

A background image showing a car driving on a winding road that curves into the distance, with a bridge visible in the background. The image has a teal and green color gradient overlay.

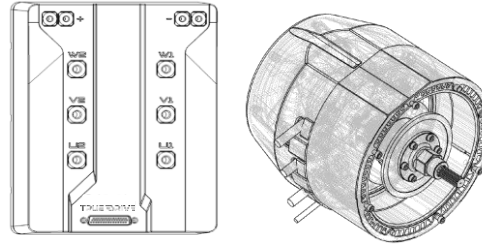
TrueDrive

Driving E-Mobility Forward

IRP INTRODUCTION

2021

IRP's innovative **Electric Powertrain** makes electric vehicles **POWERFUL** and **AFFORDABLE**



To

Accelerate The EV Revolution & Reduce The CO2 Footprint



Company Background – From Aerospace to E-Mobility

2011

Company Foundation -
Custom Aerospace
Powertrain Projects



2017

**Development & testing
of micro-mobility solutions**



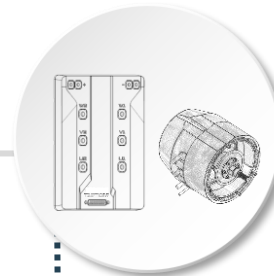
2013

**Serial Production for
aerospace applications**



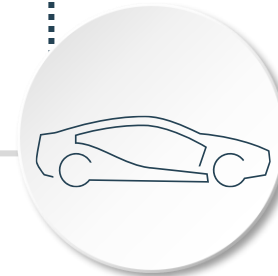
2019

TrueDrive product line
launch. Deep engagement
with leading automotive
players



2021

**Development of >100KW
powertrain systems for
BEV**



Leadership Team



Moran Price
Founder & CEO [in](#)



Paul Price
Founder & CTO [in](#)



Prof. Sam Ben-Yaakov
Chief Innovation Officer [in](#)



Amit Grauer
VP Business Development [in](#)



Dan Shoshani
VP Product & Marketing [in](#)



Shadie Bisharat
VP Sales [in](#)



Ilya Vatsel
VP Operations [in](#)

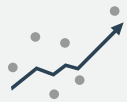
IRP's Unique DNA



Innovative Technology -
More Than 10
Powertrain Patents



Selected by **Market Leaders**



End-To-End
In-House Development



Unmatched Product
Performance and Price



Flexible and Agile
approach



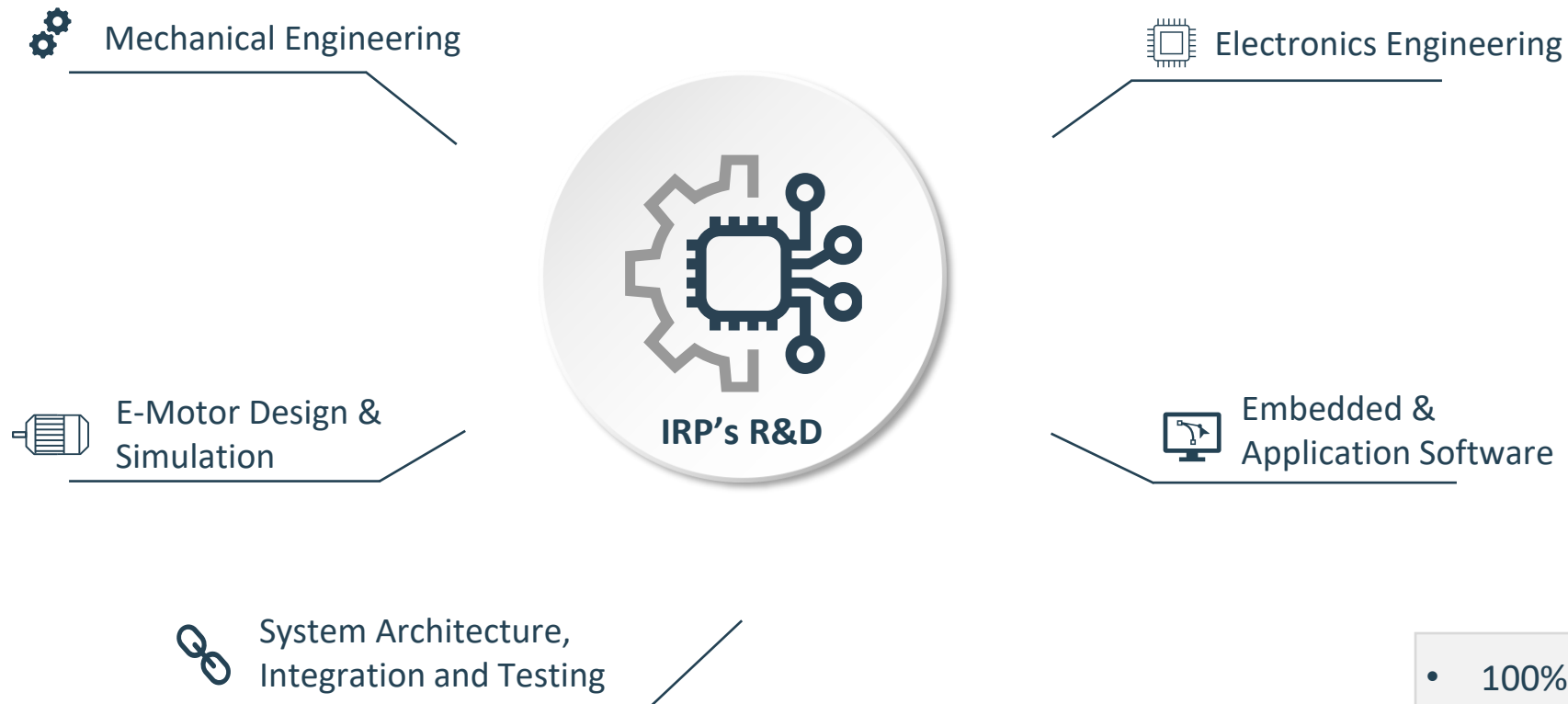
Top Quality –
Automotive standards



Vast In-House R&D Capabilities



IRP's R&D team includes a wide range of engineering expertise.
The team is working together to develop **high quality, tightly integrated end-to-end** powertrain solutions

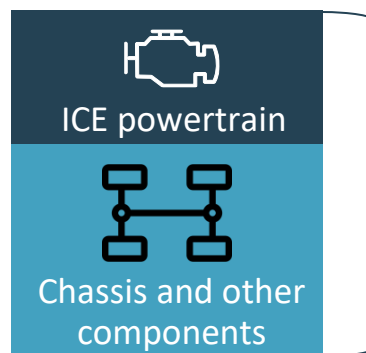


- 100% flexibility to optimize HW & SW
- No 3rd party black-box
- R&D: >60% of the employees

The Market's Challenge - Cost

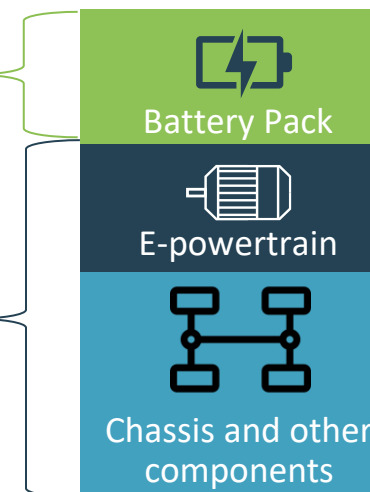


ICE Model



Electric Model

\$5k-12k



Similar Cost



TrueDrive - Superior Performance at Affordable Cost



High-performance, hyper-efficient motors and inverters for EVs,
overcoming the barrier for EV adoption with **lower costs**

TRUE DRIVE



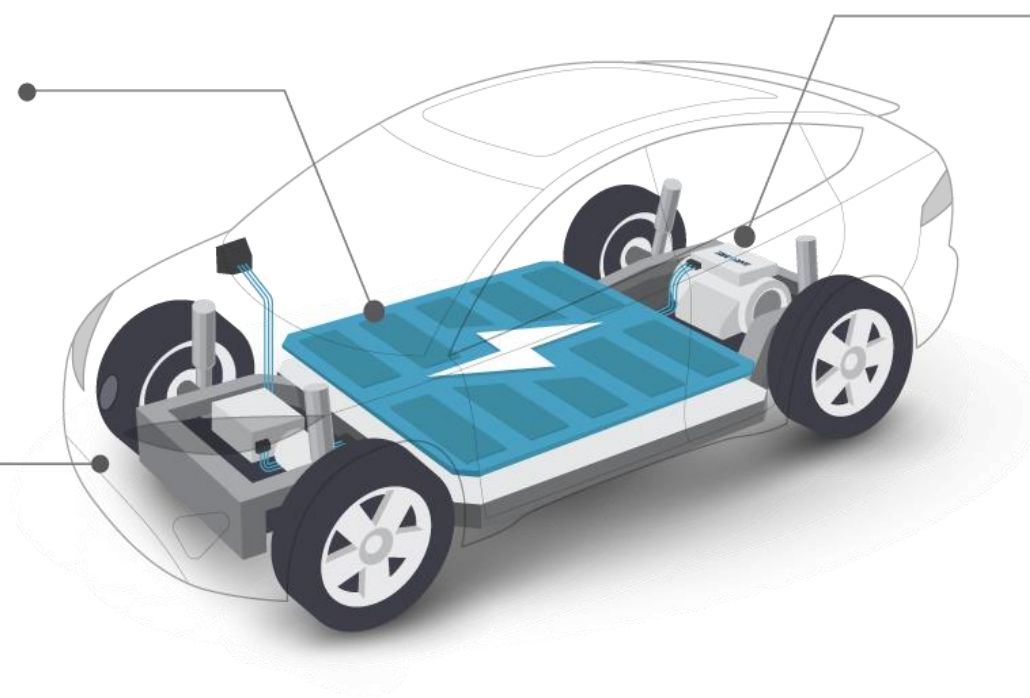
Top Efficiency

Utilizing max battery power



Top Performance

High torque at all speeds



Compact Powertrain Size

Reducing weight and volume



Custom Solutions



Automotive Manufacturing
Standards Compliant



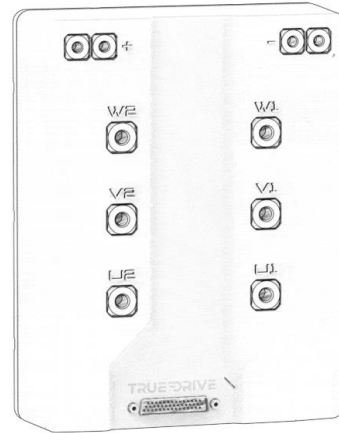
Fits All EV Platforms

BEV | PHEV | HEV | MHEV

Our Unique Patented e-Powertrain Technology

TrueDrive Controller

- 1 Patented control algorithms
- 2 Unique topology
- 3 Advanced power stage design



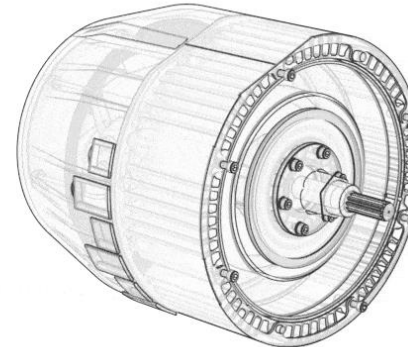
TrueDrive Motor

Unique motor design
(i.e. winding)

4

Standard materials and
manufacturing processes

5



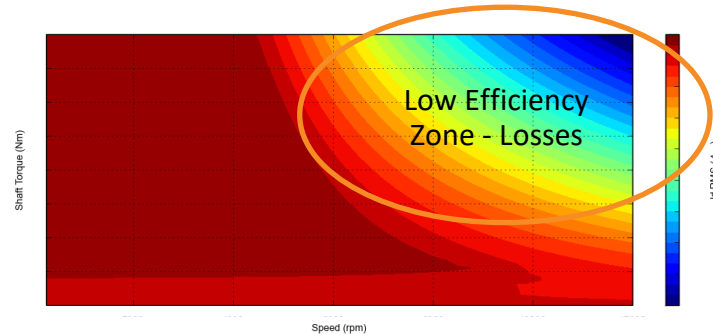
- 6 Tightly integrated and optimized end-to-end system

What Is The Effect of TrueDrive Design?

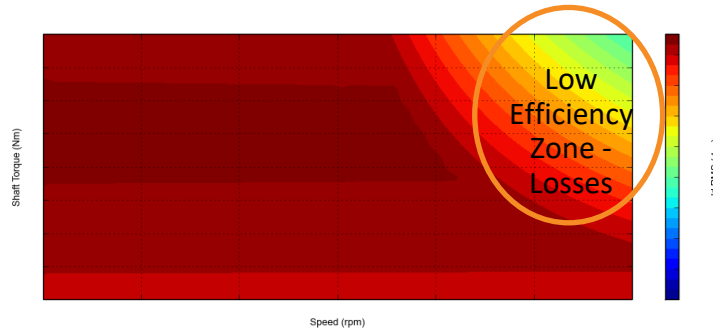
High torque and efficiency at high speeds.
Minimal / no use of field weakening

Wider **High Efficiency** operational envelope

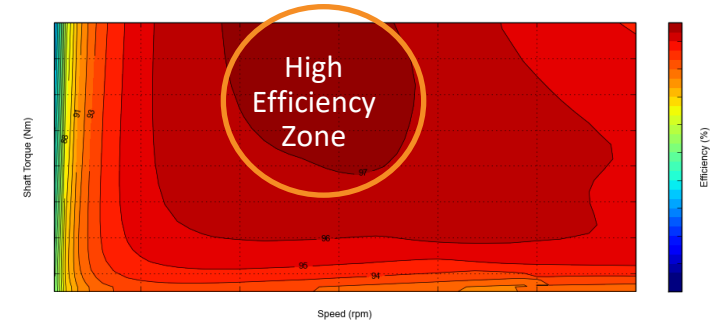
Traditional Solution



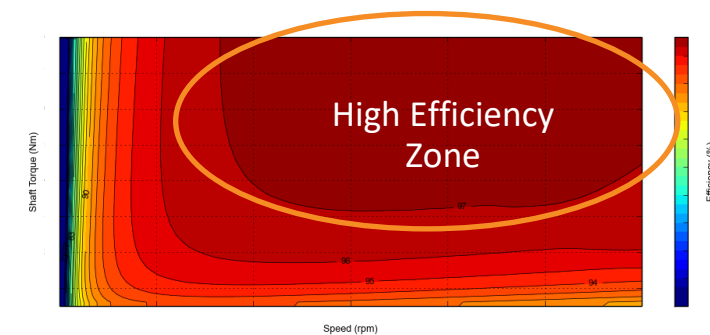
TrueDrive



Traditional Solution

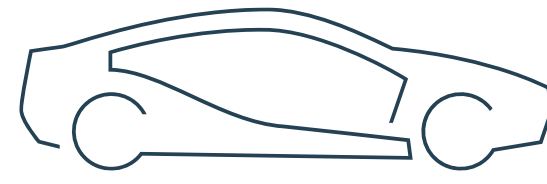
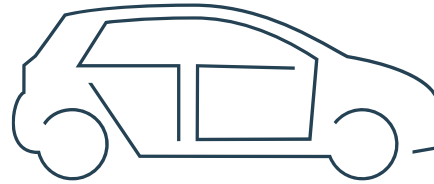
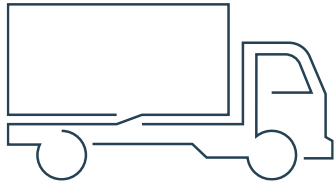


TrueDrive

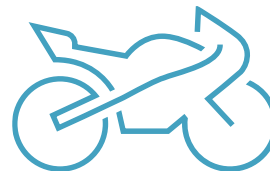
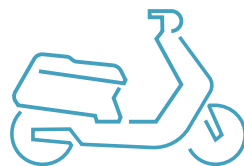


TRUE DRIVE

Full EV & HEV: Custom Solutions | LV & HV | Up To 150kW



Personal Mobility: Off-The-Shelf Products | LV | Up To 30kW



TrueDrive Off-The-Shelf Product Families

TRUE DRIVE DYNAMIC

IRP Controller working with any personal mobility motor 1-6kW



Flexible / customizable



Cost effective



Driving Experience



TRUE DRIVE FORCE

End-to-End Controller & Motor utilizing IRP's unique technology 8-15kW



Unmatched performance



Super efficient. Air cooled motor



Compact & low weight



TrueDrive Success Stories – Renault Twizy

Collaboration With Renault-Nissan-Mitsubishi Innovation Lab

- Integrated IRP's motor and controller



Increased **driving range** significantly



Increased **Torque**



Significantly reduced **size and weight**

Original
Motor
36KG



IRP Motor
***14KG**

TRUE DRIVE
FORCE 15



Peak Efficiency – **95%** | Output – **15kW**
Torque – **83Nm** | Max Speed – **8000 RPM** |
Voltage – **48V**



RENAULT NISSAN MITSUBISHI

Pushing The Boundaries – TrueDrive EV Success Story

Developed E-motor and inverter for Leading European BEV OEM



Increased **performance** and **efficiency** – **97%**



Reduced **size** and **weight** by **15%**

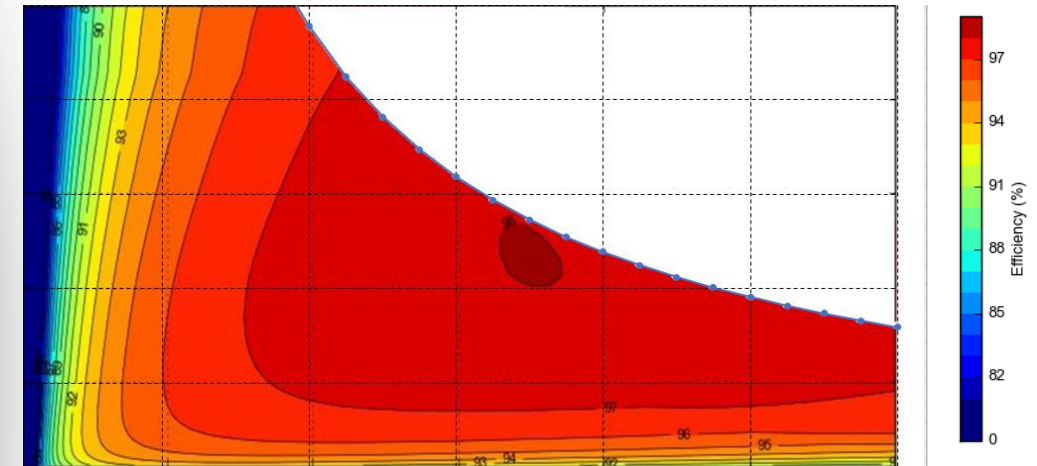


Minimal Rotor Losses at high speeds

Minimal use of field weakening



TRUE DRIVE



Peak Efficiency – **97%** | Output – **100kW**
Torque – **245Nm** | Max Speed – **12000 RPM**
Voltage – **400V**

Pushing The Boundaries- TrueDrive 150kW Powertrain



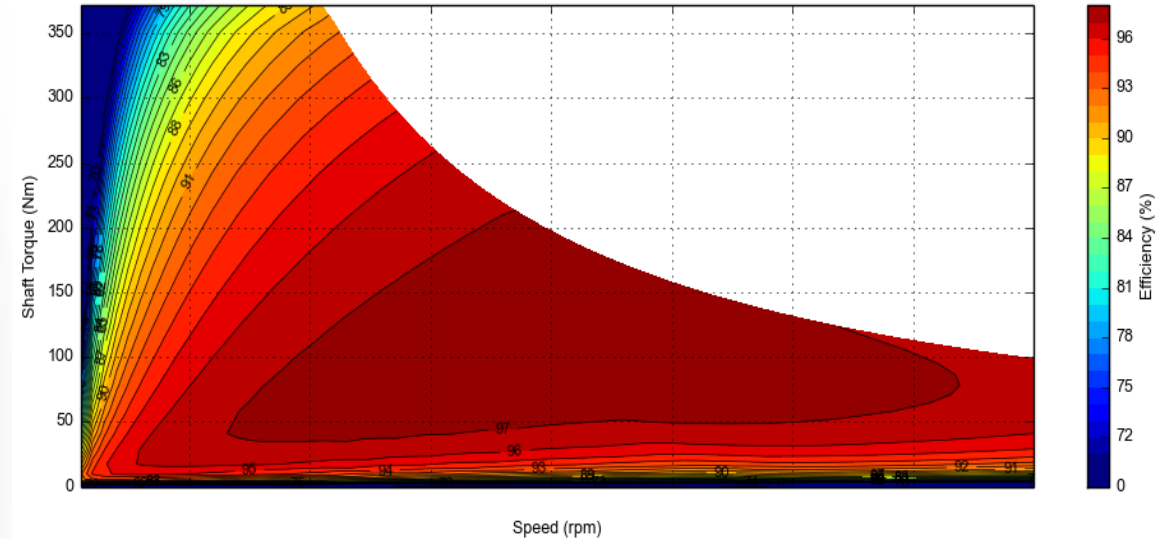
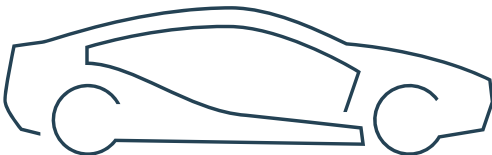
E-motor for High-Performance Platforms



Super **HIGH TORQUE, POWER** and **EFFICIENCY**



Super **light** and **compact** motor size



Peak Efficiency - **97%** | Output – **165kW**
Torque – **360Nm** | Max Speed – **16000 RPM**
Weight – **38KG** | Dimensions - **Ø300x180mm**

Our revolutionary technology **empowers**
e-mobility leaders

Powered by
TRUE DRIVE



Driving
E-Mobility
Forward



THANK YOU



in

