

# SUPPLIERS PARTNERSHIP FOR THE ENVIRONMENT



# ALIANZA VERDE AUTOMOTRIZ








Update on Industry  
Activities in Mexico

November 13, 2017



# AGENDA

-  A shot of culture
-  Mexico overview
-  Automotive industry
-  AVA activities
-  Q&A





# MEXICO AT A GLANCE

- Population: 123 million
- Economy:
  - GDP: \$2.2 trillion USD (12<sup>th</sup> in world)
  - GDP per capita: \$18,000 USD
  - \$580 billion USD annual trade w/U.S. (2016)
  - Unemployment rate: 3.3% (Sep. 2017)
  - *Poverty rate*: 52% below poverty line
  - *Min. wage*: \$80 pesos/day (about \$4.50 USD/**day**)
- Major Industries:
  - Agriculture, Petroleum, Automotive, Aerospace



# TRADE

- More than \$1M USD in trade/*min.* crosses U.S.-Mex. border
- Total trade has grown nearly fivefold since NAFTA took effect:

<i>Billion USD</i>	<b>1995</b>	<b>2015</b>
U.S Exports to Mexico	46.3	236.4
Mexican Exports to U.S.	62.1	294.7
<b>TOTALS</b>	<b>108.4</b>	<b>531.1</b>

- Mexico has trade agreements with 45+ countries
- 5M U.S. jobs depend upon exports to Mexico



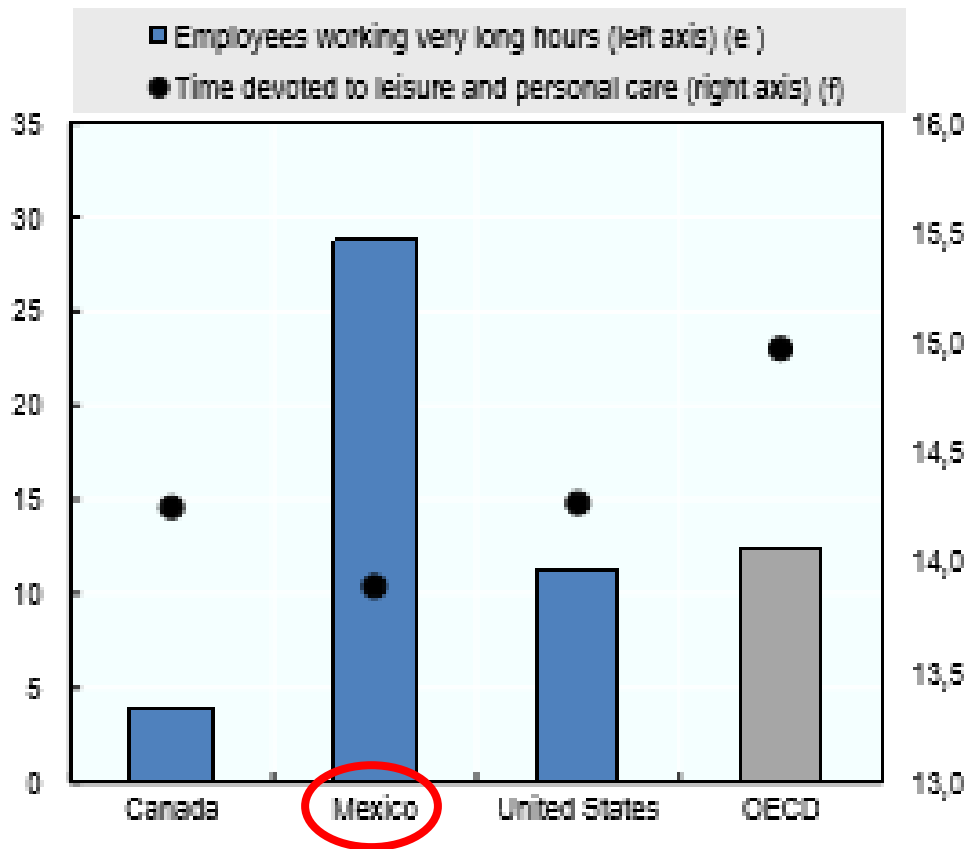
# LABOR

- Low rate of productivity growth since 2000
  - Has resulted in no/negative wage growth
- High rate of informal employment—50% (outside of social programs, protections)
- 48-hour standard work week
- Generally employee-friendly labor laws, but recent labor reforms implemented important changes
- Labor unions exist and need to be part of business planning



# LABOR (CONT'D.)

D. Work-life balance  
2014 or latest available year



# LABOR (CONT'D.)

## D. Work-life balance 2014 or latest available year

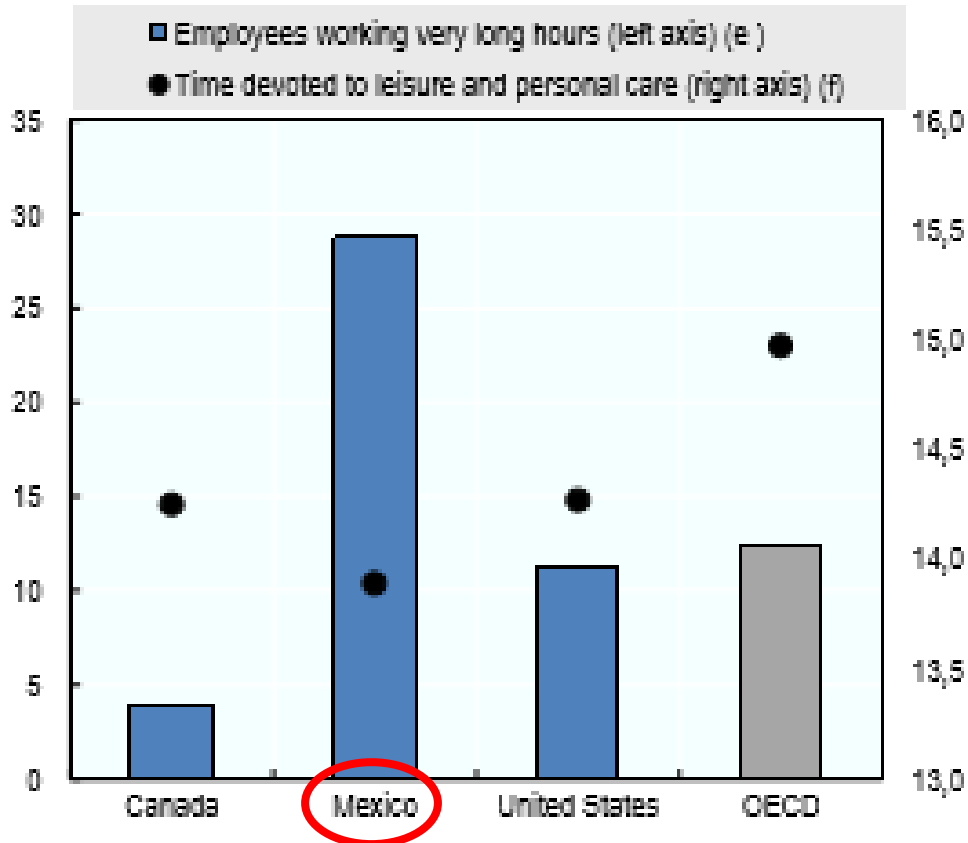
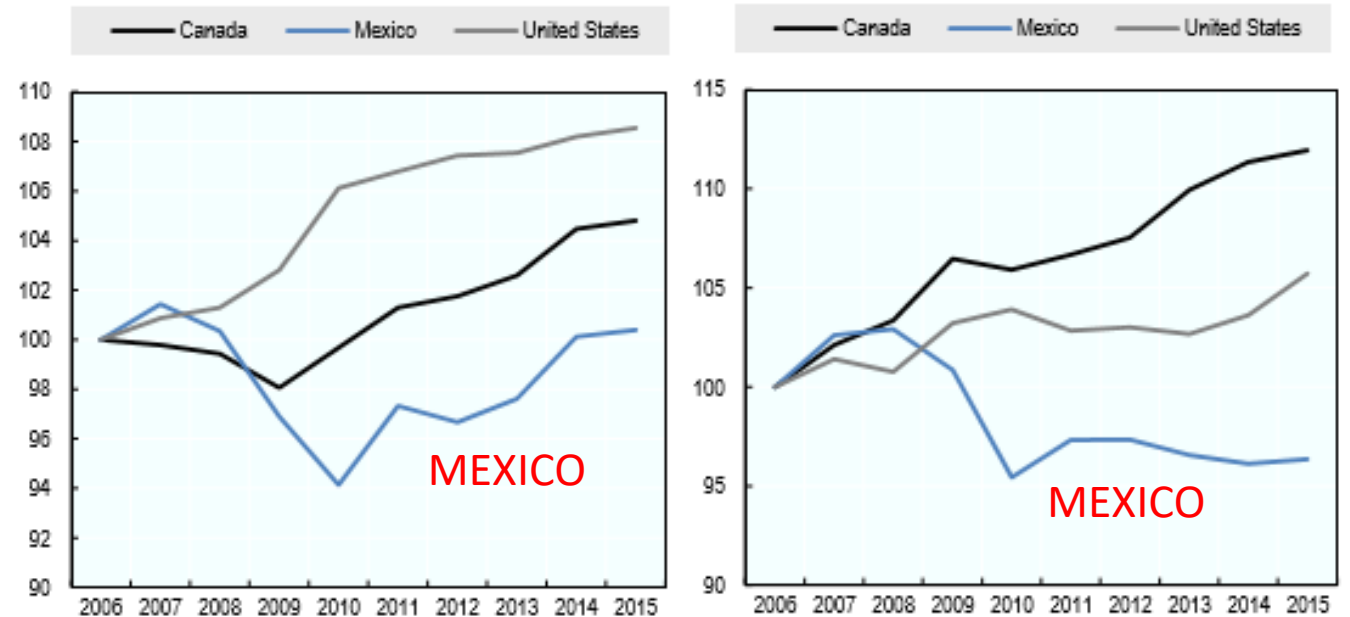


Figure 1.4. Labour productivity and real wages growth in North America, 2006-15



Source: OECD calculations based on OECD (2016), OECD Economic Outlook, OECD Publishing, Paris, [http://dx.doi.org/10.1787/eco\\_outlook-v2016-1-en](http://dx.doi.org/10.1787/eco_outlook-v2016-1-en).

# RECENT GOVERNMENT REFORMS

- Energy sector—state-run since 1930's, now opening up to foreign participation/investment
- Education—stronger teacher evaluation process
- Tax—strict electronic “factura” process, other digital features
- Labor—implementing some employer-friendly changes



# AUTOMOTIVE INDUSTRY IN MEXICO



# GLOBAL PERSPECTIVE



Global light vehicle production summary by region  
(000s)

	2015	2016	2017	2018	2019	2020	2021	2022	2023
Europe	20,936.38	21,411.03	21,831.45	22,118.80	22,529.98	22,713.20	23,036.38	23,301.24	23,427.57
Greater China	24,023.00	25,807.05	26,055.92	26,955.12	28,263.85	29,748.57	30,796.91	31,581.52	32,386.96
Japan/Korea	13,265.35	12,788.02	13,170.07	12,966.47	12,974.43	12,697.42	12,505.64	12,482.33	12,532.98
Middle East/Africa	1,964.55	2,344.66	2,379.78	2,671.32	2,910.73	3,030.72	3,140.38	3,222.37	3,293.00
North America	17,495.39	17,885.65	17,951.02	18,139.61	18,488.95	18,835.33	18,735.58	18,654.02	18,582.84
South America	3,072.98	2,697.56	2,729.15	2,806.92	2,970.76	3,238.26	3,508.24	3,825.16	3,996.53
South Asia	7,979.17	8,278.10	8,695.87	9,215.62	9,995.47	10,790.88	11,390.62	11,976.80	12,556.31
<b>Grand total</b>	<b>88,736.81</b>	<b>91,212.06</b>	<b>92,813.27</b>	<b>94,873.86</b>	<b>98,134.18</b>	<b>101,054.36</b>	<b>103,113.74</b>	<b>105,043.44</b>	<b>106,776.18</b>

Source: IHS Automotive

© 2016 IHS

# GLOBAL PERSPECTIVE



Global light vehicle production summary by region  
(000s)

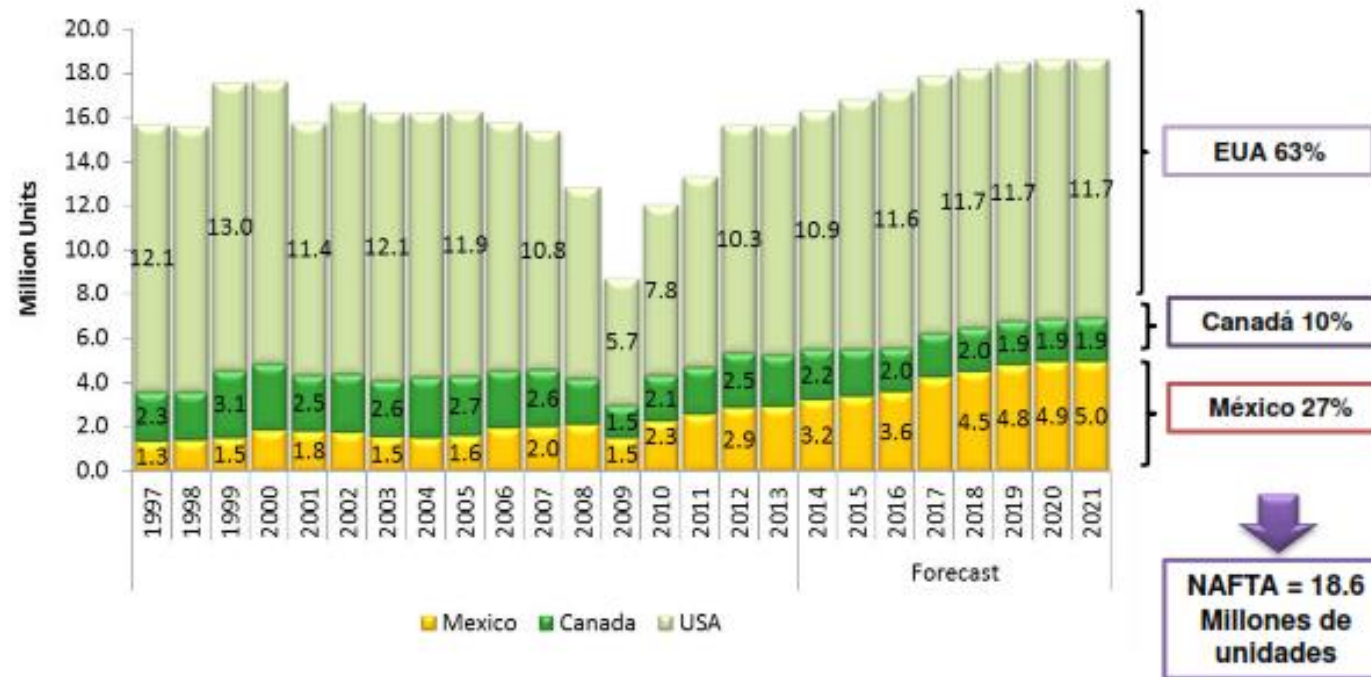
	2015	2016	2017	2018	2019	2020	2021	2022	2023
Europe	20,936.38	21,411.03	21,831.45	22,118.80	22,529.98	22,713.20	23,036.38	23,301.24	23,427.57
Greater China	24,023.00	25,807.05	26,055.92	26,955.12	28,263.85	29,748.57	30,796.91	31,581.52	32,386.96
Japan/Korea	13,265.35	12,788.02	13,170.07	12,966.47	12,974.43	12,697.42	12,505.64	12,482.33	12,532.98
Middle East/Africa	1,964.55	2,344.66	2,379.78	2,671.32	2,910.73	3,030.72	3,140.38	3,222.37	3,293.00
North America	17,495.39	17,885.65	17,951.02	18,139.61	18,488.95	18,835.33	18,735.58	18,654.02	18,582.84
South America	3,072.98	2,697.56	2,729.15	2,806.92	2,970.76	3,238.26	3,508.24	3,825.16	3,996.53
South Asia	7,979.17	8,278.10	8,695.87	9,215.62	9,995.47	10,790.88	11,390.62	11,976.80	12,556.31
<b>Grand total</b>	<b>88,736.81</b>	<b>91,212.06</b>	<b>92,813.27</b>	<b>94,873.86</b>	<b>98,134.18</b>	<b>101,054.36</b>	<b>103,113.74</b>	<b>105,043.44</b>	<b>106,776.18</b>

Source: IHS Automotive

© 2016 IHS

# NORTH AMERICAN PERSPECTIVE

## Light Vehicle Production in NAFTA Region



\*From 1997- 2013 data from AMIA for Mexico and OICA for USA and Canada. From 2014- 2019 forecast from IHS Global Insight.



**Forecast of production of light vehicles in Mexico, 2014-2019**  
(units)

<b>OEM</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>
Nissan	643,686	683,770	762,841	884,158	922,294	939,069
General Motors	670,988	670,185	621,438	760,621	786,997	781,662
Volkswagen	537,840	554,204	603,346	617,047	611,667	649,607
Chrysler	375,373	417,947	586,641	544,818	562,147	555,425
Ford	471,551	456,968	432,410	355,867	442,292	530,676
Honda	170,722	251,950	279,427	322,326	321,022	318,748
Mazda	89,696	178,972	200,129	253,245	257,192	236,283
Toyota	54,682	71,557	154,723	160,235	168,589	164,398
BMW	0	0	0	0	0	150,000
Audi	0	0	72,503	131,270	155,300	149,837
Infiniti	0	0	0	51,237	49,863	46,708
Mercedes Benz				19,071	68,836	73,554
Fiat	90,160	67,014	24,366	0	0	0
KIA			10,000	150,000	200,000	300,000
<b>Total</b>	<b>3,104,698</b>	<b>3,352,567</b>	<b>3,747,824</b>	<b>4,249,895</b>	<b>4,546,199</b>	<b>4,895,967</b>

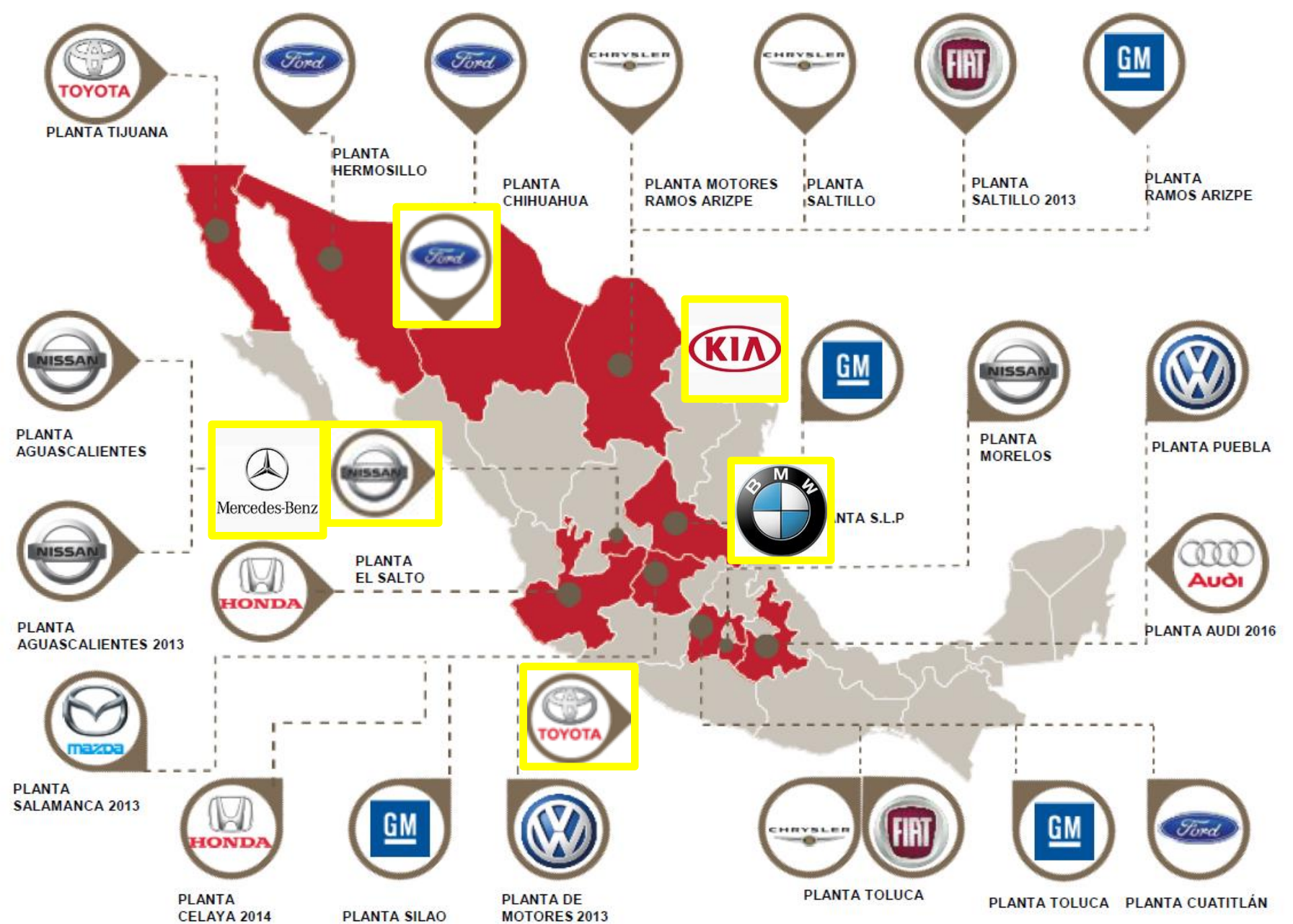
Source: INA with information from IHS Global Insight

**Forecast of production of light vehicles in Mexico, 2014-2019**  
(units)

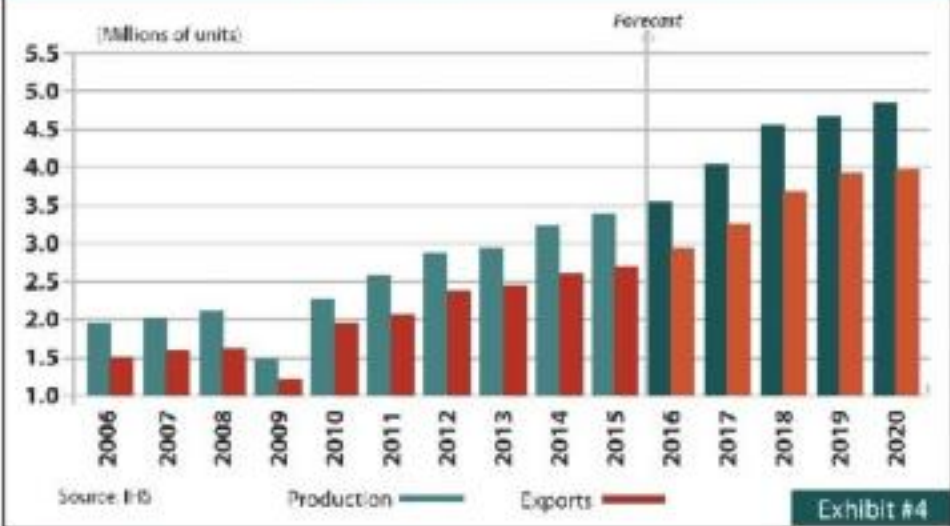
OEM	2014	2015	2016	2017	2018	2019
Nissan	643,686	683,770	762,841	884,158	922,294	939,069
General Motors	670,988	670,185	621,438	760,621	786,997	781,662
Volkswagen	537,840	554,204	603,346	617,047	611,667	649,607
Chrysler	375,373	417,947	586,641	544,818	562,147	555,425
Ford	471,551	456,968	432,410	355,867	442,292	530,676
Honda	170,722	251,950	279,427	322,326	321,022	318,748
Mazda	89,696	178,972	200,129	253,245	257,192	236,283
Toyota	54,682	71,557	154,723	160,235	168,589	164,398
BMW	0	0	0	0	0	150,000
Audi	0	0	72,503	131,270	155,300	149,837
Infiniti	0	0	0	51,237	49,863	46,708
Mercedes Benz				19,071	68,836	73,554
Fiat	90,160	67,014	24,366	0	0	0
KIA			10,000	150,000	200,000	300,000
<b>Total</b>	<b>3,104,698</b>	<b>3,352,567</b>	<b>3,747,824</b>	<b>4,249,895</b>	<b>4,546,199</b>	<b>4,895,967</b>

Source: INA with information from IHS Global Insight

# Ubicación en México de Plantas de Vehículos Ligeros



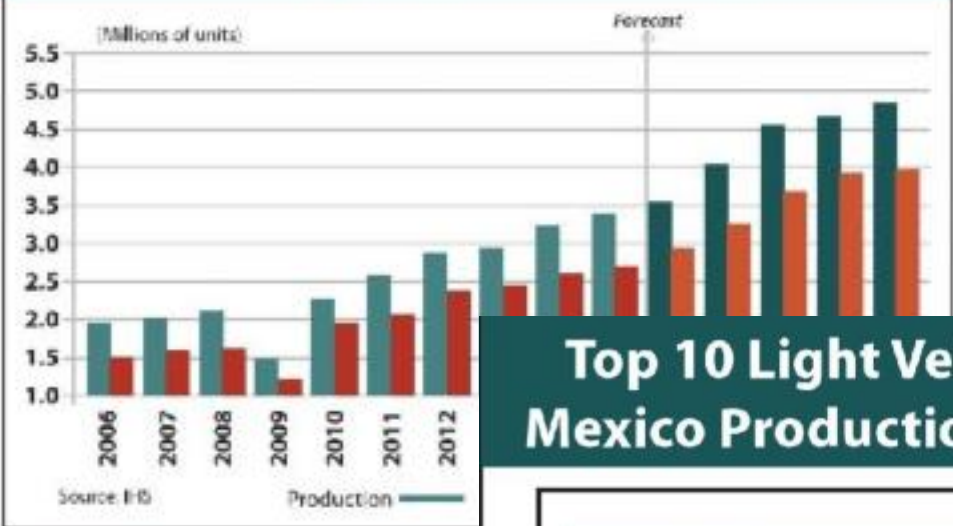
# Mexico Light Vehicle Production



28 MEXICONOW MARCH - APRIL 2016



## Mexico Light Vehicle Production



## Top 10 Light Vehicles Mexico Production 2015

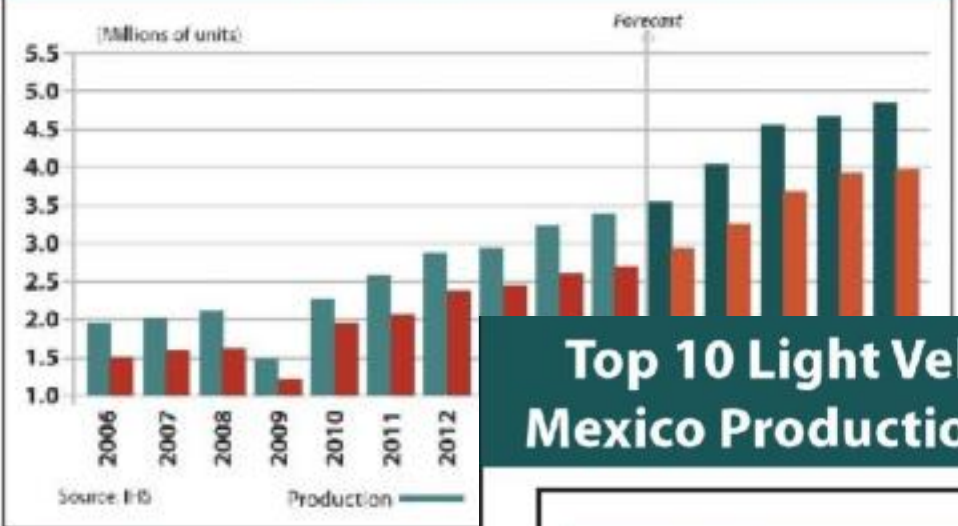
FUSION (Ford)	292,322
SENTRA (Nissan)	281,245
JETTA (VW)	267,879
SILVERADO (Chevrolet)	238,184
JOURNEY (Dodge)	195,969
CREW CAB (GMC)	163,109
VERSA (Nissan)	158,768
SIERRA (GMC)	137,377
HR-V (Honda)	95,882
GOLF (VW)	88,041

Source: AMIA

Exhibit #5



## Mexico Light Vehicle Production



## Top 10 Light Vehicles Mexico Production 2015

FUSION (Ford)	292,322
SENTRA (Nissan)	281,245
JETTA (VW)	267,879
SILVERADO (Chevrolet)	238,184
JOURNEY (Dodge)	195,969
CREW CAB (GMC)	163,109
VERSA (Nissan)	158,768
SIERRA (GMC)	137,377
HR-V (Honda)	95,882
GOLF (VW)	88,041

Source: AMIA

Exhibit #5

## Used Vehicles Imports vs New Light Vehicles Sales

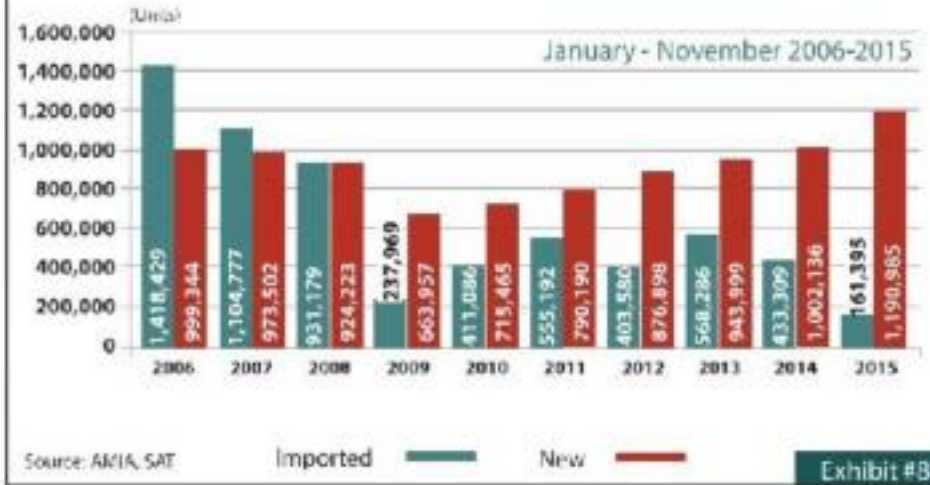
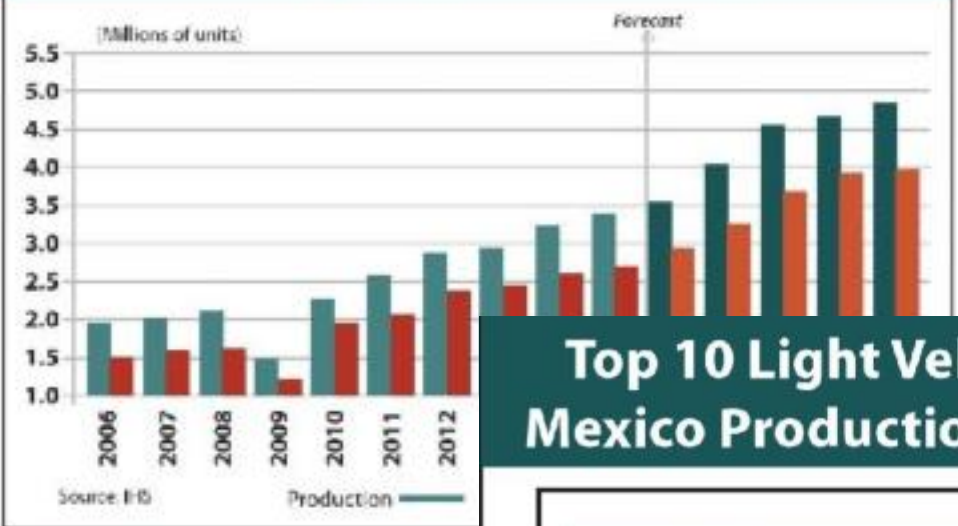


Exhibit #8

## Mexico Light Vehicle Production



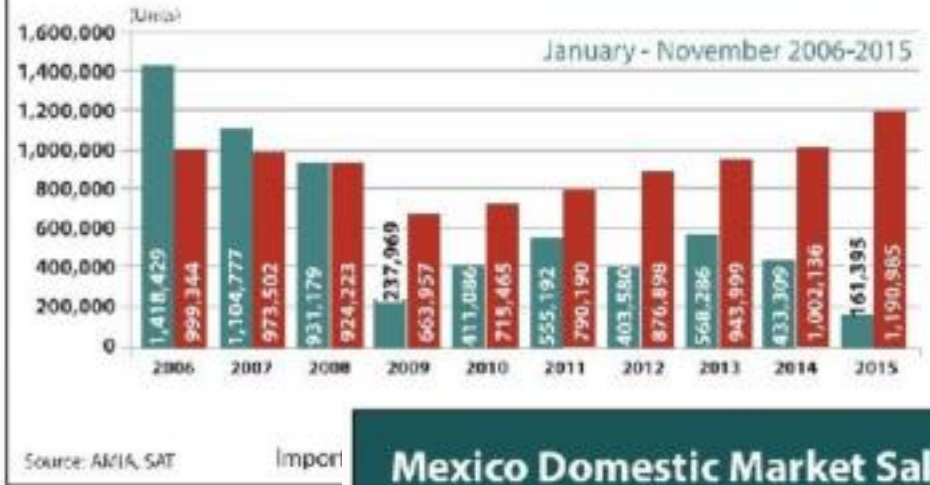
## Top 10 Light Vehicles Mexico Production 2015

FUSION (Ford)	292,322
SENTRA (Nissan)	281,245
JETTA (VW)	267,879
SILVERADO (Chevrolet)	238,184
JOURNEY (Dodge)	195,969
CREW CAB (GMC)	163,109
VERSA (Nissan)	158,768
SIERRA (GMC)	137,377
HR-V (Honda)	95,882
GOLF (VW)	88,041

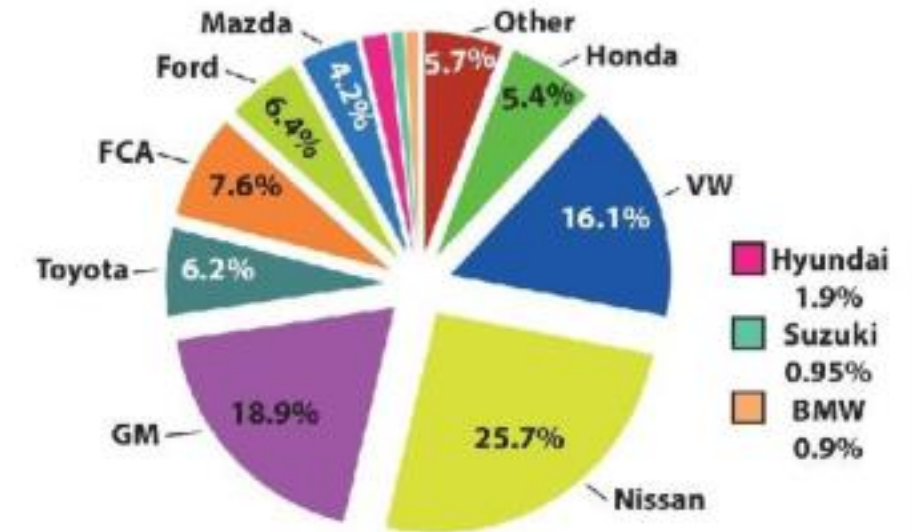
Source: AMIA

Exhibit #5

## Used Vehicles Imports vs New Light Vehicles Sales



## Mexico Domestic Market Sales By Brand 2015



Source: AMIA-AMDA

Exhibit #9



# ADVANTAGES & CHALLENGES

## ADVANTAGES:

- Geography
- Government support of FDI/stable gov.
- Young, eager, inexpensive workforce
- Zero tariffs to U.S./Canada (for now...)
- Trade agreements with 40+ countries
- Strength of automotive supply chain

## CHALLENGES:

- Tightening labor market/low-skill labor
- NAFTA uncertainty
- Crime in certain regions (e.g. border zones)
- Infrastructure—can it handle 60% increase in auto production in 3-5 years?
- Presidential election in 2018
- High credit costs
- Administrative burden

# ALIANZA VERDE AUTOMOTRIZ

Offers automotive OEMs and their suppliers opportunities to work together collaboratively on new, innovative projects focused on improving environmental and sustainability performance at the site level, while also creating value throughout the automotive supply chain.

AVA is an initiative founded as part of the Suppliers Partnership for the Environment (SP).



# AVA VISION

To be the leading private sector organization that provides original equipment manufacturers and their suppliers, the opportunity to **improve their environmental performance** and competitiveness and at the same time **create value** throughout the automotive supply chain in Mexico.



# AVA MISSION

Foster **collaboration** and interaction among its members to **identify, promote and implement initiatives** and projects, through the exchange of knowledge and experience to deal with the challenges of environmental sustainability and opportunities that **improve the environment and the economic viability** of the automotive supply chain.

# AVA MEMBERS



# AVA LEADERSHIP TEAM

## **Executive Committee**

- ❖ Raul Rodriguez, Audi Mexico S.A. de C.V.
- ❖ Delia Rivas, FCA México, S.A. de C.V.
- ❖ Luis Lara, Ford Motor Company S.A. de C.V.
- ❖ Arnulfo Berlanga, General Motors Mexico

## **Staff**

- ❖ Don Harris, Alianza Verde Automotriz
- ❖ Steve Hellem, Suppliers Partnership for the Environment
- ❖ Kellen Mahoney, Suppliers Partnership for the Environment

# FAREWELL ARNULFO!

Founding AVA member, leader, and mentor. ¡GRACIAS POR TODO!



# AVA FOCUS ISSUES

# ENERGY EFFICIENCY

Collecting and sharing information to help suppliers address energy efficiency opportunities that will improve the environment, and economic opportunities for their companies.

# ZERO WASTE TO LANDFILL

Identifying wastes that the supply chain collectively wants to disappear and challenging ourselves to find better solutions and uses for materials that can provide economic value to participants.

# WATER CONSERVATION

Collecting and sharing information to help suppliers to improve their use and potential re-use of water in their manufacturing activities.

# MULTI-MEDIA ASSESSMENTS

AVA member-led  
collaboration designed  
to identify opportunities  
to conserve energy,  
water and materials,  
and reduce costs.

# MULTI-MEDIA ASSESSMENTS



2014

AVA member-led  
collaboration designed  
to identify opportunities  
to conserve energy,  
water and materials,  
and reduce costs.

# MULTI-MEDIA ASSESSMENTS

AVA member-led  
collaboration designed  
to identify opportunities  
to conserve energy,  
water and materials,  
and reduce costs.



2014



2015



# MULTI-MEDIA ASSESSMENTS

AVA member-led collaboration designed to identify opportunities to conserve energy, water and materials, and reduce costs.



2014



2015



2016



# MULTI-MEDIA ASSESSMENTS

AVA member-led collaboration designed to identify opportunities to conserve energy, water and materials, and reduce costs.



2014



2015



2016



2017



# MEMBER VALUE

- Exchange of valuable environmental information
- Create/strengthen business relationships
- Participate in voluntary assessment program to identify opportunities at site level to reduce operating costs and improve environmental performance
- Align sustainability goals/initiatives with other leading automakers/suppliers
- Opportunity for visits to member site operations
- Receive recognition for environmental accomplishments
- Engage in technical dialogue on new/emerging environmental legislation
- Identify practices that can assist supply chain in preparing for emerging requirements



# AVA MEETING AGENDA: November 9<sup>th</sup>, 2017

- National Commission for Efficient Energy Use (CONUEE)
- Expert on energy reform/impacts to industry
- National Water Commission (postponed)
- International Material Data System (IMDS)
- Environmental assessment—Bosch SLP
- SP update
- 2018 objectives

## REUNION DE AVA 4º CUARTO


### GENERAL MOTORS DE MÉXICO

Ejército Nacional 843-B, Col. Granada, Del. Miguel Hidalgo, C.P. 11520, CDMX

NOTA: Acceso al nuevo Torre GM está por Blvd. Miguel de Cervantes Saavedra, enfrente del Corporativo Nestlé  
Salón: Auditorio

## AGENDA BORRADOR

09 DE NOVIEMBRE DEL 2017

9:00am – 9:30am	Registro, "networking" y café
9:30am – 9:45am	<b>Bienvenida / Presentaciones</b> <ul style="list-style-type: none"> <li>• Don Harris, Gerente de Programa, AVA</li> </ul>
9:45am – 10:00am	<b>Bienvenida por parte de General Motors de México</b> <ul style="list-style-type: none"> <li>• Arnulfo Berlanga, Gerente de Medio Ambiente y Sustentabilidad, General Motors de México</li> </ul>
10:00am – 10:45am	<b>Comisión Nacional del Uso Eficiente de la Energía (CONUEE):</b> Vamos a aprender más sobre las iniciativas de la Comisión, incluyendo la promoción de ISO 50001 y temas energéticos que aplican a la industria automotriz. <ul style="list-style-type: none"> <li>• Ing. Miguel Angel Martínez Urincho, Subdirector de Grandes Usuarios de Energía, CONUEE</li> </ul>
10:45am – 11:00am	<b>DESCANSO</b>
11:00am – 11:45am	<b>Energía:</b> Directora Bouchot regresa con AVA para platicar sobre el mercado abierto eléctrica y el programa del Certificado de Energías Limpias (CEL) entre otros temas energéticos. <ul style="list-style-type: none"> <li>• Cynthia Bouchot, Directora General, Energía CB</li> </ul>
11:45am – 12:30pm	<b>Agua:</b> Continuamos con el diálogo con nuestros compañeros de CONAGUA sobre las iniciativas de la Comisión y temas relacionados a la industria automotriz. <ul style="list-style-type: none"> <li>• Ing. Rogelio García Flores (tentativo), Gerente de Planificación Hídrica, Subdirección General de Planeación Comisión Nacional del Agua</li> </ul>
12:30pm – 1:00pm	<b>DESCANSO / COMIDA</b> <ul style="list-style-type: none"> <li>• Comida será disponible a todos y seguiremos con la agenda mientras que disfrutamos la comida.</li> </ul>
1:00pm – 1:45pm	<b>Sustancias Químicas:</b> Nuestro socio <b>TetraTech</b> presentará sobre la administración de sustancias químicas y la conformidad del producto y el Sistema Internacional de Datos Materiales (IMDS por sus siglas en inglés). <ul style="list-style-type: none"> <li>• Diana Vallejo, Ingeniera Ambiental, <b>TetraTech</b>.</li> </ul>
1:45pm – 2:00pm	<b>Diagnósticos Ambientales de AVA:</b> Presentaremos un resumen del diagnóstico con Robert Bosch en SLP en octubre del presente año. <ul style="list-style-type: none"> <li>• Don Harris, Gerente del Programa, AVA</li> </ul>
2:00pm – 2:15pm	<b>Actualización de Suppliers Partnership for the Environment</b> <ul style="list-style-type: none"> <li>• Don Harris, Gerente del Programa, AVA</li> </ul>
2:15pm – 3:00pm	<b>Grupos de Trabajo:</b> Vamos a separarnos en nuestros grupos de trabajo y desarrollar ideas sobre las iniciativas deseadas para 2018.
3:00pm – 3:30pm	<b>Mesa Redonda</b> <ul style="list-style-type: none"> <li>• </li> </ul>
3:30pm	Concluimos... ¡Gracias por participar!

# KEY 2018 INITIATIVES

- Forge stronger relationships with CONAGUA (water authority), SEMARNAT (similar to EPA in U.S.), and SENER/CONUEE (energy authority)
- Increase understanding of complex energy reform laws/requirements
- Take “zero landfill” to the next level
- Build on successful environmental assessment program



# JOIN US

We welcome automakers and their suppliers operating in Mexico to join us in our mission to improve the environment and the economic viability of the supply chain.



# CONTACT US

---

Don Harris, AVA Program Manager  
dharris@amerris.com  
[www.supplierspartnership.org/ava](http://www.supplierspartnership.org/ava)