Q2 2018
Investor
Presentation

Linamar Corporation

August 2018



## **Forward Looking Information, Risk and Uncertainties**



Certain information regarding Linamar set forth in this presentation and oral summary, including managements assessment of the Company's future plans and operations may constitute forward-looking statements. This information is based on current expectations that are subject to significant risks and uncertainties that are difficult to predict. Actual results may differ materially from these anticipated in the forward-looking statements due to factors such as customer demand and timing of buying decisions, product mix, competitive products and pricing pressure. In addition, uncertainties and difficulties in domestic and foreign financial markets and economies could adversely affect demand from customers. These factors, as well as general economic and political conditions, may in turn have a material adverse effect on the Company's financial results. The Company assumes no obligation to update the forward-looking statements, or to update the reasons why actual results could differ from those reflected in the forward-looking statements. Content is protected by copyright and may not be reproduced or repurposed without express written consent by the Company.



## **Linamar – A Global Powerhouse in Diversified Manufacturing**



2017 SALES: \$6,546.5M ↑ 9.0%

Normalized NE<sup>1</sup>– ATS: \$551.5M (8.4%)  $\uparrow$  9.4%

2018 Q2 YTD SALES: 4,051.4M ↑ 18.4%

Normalized NE¹– ATS YTD: \$346.9M (8.6%) ↑ 10.9%

### Diversified Manufactured Products that Power Vehicles, Motion, Work and Lives



28,700 EMPLOYEES

**60 MANUFACTURING FACILITIES** 

17 COUNTRIES

## **Core Capabilities**





- CNC Expertise
- Complex Assemblies
- Advanced Automation & Robotics
- Hydroforming
- Heat Treatment



- Hatebur High Speed Hot Horizontal Forging
- Conventional Vertical Forging
- Cold Forming
- Ring Rolling
- Radial Forging





- Gravity & Low Pressure Aluminum Die Casting
- High Pressure Aluminum & Magnesium Die Casting

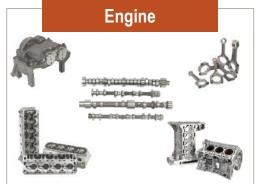


- Laser cutting
- Metal Forming
- Stamping
- Painting
- Robotic Welding
- Assembly

## **Key Products**



### **Transportation**













# **Scope of Operations & Market Concentration** Q2 YTD 2018



PRODUCTS

MARKETS

### **Transportation**

74.1%

Industrial

25.9%

Engine | Transmission | Driveline | Body

Mobile Industrial Equipment | Fabricated Assemblies



AUTOMOTIVE 66.6%



OFF-HIGHWAY 2.2%



COMMERCIAL VEHICLE 3.6%



ENERGY, HEAVY MACHINING, MILITARY 1.1%



MARINE & RECREATION 0.6%



**ACCESS** 17.6%



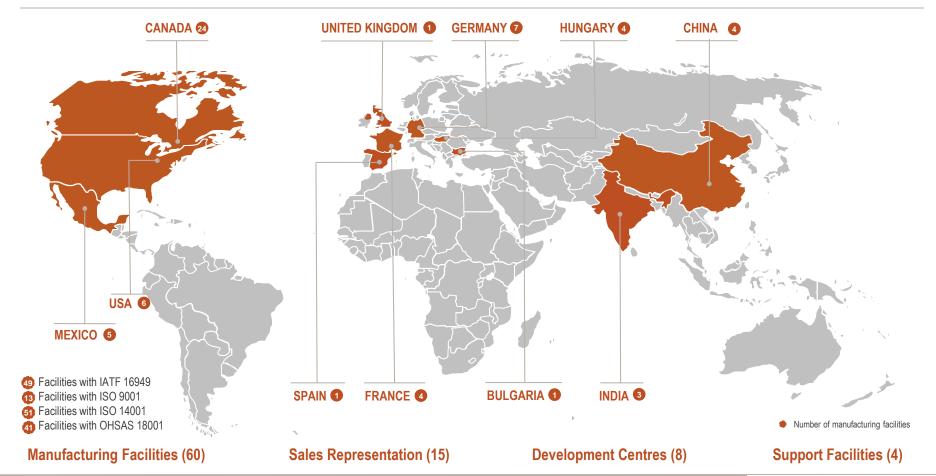
AGRICULTURAL 7.5%



INDUSTRIAL 0.8%

### **Global Presence**





### 2018 Market\* Outlook



2018	Transportation		Industrial	
2010	Automotive (LV)	Commercial Truck	Agriculture	Skyjack
North America	Flat	Growth	Moderate Growth	Strong Growth
Europe	Moderate Growth	Growth	Moderate Growth	Strong Growth
Asia	Flat	Decline	Moderate Growth	Growth

	Ranking	Score	Growth Expectation
_	Decline	0.00	<-2%
붑	Flat Moderate Growth	1.00	Between -2% and 2%
8	Moderate Growth	2.00	>2%, <=5%
_	Growth	3.00	>5%, <15%
	Strong Growth	4.00	>=15%

Note this is a MARKET outlook, NOT a prediction of Linamar's growth in each market. Growth is highly influenced by market share growth expectations as illustrated on the launch and market share slides in this ppt.

### 2019 Market\* Outlook



2019	Transpo	Industrial	
2019	Automotive (LV) Commercial Truck		Skyjack
North America	Flat	Flat	Moderate Growth
Europe	Flat	Flat	Moderate Growth
Asia	Moderate Growth	Decline	Flat

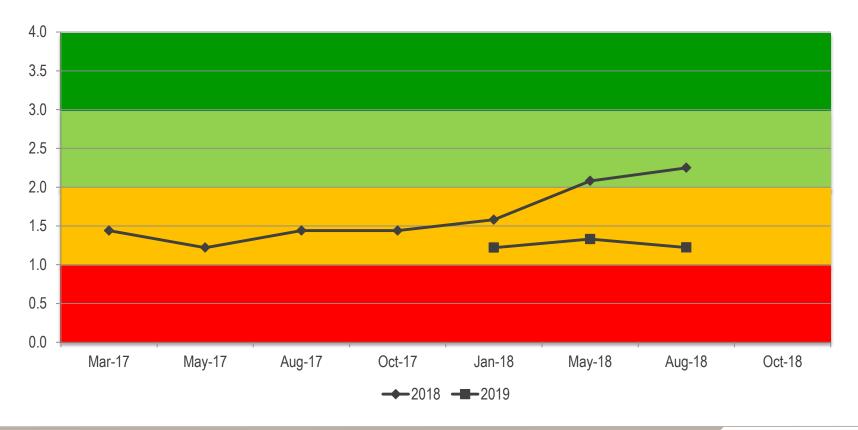
Ranking	Score	Growth Expectation
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Strong Growth	4.00	>=15%

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### **Trend Review – Positive Trend in Outlook for 2018 and 2019**



August 2018



## **Performance Highlights**

#### Q2 2018



### Evolution Through Bold Innovation

- Exciting new innovations launched at Skyjack
  - Telematics capabilities to help customers track assets, maintenance and usage
  - CVT transmission for telehandlers
  - VR Simulation for operator training
- Gear Lab established at Centre in Guelph to support global gear and gear box growth
- Innovation Hub designs for renovation complete, construction to begin in Sept between Centre & Powercor in Guelph
- New Business Wins and quoting activity at record levels
  - \$ NBW up 35% vs last year, launch book at nearly \$4.5 Billion
  - Great growth internationally 66% of NBW ytd non NA
- Great CPV growth in most regions despite soft customer production
- Continued market share growth for Skyjack on booms and telehandlers globally
- Strong first half for MacDon

### Accountability & Global Bench

- MacDon integration proceeding very well
- Good momentum on global mindset on several fronts
- New onboarding process launching in pilot mode
- >600 apprentices globally and trend showing positive momentum

### Systems & Simplify

- Top line growth of 22%, normalized OE growth 20% despite soft NA auto markets
- Outlook solid for another record year in 2018
- Great progress in OWL and LMMS implementation

## **Key Investment Themes**





### **Consistent Performance**

- Sales & earnings growth consistent & well above market
- Double digit normalized earnings growth 8 years running



### **Market Share Growth Key Growth Driver**

• We have demonstrated our ability to continue to grow through flat or declining markets and will continue to do so



### **Strong Growth Secured for the Future**

•\$8.5 - \$9 billion sales secured for 2022



### **Massive Market Opportunity Vehicle Propulsion**

- · Significant content potential in EV, Hybrid and ICE
- EV CPV converging with ICE CPV by 2022 -- ~\$60 per vehicle globally for each
- Only 30% of powertrain outsourced huge opportunity for extended time frame of growth, tech shift accelerating outsourcing



### Massive Market Opportunity Access & Agriculture

- Access \$10 Billion market, few players
- · Ag market at early stage of cyclical recovery
- Actively growing market share in both businesses globally

# Strategy



## **Enterprise Strategy**





## **Vision 2100 – Building an Action Plan for the Future**











**Global Addressable Markets: Automotive Commercial Vehicle Off Highway Vehicles** Marine/Personal Trans/Rail

**Global Addressable Markets: Global Addressable Market:** Scissors, Booms, Telehandlers Agriculture Harvesting, Seeding, & **Hydraulics Tillage Equipment** 

**Advanced Manufacturing** 

Artificial Intelligence/Machine Learning

Material Development



**Global Addressable Markets:** 

Electrical products, systems & services

Energy Markets - Oil/Gas, Solar, Wind

**Energy Storage & Generation** 

Global Addressable Market: **Medical Devices Healthcare & Mobility Home Care Technology** Wearable Technology



Water

**Global Addressable Markets: Irrigation Market** Water infrastructure Access, Storage, Cleaning

## **Key Market Strategies**



- Transportation
  - Increase CPV in BEV, HEV, FCV
  - Mine opportunistic ICE market as volumes decline but addressable market increases
  - Grow integrated casting and forging business
  - Light weighting and noise reduction
- Infrastructure (Skyjack)
  - Globalize and expand product lineup in all 3 regions
- Food
  - Build on MacDon acquisition as the foundation from which to expand global ag business overall
- Power, Water, Age research markets, develop strategy
- Overall:
  - Expand Asian footprint
  - Focus primarily on Greenfield growth subsequent to Macdon acquisition with some smaller acquisitions to enhance technology offering
  - Focus on Innovation to drive growth







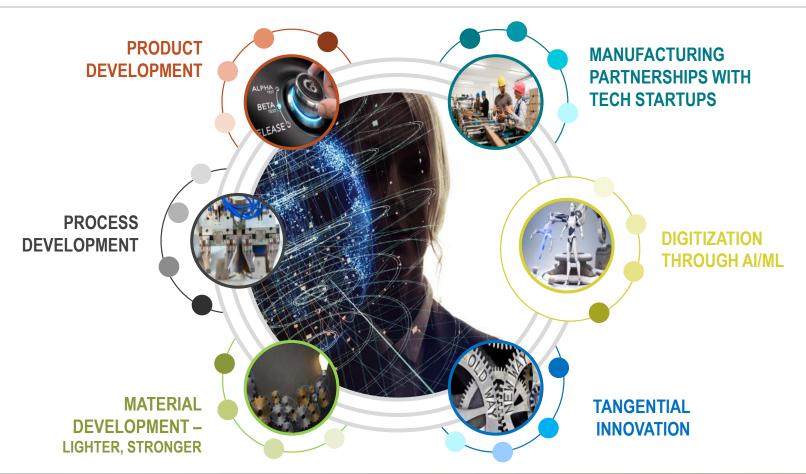






### **Innovation**



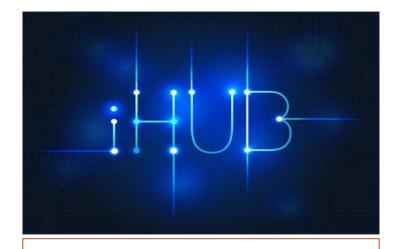


## iHub – Construction Starting Sep 2018









Incubate innovation ideas

Explore tangential products & markets

Develop manufacturing partnerships

## **Digitization Through Al | ML**



ADVANCED ROBOTICS
Development of advanced
collaborative robots to drive
more efficient and safer
automation

DATA COLLECTION

Creation of data
collection & analysis
systems to identify ways
to improve equipment
uptime, improve tool life
& reduce cycle times

Evolving vision systems to more accurately gauge & inspect products for better product integrity

**VISION SYSTEMS** 

ADDITIVE
MANUFACTURING (3D
PRINTING)
Identify applications
today (proto, tooling),
develop for future
production potential

PREDICTION & ANALYSIS
Assessing other processes
of analysis & prediction that
can be more efficiently &
accurately done by
machine

## **Digitization with AI/ML**



**Plants** 



2,189 **Connected Machines**  1,124 **LMMS** Data

**Collection Connections** 

1,164 **RFID Stations** 





**Traceability Read Stations** 

2,590 Robots



823 ©



851

Traceability Marking Stations







August 2018 © Linamar Corporation



## **McLaren Engineering**



### McLaren Engineering Development Centre, Detroit, Michigan, USA

- Enhanced collaboration as all Sales, Engineering, staff to be located under one roof
- Advanced Gear Lab, Rapid Prototype Manufacturing Cell, Production Scale Manufacturing Simulation Cell





# LINAMAR



### McLaren Engineering Development Centre, Guelph, Ontario, Canada

- Product Component
- Development Engineering
- CAD/CAE
- Plant Support
  - Prototype Build Management
  - Test and Validation

### McLaren Engineering Development Centre, Wuxi Jiangsu, China

Application, CAD,CAE for Linamar engineering group



**McLaren Engineering** 

- Dynamic torsional test bench
- Rotating bending test bench



## **Massive Opportunity in Outsourcing in all Propulsion Types**



\$500 Billion global market, addressable portion growing each year



- Addressable market consistently growing over next 20 years
  - Significant content potential in EV, Hybrid and ICE
  - 70% of content of powertrain captive but slowly being outsourced
- Linamar is a technology leader in light weighting, noise reduction, design optimization which is driving significant market share
- Linamar is a leader in vehicle electrification initiatives in driveline systems

## **Powertrain | Target Markets Significant and Growing**

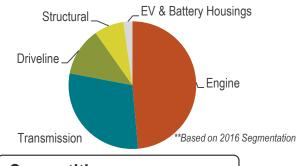


### TOTAL GLOBAL POWERTRAIN / DRIVETLINE MARKET

Global Market	2017	2020	2030
Light Vehicle	\$378 B	\$408 B	\$435 B
Commercial Truck & Off Highway Vehicle	\$129 B	\$124 B	\$130 B
Total:	\$507 B	\$532 B	\$ 565 B

### **Assumptions:**

- Includes total system value for engines, transmissions and drivetrain
- Includes all material, VA component machining and assembly
- Includes all light vehicle system production
- Commercial Vehicle (CV) and Off Highway market size includes value for systems >50 HP



### **Competition:**

- Key competitors OEM's themselves
- Handful of competitors with technical expertise in these products, fewer still with financial capacity

### **Drivers of Outsourcing:**

- Increases variability of cost base for OEM
- Machining and assembly highly capital intensive saves OEM capital
- Outsourcing to an expert in that process/product should result in better technology, quality and price

### **Linamar's Addressable Market**

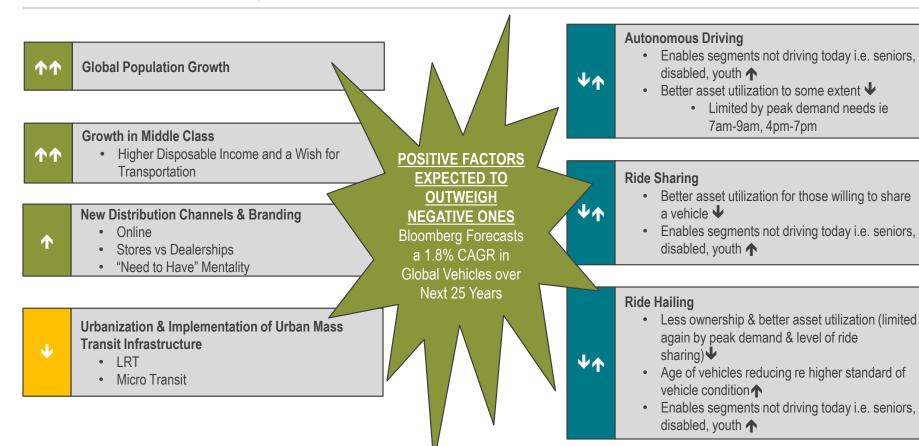
### **Evolving Technology and Propulsion Outsourcing**



- Linamar's Addressable Market is impacted by three long-term trends;
  - The shift from Internal Combustion Engines (ICE) to Hybrid Electric Vehicles (HEV) and Electric Vehicles (EV)
    - Fuel Cell Vehicles (FCV) are another key technology that is in earlier stages of development but could play a key role in the future
  - The degree to which the Propulsion Systems (or Powertrains) of those 3 architectures get Outsourced to the supply base
  - The overall level of vehicle production/sales

## **Factors Influencing Future Production Levels**

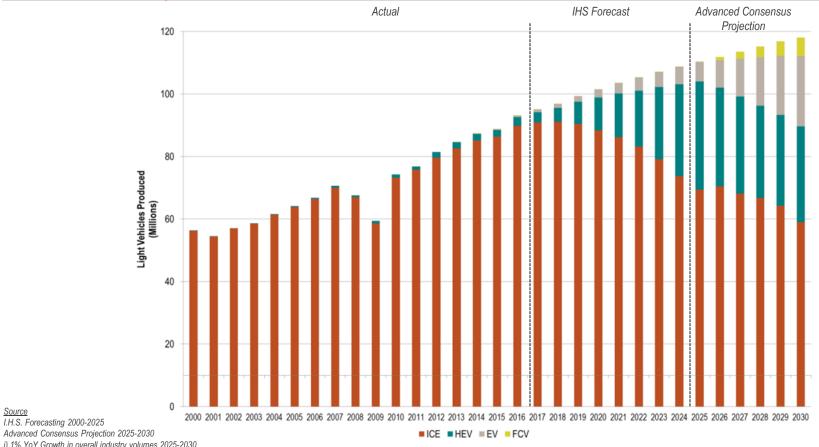




## **Global Light Vehicle Production**

**Advanced Consensus Projection** 





i) 1% YoY Growth in overall industry volumes 2025-2030

Source

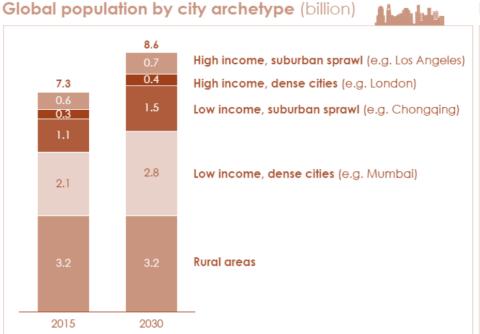
I.H.S. Forecasting 2000-2025

ii) Production Share of Technologies by 2030 of ICE 50%, HEV 24%, EV 21%, Fuel Cell 5%. (Based on Consensus Average of External Industry Expert Forecasts for EV adoption, Updated August 2018)

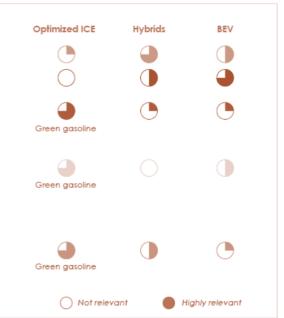
### **Powertrain Evolution**



### Different powertrains will co-exist with different urbanization patterns



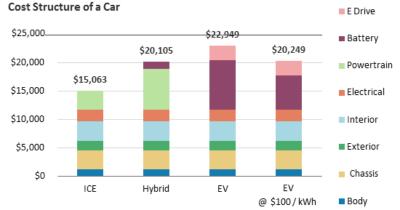
### Relevance of powertrain type



## **Cost Penalty of Electrification**







Source: Company Data, McKinsey, ICCT, Morgan Stanley Research. \$30,500 Average Selling Price (Fiat Chrysler, Ford, and General Motors in North America in 2017) - \$15,000 Cost to Manufacture (\$13,400 in 2010 Adjusted for Inflation in 2017) - \$10,500 Cost of Labor (9% EBIT Margin at Fiat Chrysler, Ford, and General Motors) - \$2,000 SG&A (7% of Revenue at Fiat Chrysler, Ford, and General Motors). For Cost to Manufacture, 8% Body + 22% Chassis + 11% Exterior + 23% Interior + 14% Electrical + 22% Powertrain. For Hybrid, assume EBIT Margin between ICE and EV (additional costs for Powertrain and Battery). For EV, 60 kWh Battery for Chevrolet Bolt EV x \$145 / kWh at General Motors + \$2,500 for E Drive (American Axle).

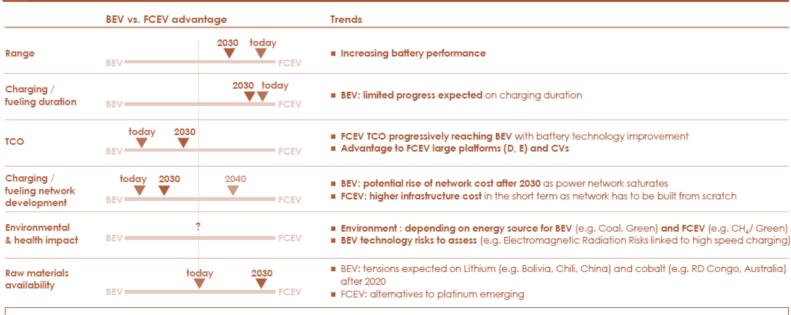
- Major hurdle to BEV is cost (and weight) of battery pack
- No roadmap with current battery technology to close the gap to cost of ICE
- Value of E-Drive >70% of value of ICE powertrain



### **Fuel Cell Vehicles**



### Fuel cell should progressively develop with a speed-up from 2030



FCEV considered relevant in the long term for vehicles requiring higher horse power and autonomy Several OEMs communicated on FCEV launches by 2025 (Toyota, HKMC, Honda, Daimler, GM, BMW)

## **Preparing for the Future of Propulsion**



# Internal Combustion Engine (ICE)



- Focus on Light Weighting, Fuel Efficiency, Emissions Reduction solutions which offer a unique value to customers.
- Leverage global footprint, vertically integrated capabilities and manufacturing reputation to be benefit from increased OEM Powertrain Outsourcing.

# Hybrid Vehicle (HEV)



- Continue to increase Content Per Vehicle on Hybrid Electrics as it will be an important bridging technology to pure Battery Electric
- Offer solutions focused on increased power density, Noise Vibration Harshness (NVH), light weighting.

# Electric Vehicle (BEV) & Fuel Cell EV (FCEV)



- Strong organizational focus on integrated eAxle technology solutions
- Provide Light Weight Aluminum and Magnesium Body & Structural Castings
- Look to augment eAxle offerings for Fuel Cell Vehicle (FCV) applications, which could play a key future role in market

Linamar objective is to pursue content in all Propulsion categories in order to be well positioned for multiple technology adoption scenarios.

### **ICE: Product Solutions**



Content Potential / Vehicle

Outsourced %

Addressable Content Potential / Vehicle

1990s \$4,000

> 15% \$600

2000s

\$4,000

20% \$800 2010s

\$4,000

32%

\$1,280

2020s

\$4,000

51%

\$2,040

2030s

\$4,000

75%

\$3,000

### Engine



**Brackets** 



**Pump Housings** 



Camshafts



Super cubed Blocks



Cylinder Head Cover Module



Cast and Fully Machined Cylinder Blocks & Heads Crankcase Assembly



Lower Engine



Full Engine Assembly

**Transmission** 





Differential Case Assemblies



Full Clutch Module Assembly



Full Clutch Module Superstructure Assembly



**Full Transmission** Assembly



Differential Case



Differential Housing & Beam Axle Assemblies



**PTUs** 



**RDMs** 



Disconnecting **AWD Systems** 

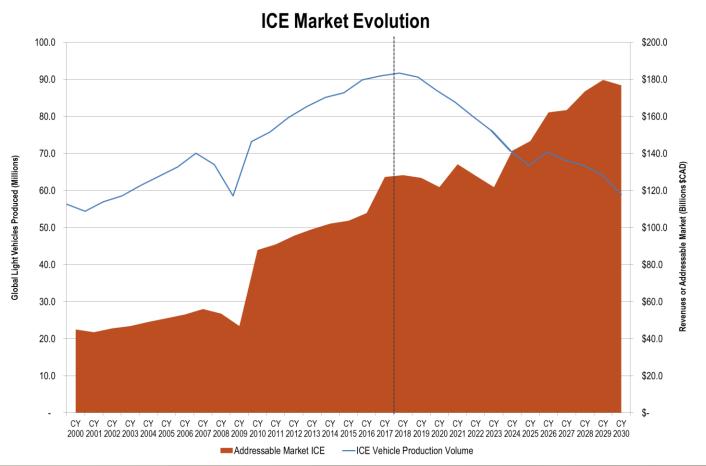
Driveline



## **ICE: Market Evolution**



34



## **Hybrid: Product Solutions**



Content Potential / Vehicle

Addressable Content Potential / Vehicle

Outsourced %

1990s \$4,000

15% \$600 2000s

\$4,000 20%

\$800

2010s

\$4,000

32% \$1,280 2020s

\$4,000

51% \$2,040 2030s

\$4,000

75% \$3,000

Engine

Camshafts





Turbo Charger Camshaft / Cylinder Assemblies Head Cover Module





Cast and Fully Machined Cylinder Blocks & Heads Crankcase Assembly



Lower Engine Full Engine

Assembly

**Transmission** 









**Fully Machined** Transmission Case



Complete Niche Transmission Assembly

E-Axle & Driveline **Systems** 



E-Assist Micro Hybrid



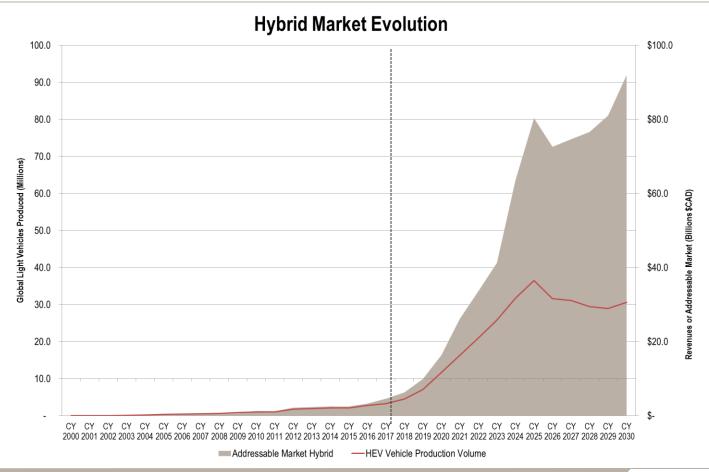
Single Motor e-Axle



with Disconnect

## **Hybrid: Market Evolution**





## **BEV/FCEV: Product Solutions**



Content Potential / Vehicle

Outsourced %

\$N/A

N/A \$N/A

1990s

2000s

\$N/A N/A

\$N/A

2010s

\$2,000

32% \$640 2020s

\$2,000

51%

\$1,020

2030s

\$2,000

75%

\$1,500

E-Axle & **Driveline Systems** 

Addressable Content Potential / Vehicle

Dual Motor e-Axle



Single Motor e-Axle



Solid Axle e-Power Unit



Multi-Speed e-Gearboxes

Structural & Chassis



**Shock Towers** 



IP Beam Structure



**Cast Chassis** Components



Centre Console



Members, Door Frames. Structural Assemblies

**EV Motor &** Battery Modules, Tank **Systems** 



Battery Tray Housings Electric Motor Housings



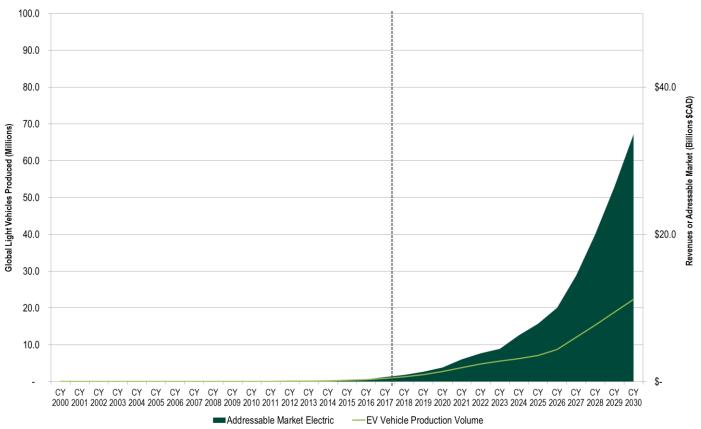


Hydrogen Storage Tank

## **EV: Market Evolution**

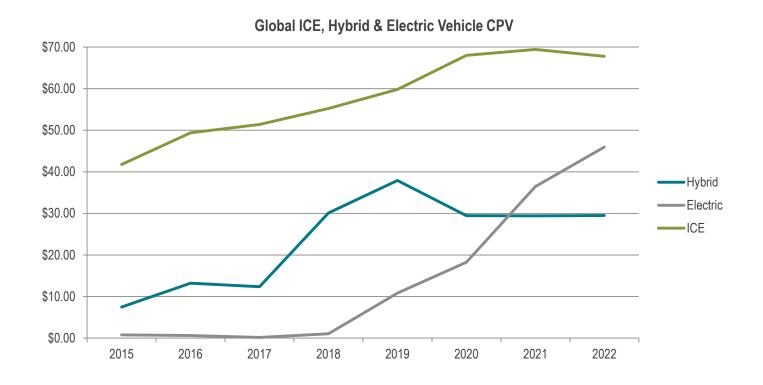






## **Content Today on Electrified Vehicles Growing Quickly**

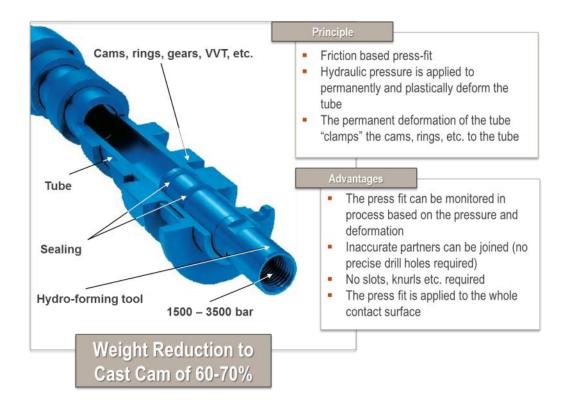




## **Technical Leadership in Process Innovation**



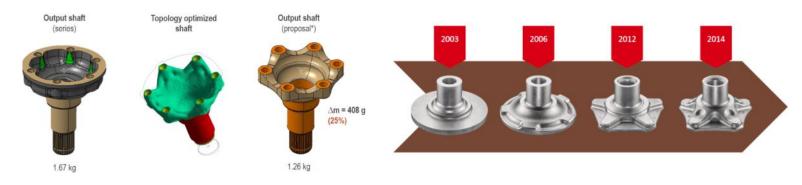
### **Dramatic Lightweighting with Hydroformed Camshafts**



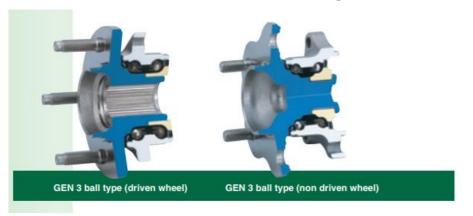
# Forgings: Lightweight Components Implemented



#### Minimizing material use through better designs – up to 40% reduction in weight



## **Future Wheel Hub Evolution – Integration & Connection**





# **Innovation Management | Casting**



**New Product &** 

**Process Simulation** 

# R&D EXCELLENCE

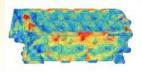
## **Material Engineering**

Thermo-physical Simulations

**Inorganic Coring** 

**ICME** 

Integrated Computational Materials Engineering



Residual stress during 
water quenching

## Jineering lations

Casting & Core shooting simulation Defect Prediction





Examples of misrun and air entrapment detections

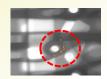
# Casting & Metallurgy Metallurgic laboratory Process Simulation Sand and Coring Imaging and Control Virtual Reality

## **Process Support**

Sand & Metal Control

Vision Systems

Tomography



▲ X-Ray Automatic defects recognition



▼ X Ray Tomography CT Scanned part vs. 3D model



## **New Technologies**

Additive manufacturing



3D-Printed Sand Package



3D interactive virtual environment

## **Technical Leadership in Material Development**



## Replace Steel Stampings with Structural Aluminum Castings for Massive Weight Savings

Weight Reduction

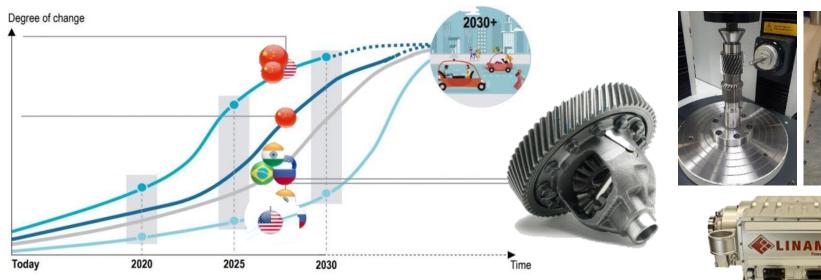
Shock Tower in Cast Aluminum compared to steel sheet assembly up to 45% less weight



# Machining & Assembly: Propulsion of the Future



- As the automotive landscape is rapidly changing, Linamar positions itself to adapt and grow with it
- Through innovative thinking and collaboration, we are leveraging our current technologies and skills to help customers bring advanced vehicles to production





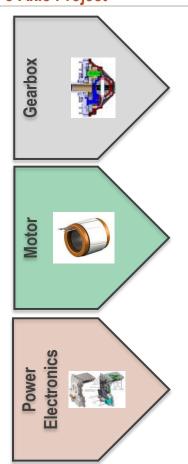


## **Technical Leadership in Product Innovation**

## **Leadership in Electrification -- e-Axle Project**



- Reduced HV Cables
- Reduced Coolant Lines
- Reduced Vehicle Interfaces
- Improved Safety
- Superior Power Density
- Lower Overall Cost





## **eDrive Product Portfolio**















Micro Launch Assist E-Axle

- 40 to 440 lo
- Differential (open / limited slip)

15 to 30 kW

- Integrated Disconnect Feature
- Integrated Power Electronics
- Available with single speed gearbox



- 40 to 110 kW
- Differential (open / limited slip)
- Integrated Disconnect Feature
- Integrated Power Electronics
- Available with single or multi-speed gearbox

#### **Dual Motor E-Axle**

- 70 to 220 kW
- Torque Vectoring
- Integrated Disconnect Feature
- Integrated Power Electronics
- Available with single or multi-speed gearbox

#### Dual Motor Commercial Truck 2 Speed

- 160 to 320 kW
- Torque Vectoring
- Integrated Clutch Feature
- Integrated Power Electronics
- Beam Axle Cradle

2+ Multi Speed Gearbox

- 2-Speed gearbox
- Differential (open / limited slip)
- Electric Dog Clutch
   Disconnect with
   Synchronizer
- Parallel Gear Architecture

# Volute Hydrogen Storage Tank – Manufacturing Partnership **Storage** Tank – Manufacturing Partnership



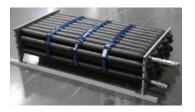




A technology start-up partnership for Carbon Fiber Hydrogen Fuel Cell Vehicle storage tank solutions.

#### **Next Generation Hydrogen Storage Tank**

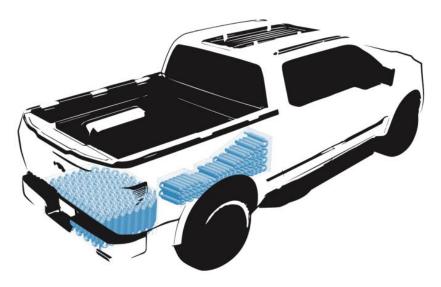
- Low profile continuous tank shape
- Lower-cost system
- Seamless design
- Continuous manufacturing
- Industry standard materials



#### **Standard Design Vs. Volute Tanks**

- 25% more space efficient than standard cylinders
- Smaller profile means tank can fit more efficiently in vehicle in a variety of spaces
- More surface area (more chambers) makes thermal management easier -- precooling requirement reduced or eliminated and faster
- Less carbon fiber usage





## **Driveline Technologies:**

#### **Commercial Truck Applications**



#### Q2 2017 New Business Win: Rear Drive Unit

#### **Axle System**

- New business win in Q3 for a Commercial Truck application
- Rear differential axle unit
- 30,000 annual volume
- Utilizes disconnecting technology to disengage the torque input to the secondary axle when the power is not required, reducing parasitic losses and improving fuel economy



Class 8 Tandem Axle Application

A new business win in Q2 of 2017 that highlights the advanced engineering capabilities within Linamar's Driveline product group.

## Advanced R & D



#### V2X Connected Car Technology for Smart AWD Capability

- Vehicle-to-vehicle communication (V2V or V2X COM) is a technology where vehicles, within certain proximity can communicate to each other over DSRC (Dedicated Short Range Communication) wireless networks. The V2V COM will be an important technology in autonomous vehicle (AV) execution by delivering information to vehicles in a near field for keeping appropriate distances while braking, accelerating, lane change, etc.
- Similar communication signals can be sent for the following events
  - Actual Yaw rate exceeding theoretical yaw rate
  - Sudden steer angle input
  - Windshield wiper activation
  - AWD connection or lock
  - Sudden braking or ABS event
  - Grade detection (throttle position vs engine load)
  - Rough road detection (accelerometer)



Asphalt

Ice

# **Creating the Future | Protean MOU**



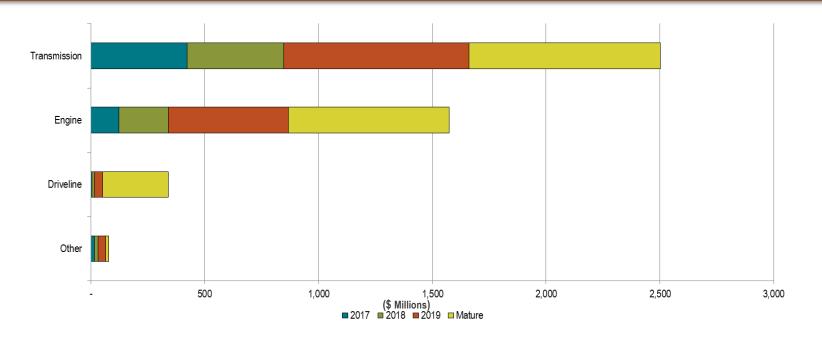




Kwok-Yin Chan CEO, Protean

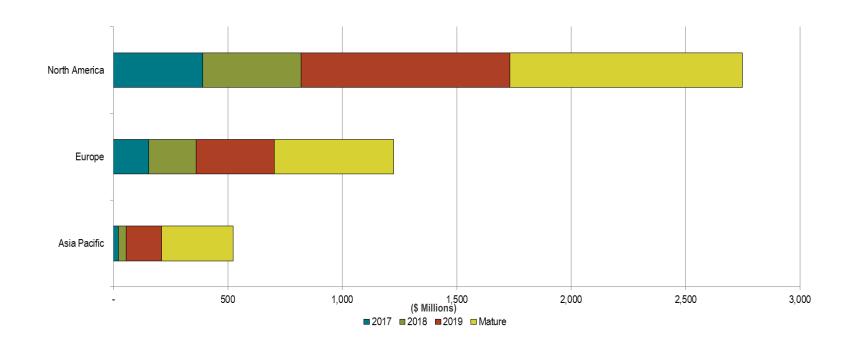


## Launching nearly \$4.5 billion of new work today

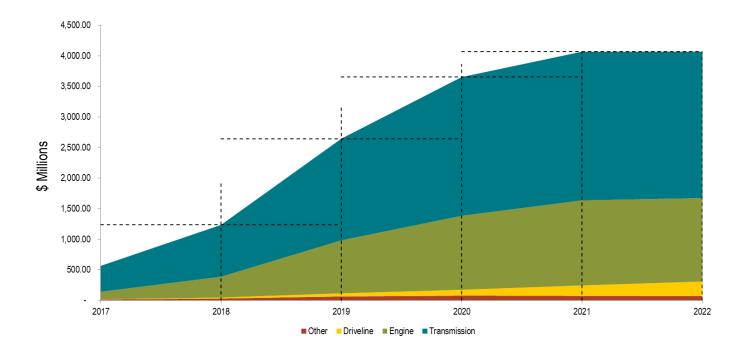




## Launching nearly \$4.5 billion of new work today





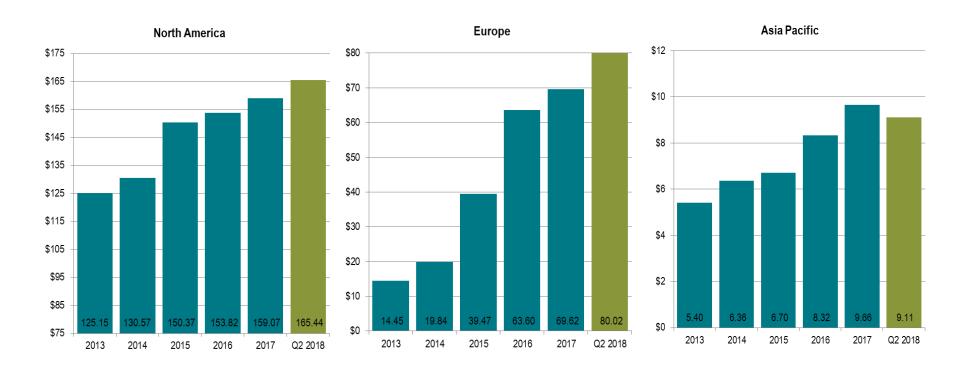


Sales from Launch add:

\$700 to \$800 Million in 2018 \$1.2 Billion to \$1.3 Billion in 2019

# Content per Vehicle 2013 – 2018





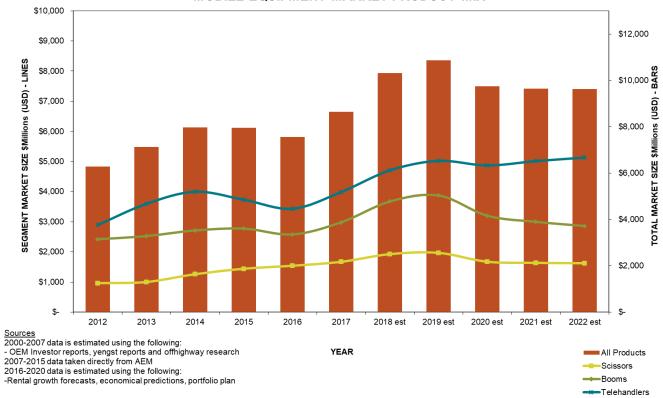
# Infrastructure



## Mobile Equipment Market – Product Mix



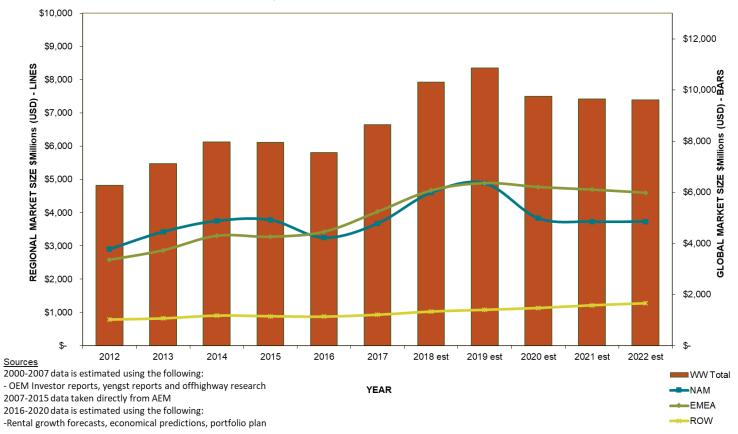




## Mobile Equipment Market – Geographic Mix



#### MOBILE EQUIPMENT MARKET GEOGRAPHIC MIX

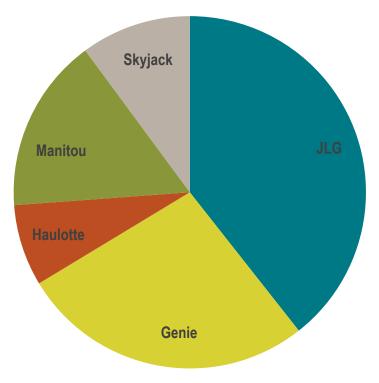


# **Access – Target Market Large with Limited Competition**













#### Overview

- Maintain and Defend Scissor Share....
  - 98% market product range coverage by product type by 2020

- Grow Boom Products...
  - 95% market product range coverage by product type by 2020

- Competitive Telehandler Offering...
  - 94% market product range coverage in NA by 2019









# **MacDon – Company Snapshot & Acquisition Highlights**



#### Founded

• 1949

#### Headquarters

· Winnipeg, Manitoba, Canada

#### **Geographic Footprint**

- Sells to over 40 Countries
- Offices in Canada, U.S., Brazil, Russia, Germany and Australia

#### **Dealer & Distribution Network**

- •~1,200 in North America
- Longstanding OEM relationships
- 200+ Internationally International distribution network

#### **Employees & Leadership Team**

•1,400 employees and management team with 100+years of cumulative experience at MacDon

- \$1.18 billion transaction value
- Fully committed financing



- Immediately accretive
- Closing Q1 2018





#### **Key Products**

• Rigid and Flexible Draper Headers and Self-Propelled Windrowers

#### **Facilities**

- •~1 million square feet total
- 11 owned and 6 leased, all manufacturing in Winnipeg

#### **Historical Financials**

- Over the past 5 years MacDon has experienced:
- Sales of C\$550 to C\$650 million
- Strong earnings
- LTM Sales of ~\$600 million



# **Acquisition Well Aligned with Linamar's Strategy**





#### **Enhances Position as a Global Diversified Manufacturer**

- Agriculture/Food is a key long term growth market globally given the growing & developing global population
- Linamar has a long history in the agriculture market
- Further diversifies Linamar beyond traditional automotive powertrain / driveline manufacturing

**Diversification** 



#### MacDon is an Innovative Market Leader

- Industry Leading Businesses and Market Share -- #1 market share in its key products
- Track Record of Technology and Innovation Leadership
  - Technology supported by over 100 unique patents with an additional 30+ unique patents pending globally, and a permanent technologyfocused staff of 110
- Significant opportunity to leverage these strengths with Linamar's global manufacturing expertise in LEAN principles through employee engagement

Innovation



#### **Significant Growth Potential and Upside Opportunities**

- Agricultural Market in Early Stages of Cyclical Recovery
- Large untapped addressable global market opportunity
- Synergies with global distribution networks

Growth



#### **Financially Attractive Deal**

- Strong, well-managed company with excellent financial performance and outlook
- Fair price
- Immediately accretive to earnings and cash flow even before synergies
  - High single digit accretion to Linamar's expected 2018 and 2019 EPS and cash flow
- Maintaining strong balance sheet with rapid deleveraging post-transaction

**Attractive Deal** 

#### Attractive, well aligned strategic acquisition

## MacDon - Product Portfolio



#### **Product**

#### Description

**Draper Headers** 

- Attached to a self-propelled windrower or combine
- Used to cut and process crops through combine feeder house or left in field for further curing
- Predominantly used for harvesting soybeans, wheat, canola, rice, oats, dry edible beans and flax seed





Self-Propelled Windrowers

- Self-propelled harvesting machinery used with a header to cut and lay crop in the field
- Popular in hay and forage, cereal grains, canola, and regions where growing seasons are short and crops are harvested while damp





**Aftermarket Parts** 

- Primarily maintenance and replacement parts for the Company's large installed base
- Bolstered by acquisition of Westward Parts in 2012



Pick-Ups

- Attached to front of a combine
- Used to pick-up crop that has previously been "windrowed"
- MacDon pick-ups renowned for functionality and durability
- PW8 fits multi brands with face plate (increases resale value)





**Hay Products** 

Includes: Auger Headers and Rotary Disc Headers for Self-Propelled Windrowers, and two types of Pull-Type Mower Conditioners



April 200

**Mower Conditioner** 

Rotary Disc Header

# **MacDon' Industry Leading Business and Market Share**



**Strong Market Position in Key Product Categories** 



Combine FlexDraper® Headers



#1

Rigid Draper Headers

#1

Self-Propelled Windrowers (mid-horsepower)

#1

# **Strong Brand Recognition and Farmer Loyalty**



Drives Powerful Customer "Pull" Dynamic

- 69 year history working handin-hand with farmers and dealers
- Deep understanding of farmers' needs
- Over 1500 touch points globally with dealers and distributors
- Ongoing, active dialogue with dealers through a variety of shows and programs

farmers for specialized harvesting equipment

Superior reputation among

- Farmers know and value the quality, durability and reliability of MacDon products
- MacDon equipment considered "best-in-class"
- **MacDon**





Regularly participate in industry events, conferences and equipment shows, globally











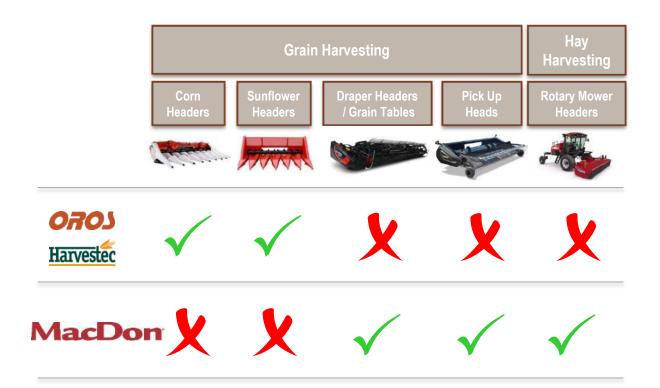




Results in a Strong "Pull" Dynamic – Farmers Demand MacDon Products from Dealers

# **Complementary Product Lines**

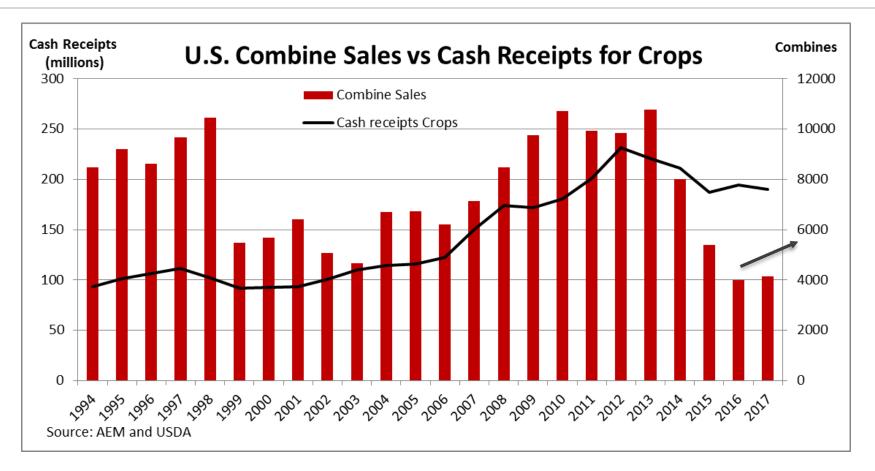




Combined business covers a wide crop range of Header Harvesting product lines

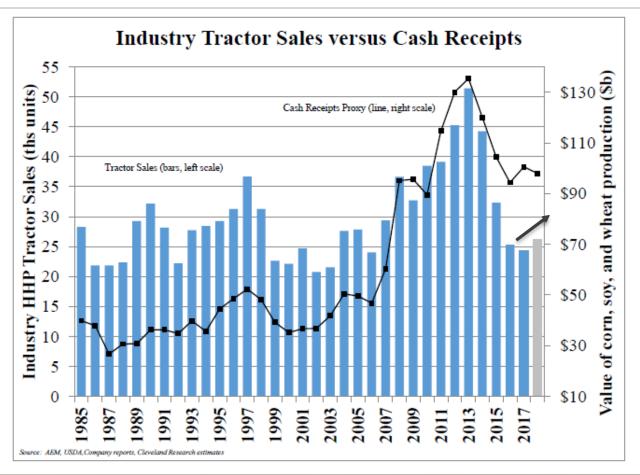
# **Equipment Sales vs Cash Receipts**





# **Equipment Sales vs Cash Receipts**





# **Agriculture Strategic Road Map**





# **Technology and Innovation Leader**



 Technology supported by over 100 unique patents with an additional 30+ unique patents pending globally, and a permanent technology-focused staff of 110

FlexDrapers® & Rigid Drapers



- Higher cutting speeds
- Structural changes to improve manufacturability, maintainability, durability, and reliability
- Improved cutterbar visibility
- Reduced seed loss
- Higher capacity (improved efficiency)

Self-Propelled Windrowers



- Industry leading road speeds
- Improved crop flow and windrow formation
- Improved lift and float of headers
- Structural changes to improve manufacturability, maintainability, availability, and reliability
- Improved operator comfort and interface

**Hay Products** 



- Market leading transport system
- Broader range of conditioning options
- Structural changes to improve manufacturability, maintainability, durability, and reliability
- Improved crop flow and windrow formation
- Improved performance in challenging conditions

Continuously Setting the Standard in Specialized Harvesting Technology

Water, Power and Age



# **Strategy Development**



- New markets we are trying to gain more knowledge around
- Established Advisory Councils to help us understand markets and develop strategies for entry
  - Water, Food, and Age Management Segments
  - Each council contains a diverse mix of outside experts (top management, academics, consultants, etc.) and Linamar leadership
  - Specific agenda items utilize each member's expertise and creativity tying to something we can pursue as a business case

Motor	A co Managamant	Food
Water	Age Management	Food

Linamar	Outside
CEO	University Experts
СТО	Segment Consultants
Engineering Expert	Private Equity focused on Segment
Corporate Development	Top Managers in Segment

Linamar	Outside
CEO	University Experts
C00	Segment Consultants
СТО	Private Equity focused on Segment
Business & Corporate  Development	Top Managers in Segment

Linamar	Outside
CEO	University Experts
СТО	Segment Consultants
Business & Corporate Development	Private Equity focused on Segment
	Top Managers in Segment

### Softwheel



A technology company partnership for built-in suspension wheel systems, developing the most energy-efficient and shock-absorbing wheel system in the world

### **S**\*FTWHEEL

### **In-Wheel Suspension System**

- Patented energy-efficient, shock-absorbing wheel design with built-in suspension
- Suspension arms inside rim designed to absorb energy from obstacles
- Includes wheelchairs, bicycle, and automotive applications
- Linamar manufacturer for mass production
- Supply Agreement complete for wheelchair & bicycles



#### Benefits

- Significantly improved ride comfort & road safety from bumps & potholes
- Improved efficiency compared to frame suspensions
- Enabler to reduce significant maintenance costs
- Enables use of solid polymer tires in lieu of pneumatic tires
- Eliminates flats tires and reduces rim damage (reduces +70% of maintenance)
- Designed to fit with no modifications required to bikes & wheelchairs





### SOFTWHEEL





#### 1. In-wheel Suspension

SoftWheel's 3 suspension arms are built inside the wheel rim, equidistant around a central hub.

#### 2. Adaptive Rigidity

Our smart suspension technology keeps the arms rigid on flat terrain but when encountering obstacles, they compress to absorb the shock

#### 3. Rapid Shock-Reset

After impact, the 3 suspension arms reset quickly, absorbing almost all of the shock immediately.

### 4. 360 degree Suspension

The unique structure of the suspension mechanism enables to absorb shocks from every direction.

## Changing the life of wheelchair riders: Freedom and reduced back pains



# Less maintenance and better riding experience for bikes



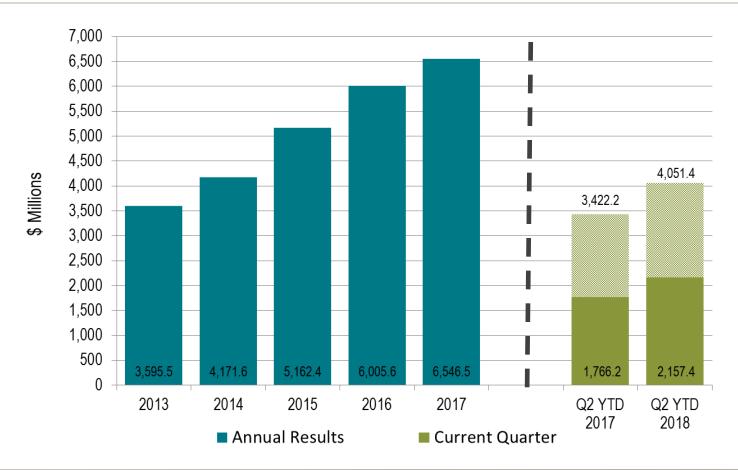




### **Yearly Sales Growth**

*2013 – 2018* 

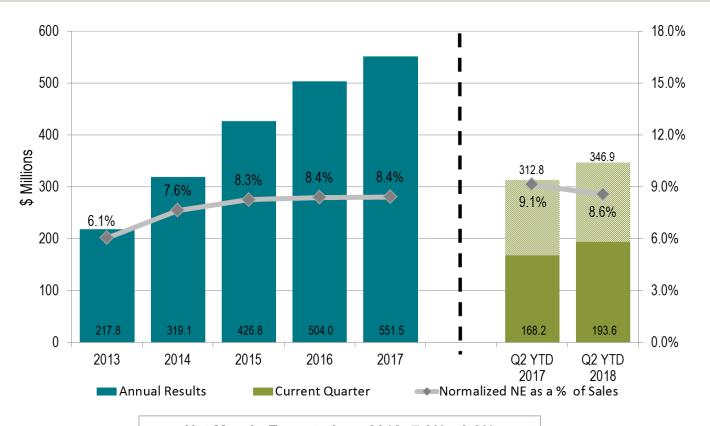




### Normalized Net Earnings Attributable to Shareholders<sup>1</sup>

**ELINAMAR** 

2013 - 2018

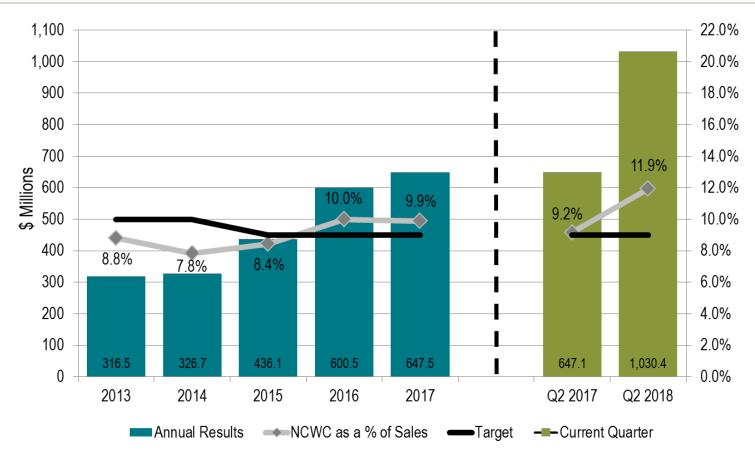


Net Margin Expectations 2018: 7.0% - 9.0%

### **Non-Cash Working Capital**

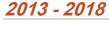
2013 - 2018

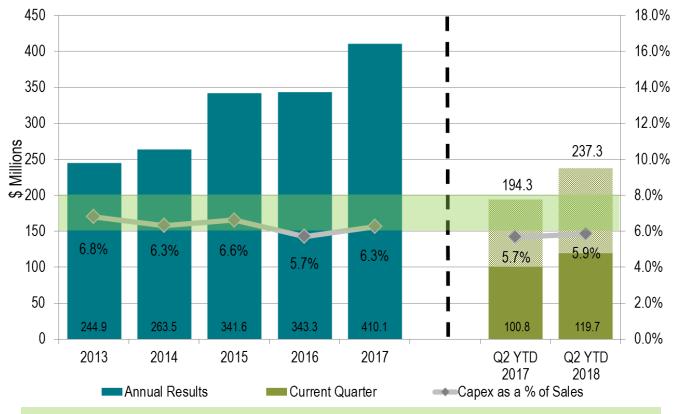




## **Operational Capital Expenditures**





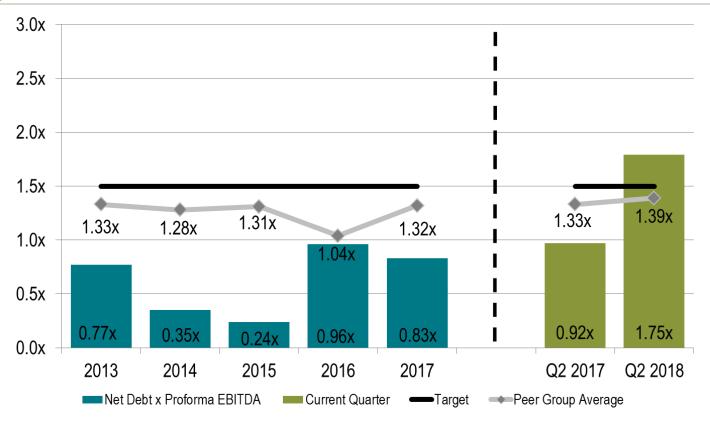


Capex as % of Sales – Normal Zone to Drive Double Digit Growth 6-8% of Sales

### **Net Debt to Proforma EBITDA Average<sup>1</sup>**

2013 - 2018



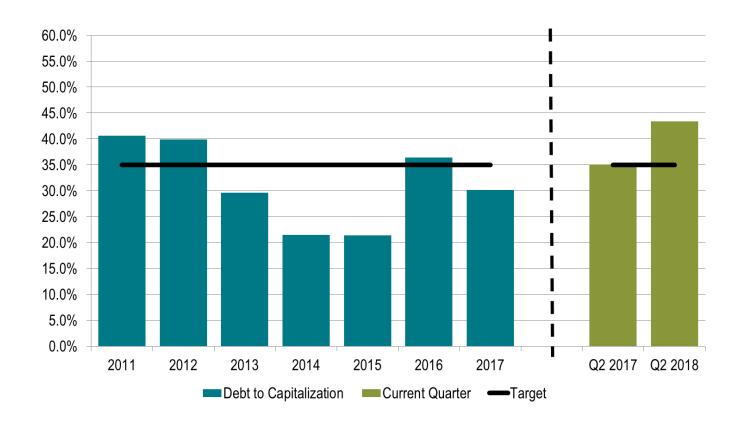


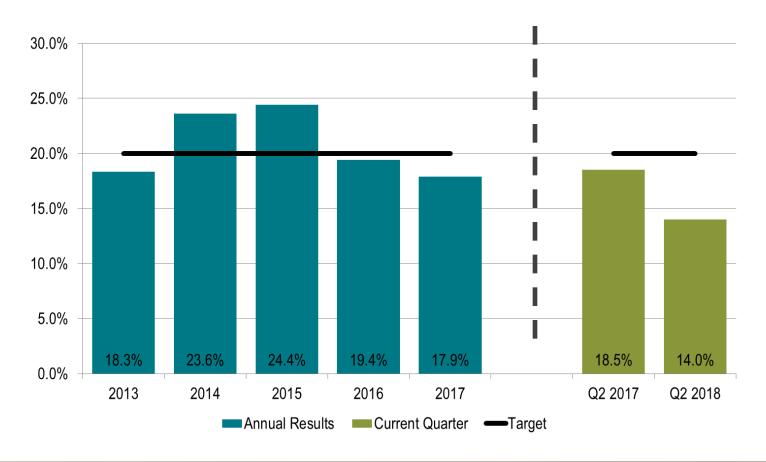
<sup>&</sup>lt;sup>1</sup> Proforma EBITDA includes last 12 month rolling EBITDA on acquisitions Note: The current quarter peer group average is the most publicly available data upon release date.

### **Debt to Capitalization**

2011 - 2018

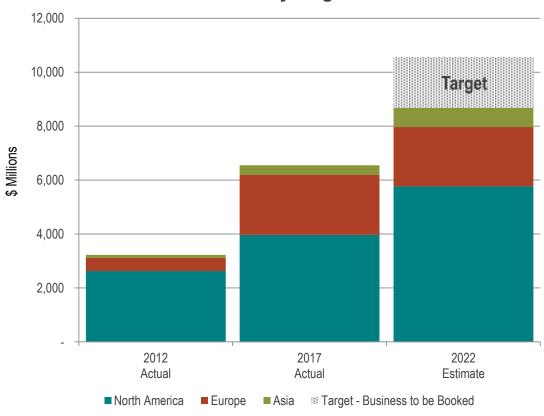








### Sales by Region



## **Key Investment Themes**





#### **Consistent Performance**

- Sales & earnings growth consistent & well above market
- Double digit normalized earnings growth 8 years running



#### **Market Share Growth Key Growth Driver**

• We have demonstrated our ability to continue to grow through flat or declining markets and will continue to do so



#### **Strong Growth Secured for the Future**

•\$8.5 - \$9 billion sales secured for 2022



#### **Massive Market Opportunity Vehicle Propulsion**

- · Significant content potential in EV, Hybrid and ICE
- EV CPV converging with ICE CPV by 2022 -- ~\$60 per vehicle globally for each
- Only 30% of powertrain outsourced huge opportunity for extended time frame of growth, tech shift accelerating outsourcing



#### Massive Market Opportunity Access & Agriculture

- Access \$10 Billion market, few players
- · Ag market at early stage of cyclical recovery
- Actively growing market share in both businesses globally

