A preliminary prospectus containing important information relating to the securities described in this investor presentation (the "Presentation") has been filed with the securities regulatory authorities in certain of the provinces of Canada. A copy of the preliminary prospectus, and any amendment, is required to be delivered with this document. The preliminary prospectus is still subject to completion. There will not be any sale or any acceptance of an offer to buy the securities until a receipt for the final prospectus has been issued. This document does not provide full disclosure of all material facts relating to the securities offered. Investors should read the preliminary prospectus, the final prospectus and any amendment for disclosure of those facts, especially risk factors relating to the securities offered, before making an investment decision.



## THE POWER WITHIN

November 24, 2020

TSXV: EXRO · OTCQB: EXROF

www.exro.com

### **NOTICE & DISCLOSURE**

#### **Cautionary Notes**

Prospective investors should rely only on the information contained in the preliminary short form prospectus dated November 24th, 2020 and the documents incorporated by reference therein (the "Preliminary Prospectus"). This Presentation is qualified in its entirety by reference to, and must be read in conjunction with, the information contained in the Preliminary Prospectus. A prospective investor is not entitled to rely on parts of the information contained in this Presentation to the exclusion of others. Neither Exro Technologies Inc. ("Exro" or the "Company") nor Raymond James Ltd. or Gravitas Securities Inc. (the "Agents") have authorized anyone to provide prospective purchasers with additional or different information. Exro and the Agents are not offering to sell shares in any jurisdiction where the offer or sale of such securities is not permitted. An investment in the Company's securities is subject to a number of risks that should be considered by a prospective purchaser. Prospective purchasers should carefully consider the risk factors described under "Risk Factors" in the Preliminary Prospectus before purchasing securities of the Company.

For prospective purchasers outside Canada, neither of Exro nor the Agents have done anything that would permit this offering or possession or distribution of the Preliminary Prospectus and final prospectus, or any amendment thereto, in any jurisdiction where action for that purpose is required, other than in Canada. Prospective purchasers are required to inform themselves about, and to observe any restrictions relating to, this offering and the possession or distribution of the Preliminary Prospectus and final prospectus. In this Presentation, all amounts are in United States dollars, unless otherwise indicated. Capitalized terms that are not defined in this Presentation have the meanings ascribed to them in the Preliminary Prospectus. Any graphs, tables or other information in this Presentation demonstrating the historical performance of Exro or any other entity contained in this Presentation are intended only to illustrate past performance of such entities and are not necessarily indicative of future results of Exro.



### **NOTICE & DISCLOSURE**

This Presentation contains "forward-looking information" for purposes of applicable securities laws ("forward-looking statements"). Forward-looking statements are neither historical facts nor assurances of future performance. Instead, they are based on the Company's current beliefs, expectations or assumptions regarding the future of Exro's business, future plans and strategies, the Company's operational results and other future conditions. Forward-looking statements can be identified by words such as "anticipate", "beliefe," "poset", "intend", "project", "seek", "target", "potential", "will", "would", "could", "should", "contemplate" and other similar expressions, although law all forward-looking statements contain these identifying words. These forward-looking statements include all matters that are not historical facts. They appear in a number of places throughout this. Presentation and include statements regarding Exro's intentions, beliefs or current expectations concerning, among other things, Exro's financial performance, financial condition, liquidity, prospects, growth, strategies and the industry in which it operates. This forward-looking information includes, among other things, statements relating to: expectations regarding industry trends, overall market growth rates and the Company's growth strategies; the Company's business plans and strategies; expectations regarding growth and timing of such growth; and the Company's competitive position in its industry.

Although Exro bases the forward-looking statements contained in this Presentation on assumptions that it believes are reasonable, Exro cautions investors that actual results and developments (including its financial performance, financial condition and liquidity, and the development of the industry in which it operates) may differ materially from those made in or suggested by the forward-looking statements contained in this Presentation. Despite a careful process to prepare and review the forward-looking statements, there can be no assurance that the underlying opinions, estimates, and assumptions will prove to be correct. By their nature, forward-looking statements involve risks and uncertainties because they relate to events and depend on circumstances that may or may not occur in the future. The Company believes that these risks and uncertainties include, but are not limited to, those described in the "Risk Factors" section of the Preliminary Prospectus.

The risk factors contained in the Preliminary Prospectus should not be construed as exhaustive and should be read with the other cautionary statements in the Preliminary Prospectus. Although Exro has attempted to identify important risk factors, there may be other risk factors not presently known to it or that it presently believes are not material that could also cause actual results and developments to differ materially from those made in or suggested by the forward-looking statements contained in the Preliminary Prospectus or this Presentation. If any of the above assumptions underlying forward-looking statements prove incorrect, actual results and developments may differ materially from those made in or suggested by the forward-looking statements contained in the Preliminary Prospectus or this Presentation. Given these risks and uncertainties, investors are cautioned not to place undue reliance on these forward-looking statements. Any forward-looking statement in this Presentation is made as of the date of the Preliminary Prospectus, and, except as required by law, Exro undertakes no obligation to update any forward-looking statements or to publicly announce the results of any revisions to any of those statements to reflect future events or developments. Comparisons of results for current and any prior periods are not intended to express any future trends or indications of future performance, unless specifically expressed as such, and should only be viewed as historical data.

This Presentation includes market and industry data which was obtained from various publicly available sources and other sources believed by the Company to be true. Although the Company believes it to be reliable, the Company has not independently verified any of the data from third-party sources referred to in this Presentation, or analyzed or verified the underlying reports relied upon or referred to by such sources, or ascertained the underlying assumptions relied upon by such sources. The Company does not make any representation as to the accuracy of such information.

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This Presentation does not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of the securities of Exro in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of such jurisdiction.



### **WHO WE ARE**

We have developed a new controller we call our **Coil Driver** that dynamically enables multiple power settings in a single motor

Exro is a North American based technology company providing **intelligent electrification** solutions for performance and sustainability.

It combines its patented software and hardware with inhouse design, development, testing and final assembly for cost-effective solutions.



17 Granted



18 Pending





Baltimore, MD

Calgary, AB

Vancouver, BC

# STEP CHANGE IN POWER ELECTRONICS

### WHAT WE DO

is make electric motors smarter

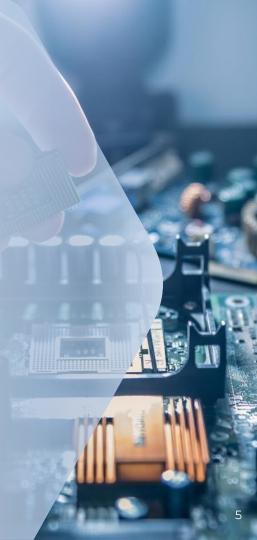
### HOW WE DO IT

is through next generation power electronics

**OUR MISSION**IS TO USE MINIMUM ENERGY FOR MAXIMUM RESULTS







### TOTAL ADDRESSABLE MARKET



Total Addressable Global Market for Electric Vehicles (EVs):

USD \$802.8B by 2027 – Global CAGR of 22.6%<sup>1</sup>



#### **Mobility Applications**

E-Bikes, E-Trucks & E-Cars, Mining Haul Trucks, Sweet Sweepers, Off-Road Vehicles, E-Recreational Vehicles



**\$300B** invested in EV technology by auto makers to date<sup>1</sup>

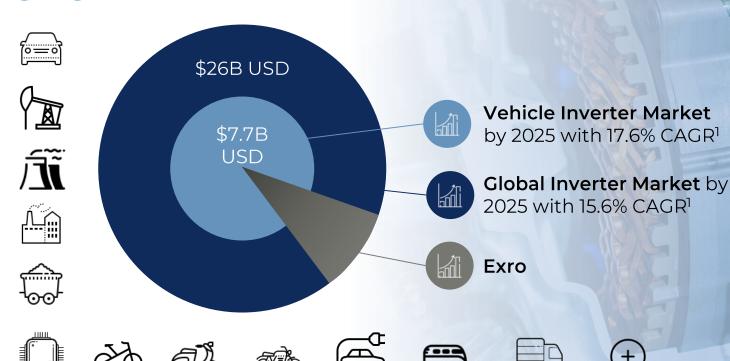


By 2040, EVs are expected to account for some **31 percent** of the global light duty vehicle fleet<sup>2</sup>

1. AfterMarketNews.com 2. https://www.statista.com/statistics/736219/ev-share-of-global-light-duty-vehicles See forward-looking information and risk factors contained herein



### **GLOBAL INVERTER MARKET**



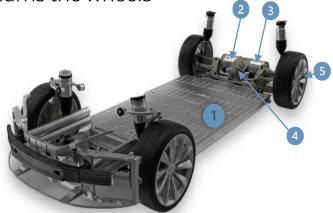


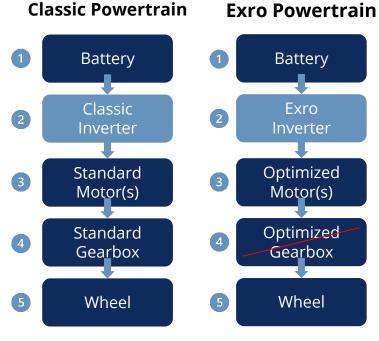




### **ELECTRIC VEHICLE POWERTRAIN**

- Every mobile vehicle has the same components to convert power:
  - 1. Battery 2. Inverter 3. Motor 4. Gearbox 5. Wheels
- The inverter acts as the brains of the vehicle by regulating how much power is sent to the motor which turns the wheels







### WHY WE MATTER

#### **Traditional Inverter**

- Controls how the motor behaves to meet load requirements
- The motor is **static** with a traditional inverter

#### **Exro Inverter**

- Controls how the motor behaves to expand load requirements
- The motor is dynamic with an Exro inverter

The benefits of a traditional inverter with the ability to change motor configurations for expanded performance



### **INDUSTRY PROBLEM**

- Limitations of traditional electronics technology are becoming more evident. In many prominent applications today, traditional methods do not meet the required performance
- We need to optimize powertrains to extend range, increase performance and reduce costs in our current machines
- Manufacturers are compensating by oversizing equipment, adding motors or implementing a mechanically-geared solution which increase costs
- Government regulations are beginning to impact the use of internal combustion engines

Motor 1 Optimizes **Torque** 

> Standard Electric Car

Motor 2 Optimizes **Speed** 

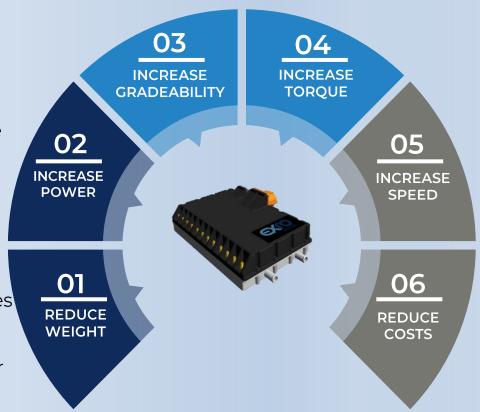




### **OUR SOLUTION**

Exro created what it believes to be the first "intelligent" coil switching driver for electric vehicles that is expected to provide greater speed, power and distance, while potentially reducing weight and space inside a powertrain.

This patented technology enables 2 separate torque profiles within a single motor. Most vehicles use technology through two or more motors and gearboxes to get the range of power they need. One motor is configured to deliver low-end torque and another motor is configured for high-end speeds.





### THE COMPONENTS



SIGNAL & DC TERMINAL ASSEMBLY

PHASE TERMINAL ASSEMBLY

CONTROL BOARD ASSEMBLY

DC LINK BOARD ASSEMBLY

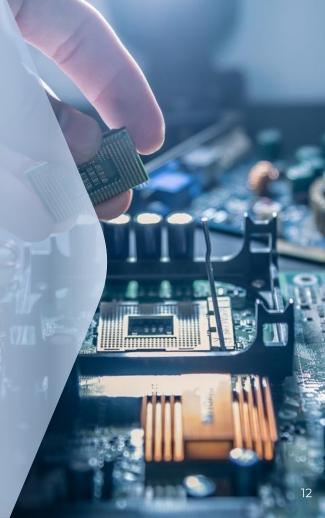
GATE DRIVER BOARD ASSEMBLY

MOLDED BUS BAR ASSEMBLY

POWER BOARD ASSEMBLY

HEAT SINK





### PRODUCT PLATFORM

Scalable platform to accommodate the wide range of applications and designs within the growing electric mobility market.



Form factor may change as product size increases All options can be customized as needed.



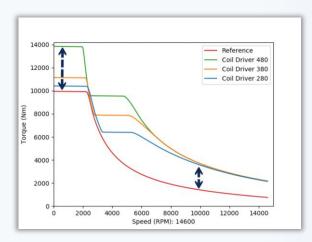
### HOW WE DO IT

- Coil switching is not a new development with electric motors, it has been around for years, we just developed a way to make it **intelligent**.
- Intelligent Coil Switching is expected to establish a greater depth of control of an electric motor using the coils already installed. The ability to change configurations allows efficiency optimization for each operating mode, resulting in smarter energy consumption. The Coil Driver automatically selects the appropriate configuration in real time so that torque demand and efficiency are optimized.
- A single motor can repeatedly change configurations on-the-fly and under demand (electric gear)
  - 1) Optimal performance at low speed
  - 2) Optimal performance at high speed
- Can be applied to any given machine geometry axial flux, permanent magnet, switch, induction and any propulsion type – BEV, PEHV, Fuel Cell



### POWER OPTIMIZATION

- ) Improve system power density
- > Increase top speed and torque capabilities
- Optimal performance at low and high speeds with the same motor
- Automatically optimize for system efficiency in each operating mode



Simulation of reference vehicle versus same vehicle at multiple currents. Assumptions of mechanical design were made. Reference current at 280.

- Smarter energy consumption
- No loss of torque between configurations
- > Gradeability improvement across speed range
- > Reduce system volume, weight and cost

#### Power optimization with Electric Supercar

Classic powertrain	Exro Coil Driver
475 kW	983 kW
Dual Motors RWD	Dual Motors RWD
288 km/h	389 km/h
Top Speed	Top Speed
2.5 s	1.8 s
0-100 km/h	0-100 km/h
2000 Nm	2777 Nm
At 0 RPM	At 0 RPM

Approximated values based on simulation model.



### BENEFIT CASE STUDY: EFFICIENCY

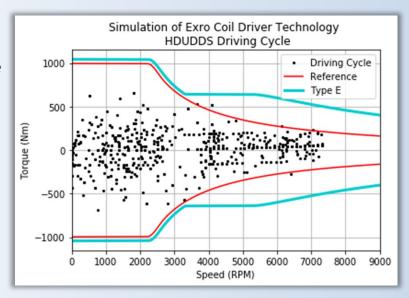
In this example, the Coil Driver is used to minimize losses inside the electric motor by systematically switching to the most efficient winding configuration.

Over the Heavy Duty Urban Dynamometer Driving Schedule ("HDUDDS") cycle, the vehicle can save significant amounts of energy.

Drive cycle motor loss reduction: 7%

Energy saved: 0.027 kWh/km

What does this mean?



7% RANGE GAIN OR 7% DECREASE IN BATTERY SIZE



### **COST OVERVIEW**

		Cost Optimization		Performance Optimization	
Description	Classic Inverter	Optimize Inverter	Optimize Motor	Optimize Cost	Optimize Power
Inverter cost	100%	76%	119%	104%	119%
Motor cost	100%	100%	50%	100%	100%
System cost (1:1.5 Inv-Mot ratio)	100%	90%	<b>78</b> %	102%	108%

Approximation of the cost breakdown of a Coil Driver compared to a classic inverter assuming a high-volume production.

### The choice is yours.

#### Focus on cost

- Up to 22% system cost reduction Reduce motor size by up to 50%
- Remove system components

#### Focus on Performance

- Improve power density Increase system efficiency
- Outperform your competition



### **CASE STUDY**

#### Imagine driving up a hill

 The Coil Driver will dynamically send a command to the motor to switch coils to get more torque or speed as required by the driver

Fluid motion

Go further on a single charge

A municipal bus can go further while covering more routes

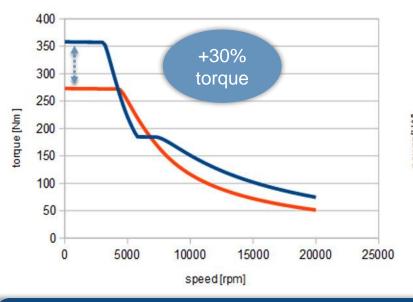
 A refuse truck can carry more load and better navigate hills

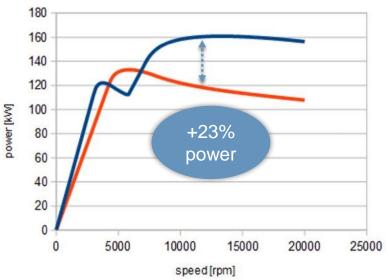




### INTELLIGENT ELECTRIFICATION







FASTER STRONGER SMARTER

MORE ROUTES & LESS CHARGING | GRADEABILITY TO GO FURTHER | EXPANDED TOWING CAPACITY



### **EXRO STRATEGIC PARTNERS**



September 2019 DORING. Electric



September 2019 **Potencia** 



November 2019





February 2020









June 2020





July 2020





September 2020



#### September 2019

"We will enter into 8 commercial deals by end of 2020. These will demonstrate versatility in operating applications." - Sue Ozdemir, CEO

September 2020

✓ Entered into 8th deal







Mexico City is one example of government regulations impacting the use of internal combustion engines.

- > Pronto Flexible Powertrain
- One of the largest motor OEM's in Mexico
- > Over 1M miles traveled







We are working with SEA Electric to open the global commercial vehicles market including delivery and garbage trucks.

- Delivery step up van proof of concept to be delivered Q3 2021
- > Garbage truck 29T application





### INNOVATION ROADMAP

Each of our applications are customized to suit the drive profile in key platforms that allow us to capture the majority of the mobility market.

#### **Micro**

<48V Coil Driver

#### Addressable markets

- Scooters
- > E-Bikes
- Micro-mobility

#### **Operational Application**

) Q4 2019

Customer validated Oct-20



#### Light

100V Coil Driver

#### Addressable markets

- Electric cars
- Motorcycles
- > Light-mobility

### Anticipated Operational Application

- ) Q4 2020
- ) Q1 2021





#### **Medium**

400V Coil Driver

#### Addressable markets

- Fleet vans
- > Recreational
- High-performance

### Anticipated Operational Application

- ) Q3 2021
- ) Q4 2021





#### <u>Heavy</u>

800V Coil Driver

#### Addressable markets

- Electric buses
- Long-haul semis
  - Industrial

### Anticipated Operational Application

) Q4 2021





### **BUSINESS MODEL**

### Multi-path revenue

**Contract Manufacturing** 

**Engineering Services** 

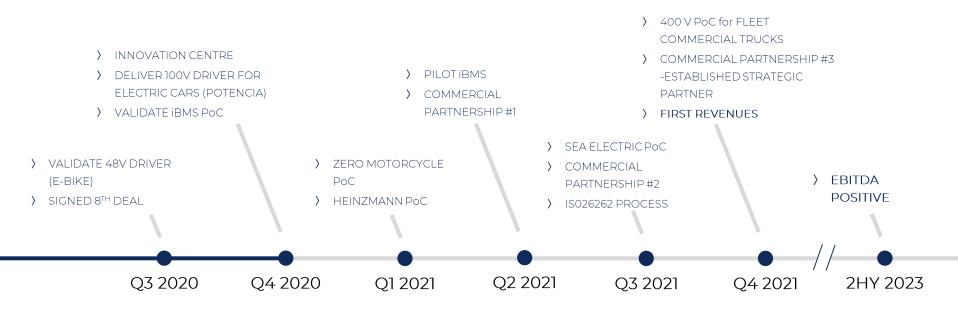
Licensing

**EBITDA** positive by 2HY 2023





### **MAJOR MILESTONES**



**PILOTS** 

**VALIDATIONS** 

COMMERCIAL



THE POWER WITHIN

### LONG TERM CATALYSTS

- > EBITDA positive second half year 2023
- > Uplist to TSX Market (from TSXV)
- Uplist to NASDAQ
- > Continued Technology innovation in power electronics
- Strategic partnerships



### **MANAGEMENT**



#### SUE OZDEMIR, Chief Executive Officer

- Former CEO of GE's Small Industrial Motors Division General Electric (NYSE: GE) ("GE").
- \$160M revenue enterprise.



JOHN MEEKISON, Chief Financial Officer 20+ Years Experience as CFO in Capital and Small Cap Markets Previous Capital Experience- Haywood Securities



JOSH SOBIL, Chief Commercial Officer
10+ Years Experience in electric motors and power electronics as Siemens (NSEI: SIEMENS) segment leader from 2016-2019 and sales leader at GE (NYSE: GE)
Mechanical Engineer & MBA



ERIC HUSTEDT, Chief Engineer
20+ Years' Experience – Automotive
Inverter Design and Manufacturing
International Rectifiers Automotive
KSR International,
Vishay Intertechnology (NYSE: VSH)



Proven innovator as Director of Marketing and Digital Operations at GE (NYSE: GE) and GE Industrial Motors, a Wolong Company Mechanical & Aerospace Engineer Harvard Business Fundamentals



### **BOARD OF DIRECTORS**



MARK GODSY, Executive Chairman
Co-Founder ID BioMedical
Co-Founder AngioTech Pharmaceuticals



Former VP of Operations at Ballard Power (TSX: BLDP) Former President Powertech Labs

**EAMONN PERCY, Director** 



FRANK BOROWICZ, Director

40 Years exp corporate
governance, regulatory
compliance and risk
management



JILL BODKIN, Director
Former Director at Westport
(NASDAQ: WPRT)
Partner at EY



JULIE (McCOY) WURMLINGER,
Director

Former Chief Engineer at Ford Motor Company (NYSE: F) 30 years automotive executive



SUE OZDEMIR, Director & CEO



DAN McGAHN, Director Current CEO at American Superconductors (NASDAQ: AMSC)



### **CAPITALIZATION**

Basic shares outstanding:	102,858,718
Fully-diluted shares outstanding:	116,742,649

Capitalization table numbers as of November 16th, 2020



### **ENVIRONMENTAL, SOCIAL & GOVERNANCE**



#### **Environmental**

- Air & Water Pollution
- Clean Technology
- Energy Efficient Solutions
- Green Workplace
- Renewable Energy

Exro is committed to environmental factors through creating innovative ways to reduce energy consumption

#### **Environmental Impact**

- Exro has converted all lights to LED format in its main facility to reduce congestion and carbon footprint
- Exro only utilizes recyclable, renewable products in its workplace



#### Social

- Community Impact
- Company Culture
- Diversity & Inclusion
- Innovation
- Privacy & DataSecurity

Exro is committed topositive social change through a cohesive and inclusive team culture

#### Social Impact

- Exro emphasizes gender equality and diversity in workplace
- Exro has been involved in community support and charitable endeavors
- Exro's supply chain focuses on long-term sustainable management



#### Governance

- Accounting
- Board Structure
- Business Ethics & Fraud
- Corruption
- Executive Compensation

Exro is committed to strong, positive and impactful governance and has a management team and board of directors aligned on this mission

#### **Governance Impact**

- Board Diversity, both in backgrounds, gender and disciplines
- Business Ethics, solidified by impeccable track record of team
- Risk Management, learned through experience
- Sound Corporate Governance, as demonstrated by ES&G initiatives taken by Exro



### **KEY TAKEAWAYS**

#### . FOCUSED MISSION

Exro is on a mission to minimize energy and maximize results with intelligent electrification.

#### . PERPETUAL INNOVATION

Exro is committed to continuous innovation in energy conversion and battery management systems.

#### . WORLD CLASS MANAGEMENT

Exro is comprised of a team of proven entrepreneurs, engineers, and industry experts in global markets.

#### . DISRUPTIVE TECHNOLOGY

Exro produces technology that translates into increased system efficiency and optimization for powertrains while consuming less energy and reducing costs.





THE POWER WITHIN

# THANK YOU

TSXV: EXRO

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