

FCA

FIAT CHRYSLER AUTOMOBILES



# EVOLUTION IN PERSONAL TRANSPORTATION





# FCA ONTARIO FOOTPRINT

FCA Canada produces **25%** of Canada's vehicle manufacturing production and continues to be a critical engine for innovation throughout the supply chain and is fundamental to Canada's economic growth. For every automotive employee, there are up to nine spin-off jobs\*; unmatched by any other sector.

Employment reaches into the local communities.

Productivity in the automotive industry supports other sectors: steel fabrication, parts and suppliers, engineering, IT, sales, financial services, insurance and hospitality.

● FCA CANADA'S DEALERSHIP LOCATIONS

🚚 FCA CANADA'S SUPPLIERS

HIGHLY INTEGRATED  
SUPPLY CHAIN

**65%**

OF PARTS ARE  
WITHIN 300KMs  
OF PRODUCTION\*

- **1** manufacturing job creates **NINE ADDED** spin-off jobs!\*
- Over **440** dealers across Canada
- **2** manufacturing plants
- **1** casting plant
- **1** research and development centre
- Sales offices and parts distribution centres throughout the country

ASSEMBLED IN WINDSOR, ON

ASSEMBLED IN BRAMPTON, ON

Chrysler  
Pacifica Hybrid



Chrysler  
Pacifica



Dodge  
Grand Caravan



Dodge  
Challenger



Dodge  
Charger



Chrysler 300



\* Canadian Automotive Partnership Council (CAPC). † Estimation based on Windsor Assembly Plant's supply chain as of 2016.

# FCA GLOBAL AT A GLANCE\*

July 21, 2018 - Michael Manley appointed Chief Executive Officer of  
Fiat Chrysler Automobiles N.V.



\*As of 31 December 2017



# THE AWARD WINNING CHRYSLER PACIFICA HYBRID

## DRIVING THE FUTURE

As a key part of the Windsor-Essex community for the last 94 years, the Award Winning Windsor Assembly Plant is proud to be the home of the *Chrysler Pacifica Hybrid*, and integral as the region's largest employer with a workforce of 6,000. As FCA's sole global producer of minivans, the Windsor Assembly Plant recently underwent over \$1 billion in retooling, making it one of the most efficient & technologically-advanced facilities' in the company's North American portfolio.

The Chrysler Pacifica and Pacifica Hybrid continue to revolutionize and reinvent the minivan segment by delivering unprecedented levels of functionality, versatility, technology, safety and bold styling. Holding its status as the most awarded minivan since 2016 with more than 100 honors and industry accolades, the Pacifica offers class-leading gasoline and hybrid powertrains and nearly 40 new minivan-first features.

As the first company to introduce the minivan and through six generations of the vehicle, FCA US has innovated 115 minivan firsts. The company has sold more than 14.6 million minivans globally since 1983, twice as many as any other manufacturer over the past 35 years.

As the first electrified vehicle in the minivan segment, the Chrysler Pacifica Hybrid achieves up to 2.6 litres equivalent per 100 kilometres (Le/100km) or 109 imperial miles per gallon equivalent (MPGe) in city driving, up to 51 kilometres of all-electric range, and up to 835 kilometres of total driving range. This revolutionary vehicle is taken a step further with its class-exclusive, innovative plug-in hybrid powertrain, along with more than 100 available safety and security features, the Uconnect Theatre rear seat entertainment system and a full array of comfort and convenience technologies, the Chrysler Pacifica and Pacifica Hybrid are no-compromise minivans ideally suited for today's families\*.

\*Electric range based on EnerGuide combined fuel consumption ratings, full battery charge and hybrid mode. Driving range based on EnerGuide combined fuel consumption ratings, fuel tank capacity, full battery charge, and hybrid mode. Your actual driving range will vary based on driving habits and other factors.





# AWARD HIGHLIGHTS



## Canadian Green Car Award Winner:

- ✓ 2018 Winner of the Plug-in Hybrid Electric Segment
- ✓ 2017 Winner of the Efficient Three-Row Family Vehicle Segment



## Chrysler Pacifica Hybrid IIHS Top Safety Pick +

When equipped with optional front crash prevention and specific headlights.



## 2019 Minivan Best Buy by Le Guide de l'auto / The Car Guide

2019 Chrysler Pacifica



## Today's Parent 'APPROVED' Seal

2019 Pacifica Hybrid



## The Chrysler Pacifica Best EV in Canada for 2019

by the Automobile Journalist Association of Canada



## 3.6L Pentastar DOHC V-6 eHybrid

2018 Winner of Wards '10 Best Engines'



## "10 Best Trucks and SUVs"

2019 Chrysler Pacifica and the All-New 2019 Ram 1500 to their



## 2019 Family Car of the Year

Chrysler Pacifica, winner for the second year in a row



“There’s an extra air of significance when one of our homegrown products wins a domestic award.”

- Reid Bigland,  
President and CEO,  
FCA Canada

PROUDLY MADE IN





# FCA BRANDS BUILT BY VISIONARIES

## LEADING THE WAY IN DEVELOPING ALTERNATIVE TECHNOLOGIES FOR THE FUTURE

Our brands are built by visionaries – women and men who kept digging, tinkering, improving, thinking, “Why not?” and “What if?”

We are working to manufacture environmentally friendly vehicles complying with regulatory and safety requirements.

We offer, and are developing, a variety of technologies that have significantly reduced CO<sub>2</sub> emissions including:

- Eco Diesel
- E85 (ethanol – gasoline blend)
- Plug-in Hybrid Electric Vehicles
- 8 and 9 Speed Transmissions
- Engine Stop Start
- Light-Weighting

# Climate change



CO<sub>2</sub>

# Industry



# CANADA'S NEWEST FCA VEHICLES



## THE ALL-NEW 2020 JEEP® GLADIATOR

When adventure calls, you're  
ready to haul.

## ALL NEW 2019 RAM 1500

Uncompromising Luxury and  
Groundbreaking Exterior Style

2019 North American Car, Utility  
and Truck of the Year Awards



## REIMAGINED JEEP® CHEROKEE INTERIOR

World Class Craftsmanship





# DRIVING THE FUTURE OF MOBILITY

## CHRYSLER PACIFICA: EVOLUTION AND REVOLUTION GO HAND-IN-HAND

FCA and Waymo first announced their partnership in May 2016. The first-of-its-kind collaboration brought engineers from FCA and Waymo together to integrate Waymo's fully self-driving system into the Canadian-made *Chrysler Pacifica Hybrid*, leveraging each company's individual strengths and resources. Since then, FCA and Waymo engineers have continued working together to support Waymo's expansion and to evolve the Chrysler Pacifica Hybrid minivan with self-driving technology.

The self-driving Chrysler Pacifica Hybrid minivans are one of the most advanced vehicles on the road today, equipped with Waymo's self-driving system, including a powerful hardware suite and software honed over six million miles of on-road testing.

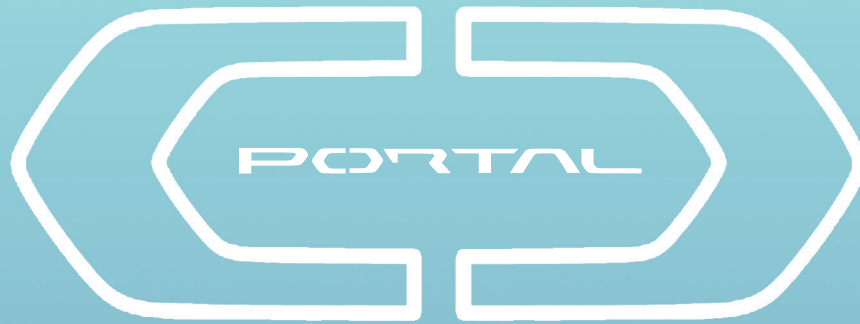
"FCA is committed to bringing self driving technology to our customers in a manner that is safe, efficient and realistic... Strategic partnerships, such as the one we have with Waymo, will help to drive innovative technology to the forefront."

- Sergio Marchionne,  
CEO, Fiat Chrysler Automobiles N.V.

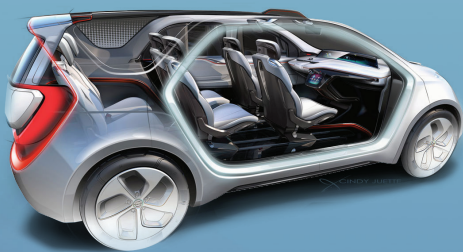
Starting in late 2018, up to 62,000 additional Chrysler Pacifica Hybrid Minivans will join Waymo's driverless fleet.







To create the next generation of family transportation, FCA sought the collaboration and fresh ideas of millennials working inside its design and engineering functions. Those ideas led to the Chrysler Portal concept — created by millennials for millennials.



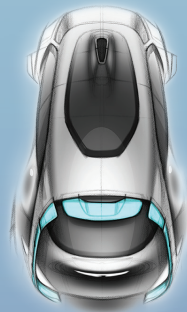
Millennials are a tech-savvy, environmentally-aware, cost-conscious generation. The Chrysler Portal concept is designed to respond to these needs and it explores the possibility of what a family transportation vehicle could look like for the millennial generation as their lifestyles evolve.

The flexibility, adaptability and technology features also make it ideal for business and commercial applications, such as ride hailing, car sharing and delivery services.

The Chrysler Portal concept was created in collaboration with supplier partners who shared their innovation and expertise to bring to life future technologies.

## THINKING FORWARD

The Chrysler Portal concept is a forward-thinking interpretation of the "fifth generation" of family transportation focused toward the millennial generation.



In the next 10+ years, one in three drivers will be a millennial and they will be at the peak of starting/having their own family.





# FCA CANADA CONTINUES TO REDUCE COSTS & IMPROVE THE ENVIRONMENT

## WCM AIMS TO KEEP IT SIMPLE, IT'S THE WAY WE RUN OUR BUSINESS

World Class Manufacturing was born of the collaboration between Fiat and the best European and Japanese experts, with the aim to enhance production standards to a recognized world-class standard. It is an approach based on the systematic reduction of all types of waste and loss through the contribution of everyone and the rigorous use of methods and standards.

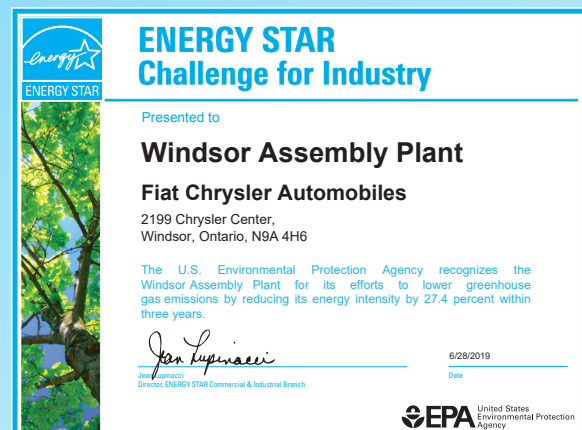
The key to successfully implementing WCM is through the engagement of the workforce. As a result, our manufacturing plants have been recognized with World Class Manufacturing designations, with the Windsor Assembly Plant being the first plant to achieve the silver status in North America.



## ENERGY STAR ACHIEVEMENT CHALLENGE FOR INDUSTRY

### OUR ACTIONS MADE A DIFFERENCE

By improving our energy efficiency by **24.4%** the Windsor Assembly Plant has met the ENERGY STAR Challenge for Industry. This marks the first time a Canadian manufacturing plant has achieved the ENERGY STAR Challenge for Industry. From large projects like MR2 Chiller Optimization, to innovative projects like VFD's on Ecoat, we have continued to reduce waste and loss.





# FCA CANADA ASSEMBLY PLANT INGENUITY

## ENERGY CONSERVATION LEADERSHIP AWARD

The Windsor Assembly Plant has won a Canadian Industry Partnership for Energy Conservation (CIPEC) Leadership Award. The recognition comes for key Process and Technology Improvements from a plant initiative that resulted in an approximate **30%** annual energy savings for an existing chilled water system, and reduced Greenhouse



Gas (GHG) emissions equivalent to almost 21 homes' energy use per annum.

"The team succeeded in implementing new strategies effectively, and, in the first quarter alone, we've achieved 113% of the anticipated savings, which is an incredible success! I'm proud to say that we not only build environmentally friendly vehicles, but we strive to do so in an environmentally sustainable facility" shared Michael Brieda, Plant Manager.

CIPEC is an award-winning partnership between the Government of Canada and Canadian industry to promote innovative energy management to help Canadian industry increase: profitability, competitiveness, sustainability.



Natural Resources  
Canada

Ressources naturelles  
Canada

Canada

## MAKING A POSITIVE CONTRIBUTION TO THE WORLD WE LIVE IN TODAY AND FOR THE FUTURE

FCA Canada is continually working to make better manufacturing processes for the environment and is at the forefront of energy management standards through ISO 50001 Energy Management Standards certification at both its Brampton and Windsor Assembly facilities. The Brampton plant was the first Auto Assembly Plant in Canada to achieve ISO 50001 certification, and was the pilot plant for FCA's North American Automotive assembly plants.

These projects have resulted in millions of dollars of cost savings and extraordinary reductions to CO2 emissions, electricity, water and fuel use, avoidance of waste going to landfill, and many more significant benefits.

ISO 50001  
energy management



## 360° VIRTUAL LEARNING

FCA Canada joined with The Learning Partnership, a national charitable organization committed to advancing publicly funded education in Canada and is best known for the 'Take Our Kids to Work™' Program, to create a virtual learning video. The program benefits students, teachers, schools, parents, communities, organizations - and Canada's future - by helping students connect school, the world of work, and their own futures. Not all children



have an opportunity to visit a workplace, so the 360° video of the Windsor Assembly Plant provides students with a virtual experience in order to gain a deeper understanding of the world of work and specifically manufacturing. As a result, many Grade 9 and 10 teachers are now using the video as part of their classroom curriculum.



The Learning  
Partnership

PUBLIC EDUCATION. CANADA'S FUTURE.



# HOME GROWN INNOVATION

## CANADIAN ACADEMIC & RESEARCH INSTITUTE PARTNERS

For over 20 years, we have invested in a joint partnership with the University of Windsor at our Automotive Research and Development Centre (ARDC) in Windsor, Ontario. ARDC has collaborated with several academic partners including the University of Waterloo, McMaster University, Université de Sherbrooke and Politecnico di Torino as it continually expands its R&D activities in Canada for fuel efficiency, light-weighting and next-generation powertrain technology.

"WE'RE HELPING CANADA  
CREATE A NEW GENERATION OF  
AUTOMOTIVE ENGINEERS.

– Tony Mancina, Head of Engineering, FCA Canada

What started out as a \$30-million investment has grown to more than a \$1 billion spend on R&D activities in Canada. Product designers, researchers and engineers at the ARDC play a key role in the development of the cars, trucks, minivans and SUVs built by FCA.

## INNOVATIVE 3-WAY PARTNERSHIP

FCA CANADA INC.



## INNOVATION STARTS AT HOME

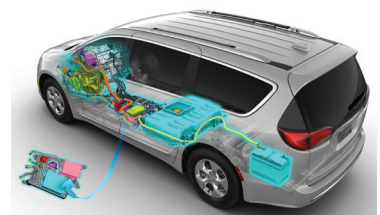
The ARDC was one of the first organizations to participate in the University of Windsor Automotive Engineering Co-op program. This long-standing relationship has resulted in over 500 undergraduate and graduate level students who are exposed to the work culture at FCA and play an essential role in working on world-class products.



POLITECNICO  
DI TORINO

## HYBRID ELECTRIFICATION, VEHICLE LIGHT- WEIGHTING AND JOINING TECHNOLOGY

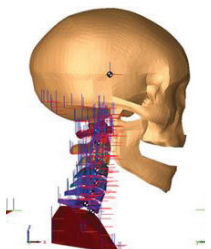
Teams from  
McMaster  
University and  
FCA are  
working towards  
advancing hybrid



electrification and developing lightweight materials and  
innovative technology to reduce vehicle weight.

## BIOMECHANICS: TESTING, MODELLING AND FATIGUE

The University of Waterloo and FCA  
are working to develop biomechanics  
testing and modeling to increase safety  
in accidents and improve fatigue and  
fracture mechanics.



## THE ONE-OF-A-KIND DUAL INTERNATIONAL MASTERS DEGREE PROGRAM

In collaboration with the University of Windsor and Politecnico di Torino, Italy, students receive technological challenges which are of strategic importance to FCA in Canada, United States and Italy.



# RESEARCH & DEVELOPMENT INNOVATIONS AT



## STATE OF THE ART DYNAMIC DRIVING SIMULATOR

As the newest innovation at ARDC, the Driving and Ride Dynamics simulator features 9 Degrees of Freedom driving simulation, allowing for the unique capability of testing and development of driving dynamics. This addition will position ARDC a centre of competency for driving dynamics and vehicle simulation.

Testing, development and related engineering will influence FCA's product portfolio in many aspects, such as supporting the increasing demand for electric, autonomous and connected vehicles.



## BRAKE DEVELOPMENT AND EVALUATION LAB

The Brake Development Lab features a new 4 wheel drive, full vehicle size, environment dyno chamber in a completely soundproof environment designed specifically for development and evaluation of brake systems. The development lab has two smaller brake end dynamometers enclosed in environmental chambers for additional brake development. This lab allows FCA to test brake noise, dust and shutter, for continuous improvement to the customer experience.



## FOUR POST ENVIRONMENTAL CHAMBER

The chamber simulates temperatures of -40°C to 60°C and humidity from 0 to 95%. It also contains twenty-one zones of twelve 375 Watt infrared heat lamp bulbs which have the ability to add sun-load to the high temperature testing and further simulate real life conditions in southern region markets. Research and evaluation of a variety of climate conditions, representative of the markets in which FCA products are sold, takes place in a unique and controlled laboratory environment at ARDC. This durability testing validates the engineered systems in FCA vehicles to withstand extreme environmental conditions.



## LIGHTING RESEARCH FACILITY

The Lighting Research Facility is one of the largest of its kind in the world. The all-weather evaluation facility simulates a 300 foot, two-lane roadway including roadside markings and reflectors. Research and evaluation of new advanced lighting systems takes place in a unique and controlled laboratory environment at ARDC.





# BUILDING GREAT VEHICLES TOGETHER

## BORDER EFFICIENCY MATTERS WHEN CREATING A STRONG GLOBAL PRESENCE

An integrated auto industry places significant importance on the effectiveness of a reliable transportation network for a company to remain competitive in the market. Vehicles and parts are designed, tested and produced seamlessly on both sides of the border for import and export. If any of the over 8,000 parts required for vehicle assembly do not arrive on time, production could be forced to come to a halt, resulting in a significant loss in revenue. Given the highly integrated nature of the auto industry, parts and components may cross the NAFTA countries' borders as many as eight times before

being installed in a final assembly plant in one of the three NAFTA partner countries†.

In order to maintain competitive operations and effectively bring vehicles to market, it is critically important that the border remains efficient, reliable and consistent. The Detroit-Windsor crossing represents the highest number of loaded truck container crossings, 1.6 million annually, with a significant percentage of these being auto manufacturing related.



**95%** OF  
VEHICLES  
PRODUCED IN  
CANADA ARE  
**EXPORTED**  
TO THE US\*\*

AUTO TRADE  
REPRESENTS  
**28%** OF  
ALL EXPORTS  
FROM ONTARIO\*





# DRIVING CHANGE IN OUR COMMUNITIES

*FCA provides employees with opportunities to engage with their communities across Canada. From building homes with Habitat for Humanity to hosting the annual United Way Christmas Party, the program lets employees experience the first-hand benefits of their contributions and builds on FCA Canada's long tradition of giving back.*

## WORKING TOGETHER TO CREATIVE POSITIVE CHANGE

FCA Canada Inc. is devoted to providing a helping hand through various charitable programs focused on building better communities. As a company, we are involved in numerous efforts to improve the world around us through financial giving, community initiatives and volunteer programs.

The Motor Citizens program goes beyond financial contribution and encourages employees to donate their time, energy and expertise in the communities where they live and work.

33 CONSECUTIVE YEARS OF FCA CANADA INC.  
EMPLOYEES AND RETIREES DONATING OVER

# \$1 MILLION

In 2018, the Windsor Assembly Plant announced a donation of \$1.24 million to the United Way/Centraide Windsor-Essex County 2019 campaign. Also unveiled was generous contribution of new toys collected from FCA Windsor Assembly Plant employees valued at over \$35,000, which were overflowing from eight Chrysler Pacifica minivans, for distribution to the Windsor Fire & Rescue Services as part of their annual Sparky's Toy Drive.

"FCA employees in Windsor are some of the most generous I've seen throughout my career. No matter the cause, they are tireless when it comes to helping others who are struggling or going through tough times," said Reid Bigland, president and CEO, FCA Canada. "2018 marks our 71st year of working with United Way and 16th year with Sparky's Toy Drive. I couldn't be more proud of our Canadian workforce for their unwavering commitment to the local community."



# DRIVING THE FUTURE

No single technology can meet all the needs of the global marketplace. Customers need reliability and want excitement, FCA vehicles deliver pragmatism and passion, neither being mutually exclusive. FCA offers both electrified models and some that run on alternative fuels to satisfy a wide range of demand. Of course, FCA continues to refine and improve traditional internal combustion engines which power the majority of our vehicles.

## FCA Canada Inc.

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## Please visit us at:

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1-800-465-2001

## The FCA Footprint in Canada:

- FCA Automotive Research and Development Centre
- Windsor Assembly Plant
- Brampton Assembly Plant
- Etobicoke Casting Plant
- National Parts Distribution Centre
- Eastern Business Centre / FCA Canada Fleet Headquarters
- Quebec Business Centre
- Western Business Centre

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