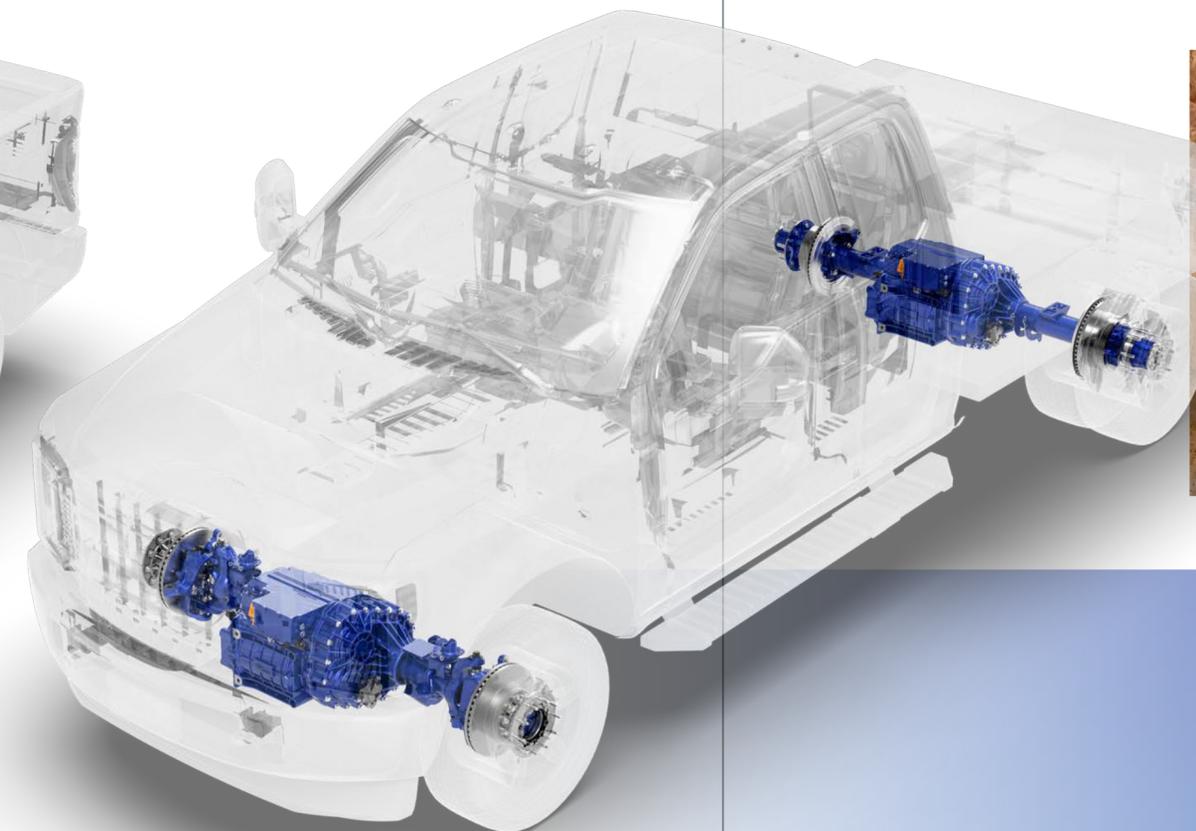
Adding thermal management into the e-Beam makes for a smaller overall system that delivers maximum efficiency, torque, and power density. When the thermal management system is built within the e-Beam, it intrinsically reacts with its components without plug-ins, extra software, added weight, or connections. It's no wonder Dana's thermal management is so highly awarded for its clean energy technologies.



- 4-in-1 Independent e-Axle**
- Gearbox
  - e-Motor
  - High-voltage inverter and software
  - Integrated thermal management



- 4-in-1 e-Beam**
- e-Beam axle
  - e-Motor
  - High-voltage inverter and software
  - Integrated thermal management



See the Dana 4-in-1 e-Beam in action.



Watch video To view video, scan the QR code below.



Learn more

The Dana 4-in-1 e-Beam delivers the widest range of output torque.

# Building Your Axle to **Your** Specifications

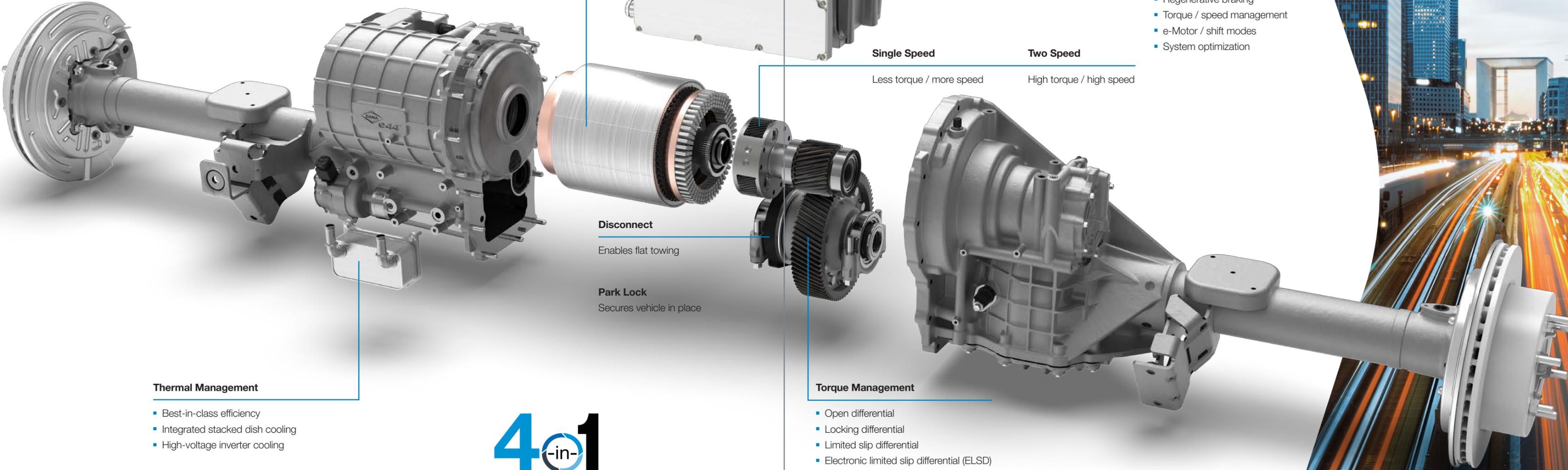
Every program has its own unique requirements. The e-Beam engineers at Dana will collaborate with you and design a system to meet or exceed all your platform specifications and program goals.

**Motors and Inverters**

Custom size and performance

**Software and Controls**

- Thermal management
- Park lock
- Regenerative braking
- Torque / speed management
- e-Motor / shift modes
- System optimization



**Disconnect**

Enables flat towing

**Park Lock**

Secures vehicle in place

**Single Speed**

Less torque / more speed

**Two Speed**

High torque / high speed

**Torque Management**

- Open differential
- Locking differential
- Limited slip differential
- Electronic limited slip differential (ELSD)
- Vectoring: mechanical, independent motor, twin motors

**Thermal Management**

- Best-in-class efficiency
- Integrated stacked dish cooling
- High-voltage inverter cooling



## Flexible e-Componentry Solutions

that work with our systems or yours

Dana takes a systems-based approach to the full drive system, offering mechanical, electrical, and software components that are ready to integrate within your e-Architecture.

We have the right products to meet any OEM need, from hybrid to full battery electric. No matter what stage of development you are in, Dana is ready to serve you with multiple electrified products already in production.

Dana engineers provide the seamless integration of our parts within your platform at any stage of the design or development process. We will be there with a full line of e-Drive and e-Axle components, transmissions, and modules like motors, inverters, gearboxes, cooling components, software, and beyond.



# Next-Level High Performance

## Dana transmission solutions

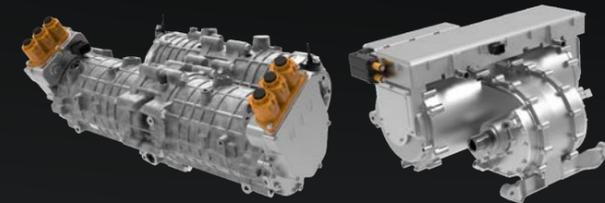
Dana is a world leader in manual, automated manual, and dual clutch transmission systems for small / medium series high-performance cars. We apply innovative technologies such as hybridization for dual clutch transmissions.

Dana Graziano™ six-, seven-, and eight-speed units are designed for front engine, rear transaxle, or mid-ship configurations and are pristinely tailored to the particular requirements of each individual vehicle.

## High Performance Longitudinal and Transverse Hybrid Dual Clutch

Meet the new benchmark for torque and speed. Select the P2 hybrid for battery recharge or engine cranking and the P3 for torque boost or EV drive. Both in a highly compact layout.

- 8 speed
- Max input speed: 10,000 rpm
- Max e-Motor torque: 170 Nm
- Max e-Motor speed: 21,000 rpm
- Self-locking differential
- Max input torque: 800 Nm (ICE)
- EM voltage: 400 V
- Max e-Motor power: 170 kW
- Top output speed: 2,700 rpm (>350 kph)
- Bistable park lock



High Performance Twin Motor e-Drives



High Performance Longitudinal Hybrid Dual Clutch

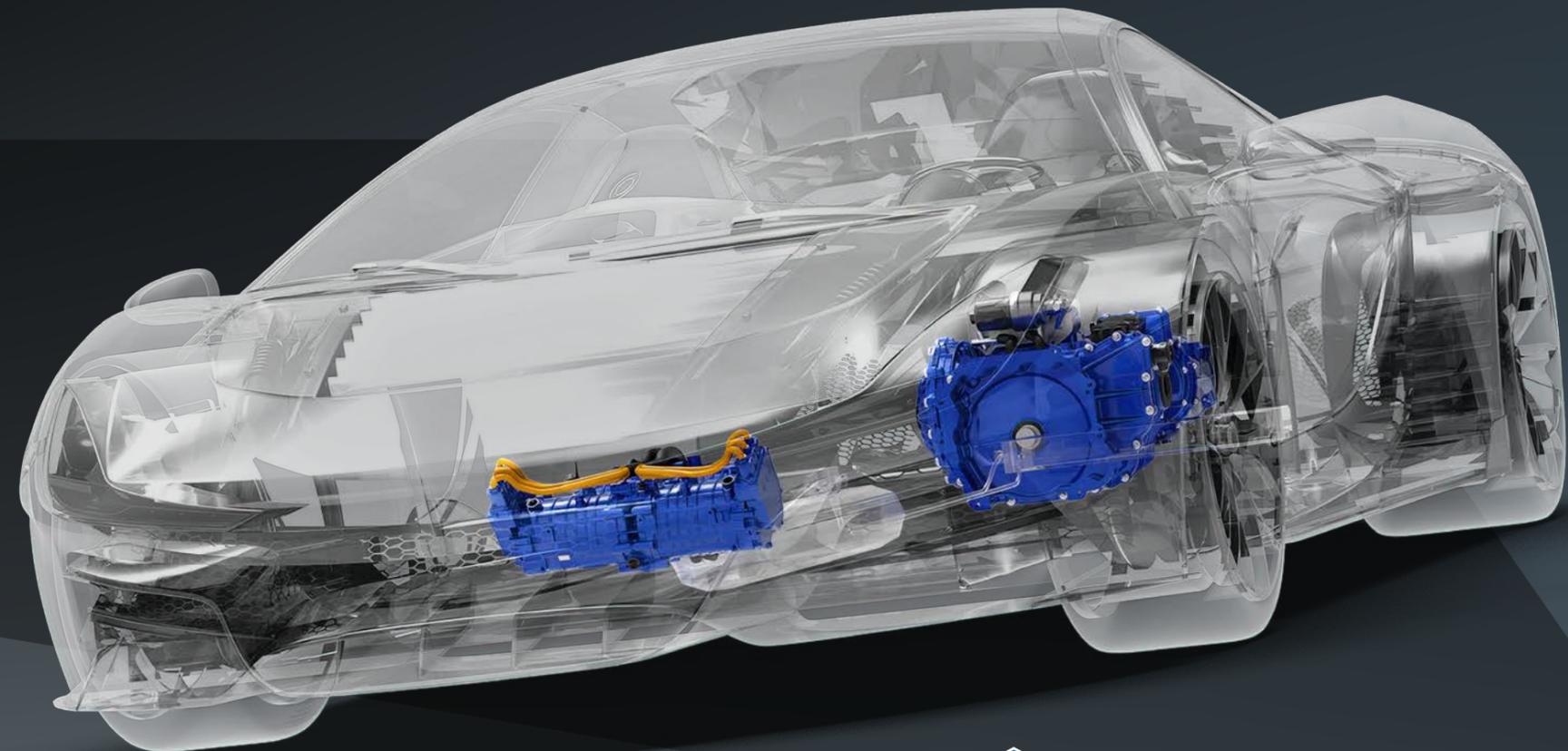


High Performance Transverse Hybrid Dual Clutch

## High Performance Dual Motor e-Drive

Best-in-class power and torque dense unit with high-speed motor is modularly designed to adapt to different applications with minor changes. It features torque vectoring capability with the highest Functional Safety (ASIL D).

- Max Output Torque: >10,000 Nm
- Silicon Carbide Inverter: Up to 900 V
- Torque Density: >75 Nm/kg
- Max GCWR: 6,000 kg
- Top Speed: 250 km/h
- Oil cooled motor, peak system efficiency 95.5%
- Max GVWR: 3,500 kg



BESPOKE

PRECISE

WEIGHT  
OPTIMIZED

AGILE

RESPONSIVE



**ONE-STOP  
SOLUTIONS**

**SYSTEM  
OPTIMIZATION**

**TRANSPARENT  
COMMUNICATION**

**GLOBAL  
REACH**

# 100% In House. 100% Complete Services. 120 Years of Customer Dedication.

We work with you to create the precise system for your application from implementation and programming, to the last exacting detail.

That's the difference a one-stop shop can make. Dana has all the pieces of the driveline systems in one place, so we can constantly refine and improve outputs.

Meeting your project specifications in one central location may sound like a small detail, but it means a lot. Just reliable product quality and a job that's up to our high standards, and yours.

# Light Vehicle Drive Systems **Global Footprint**

No matter your time zone or country code, Dana is globally positioned to respond quickly and in person.

**50+** facilities in **19** countries across **5** continents  
**32** manufacturing centers and **10** technology centers

# Dana **Sustainability** Targets

**75%+**  
Reduction of Scope 1  
and Scope 2 GHG  
emissions by 2030

**25%+**  
Reduction in Scope 3  
GHG emissions by 2030

**2040**  
Net zero

 **SCIENCE  
BASED  
TARGETS**  
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION  
**Managing with Science  
Based Targets**



**Better World™**



Learn more



Electrification.  
**Delivered.**<sup>®</sup>

